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The editorial is poised to accepting as many articles as possible that are evidence-based knowledge and skills. Researchers are therefore encouraged from a range of discipline such as Business Management Sciences, Agriculture, Home Economics, ICT, Industrial Technical Education, Engineering, Health, Medical, Education, Computer, and Architecture among others. They are also drawn from within and outsideNigeria.

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Department of Vocational and Technical Education,
Faculty of Education
P.M.B. 1154
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e-mail: tavejacad@gmail.com
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HEALTH BENEFITS OF SELECTED LOCAL SPICES AND CONDIMENTS:A LITERATURE REVIEW

[1]Florence SANDO [2]Ekemini E UKO-AVIOMOH
[1]Government model secondary school GRA Asaba
[2]Department of Vocational and Technical Education, Faculty of Education,
University of Benin, Benin City
florencesando85@gmail.com.
08068956887
ekeminiaviomoh@gmail.com.
0805 665 0906

Abstract

This paper looked at the health benefits of selected local spices and discussed the significant role and how the nutritive value of food could play a role in maintenance of good health and sustenance of life. Every edible food plants has their own major nutrients. Spices are edible plant which could be used raw in food preparation or dried and ground into powdered form. The spices reviewed in this paper include Aiden, Negro pepper, Nutmeg, African locust bean, West African pepper and Turmeric. The nutritive value of the spices and their chemical contents were proven to function like drugs to prevent and manage diseases, if included in diet daily to help live healthy as one aged gracefully. It is therefore recommended that serious attention should be given to local spices by using it in preparing food.

Keywords: local spices, condiments, health benefits

Introduction

Food plays a major role in the human body and it's nutritive value, include such basic nutrients as proteins, carbohydrates, fats and oil, vitamins mineral and water. These nutrients are very essential for sustenance of life in daily living. Nutrition researchers have reported that each of the nutrients or group of the nutrients have specific function in the body and that appropriate consumption of adequate quantity of each nutrient will help to maintain good health status. Clark (2013) grouped the basic nutrients and function in the body to include body warmer and energizer such as carbohydrates, fats and oil, body builders include protein, body protectors: vitamins and minerals and essential nutrients - water

Vitamins and minerals are essential nutrients required in a little quantities for biochemical functioning of organs and systems of the body. Gerber (2016) opined that vitamins and minerals are functional nutrients that works somewhat like drugs that can be used to prevent and manage ill-health challenges manage whereit has occurred, and their major sources are herbs and spices from the plant family. Every edible plant has its major nutrients value along side with other trace elements, but some have vitamins and minerals in largequantities, which made Nutritionists to refer to them as functional foods, because they can be used as drugs for prevention and management of ill-health condition. Herbs are obtained from the leafy parts of plants, while spices are obtain from the seeds roots and bark. They could be used raw in food preparation or dried and grounded into powdered form for use. The nutritive values of herbs and spices and their chemical contents have been proven to function like drugs that could be employed to maintain good health and sustain life. (Okafor & Uko-Aviomoh, 2019). This paper therefore, addressed selected local herbs and spices, theirnutrient contents (chemical values) and health benefits in the prevention and management of ill-health challenges when it occurs. The main focus of this study is to review specific local spices, their nutritional components and functional properties to prevent and manage disease conditions.

Meaning of Spices:

According to John (2016), spices are aromatic or pungent vegetable substances used to add flavour to foods and also contain vital chemical compound that function like drugs. Duke (2017) also opined that spices could

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be any dried part of a plant other than the leaves used for seasoning and flavouring a recipe but not used as the main ingredient. National Research Council (2016) defined Spices as any aromatic vegetable substancein the whole, broken, or grounded form. Therefore there are numerous local spices used in cooking foods in the society examples are as follows: Aiden, Negro pepper, Nutmeg, African locust bean, West African pepper and Turmeric.

AIDEN : (English Name), *tetrapleura tetraptera* (Botanical Name) and Local Name (Uyayak) Ibibio, (prekese) Ghana (Osakrisa; /oshosho) Ibo, (Aridan) Yoruba**.** Aiden is a spice of plant in the pea family in Western Africa. The tree has many uses. Its sweet fragrance is valued, its fruit is used to spice dishes, such as Banga soup, pepper soup, porridges, jollof rice and its bark is used for medicinal purposes.The major constituents are tannins, flavonoids alkaloids, steroids, phenol and starch

Aiden has many health benefits among which are:

Supports the Immune System: Aiden is an excellent source of key minerals such as potassium, iron, calcium, magnesium and zinc. Aiden helps to strengthen the immune system. Iron helps to regenerate lost blood, zinc offers protection against viruses especially those that can cause respiratory tract infections, while calcium and potassium help to manage, prevent and control bones and muscles disorders. (Ekwenye & Okorie, 2010)

Anti-Aging Properties: Aiden pod contains anti-aging properties such as polyphenols, flavonoids, tanninsand alkaloids which are antioxidants that protect the body from free radicals and oxidative damages responsible for aging. Those who wish to continue to look young, especially women, must make Aiden fruits their friend, and use it to spice up their foods each time they are cooking. (Maillard, Adewumi & Hostettman, 2012).

Disease management and treatment*:* In folk medicine, both the stem, leaves and fruit of Aiden are used for producing herbal concoction for managing convulsion. Aderibegbe, Iwalewa, Adesina & Agboola (2010) revealed that the aqueous extract from the fruit exhibits anti-convulsant properties which confirms it's inhibitory effects on the central nervous system. Ekwenye & okorie (2010) opined that Aiden can be used for treating leprosy, which is an infectious disease that affects mainly the skin, nerves and the mucous membranes thereby causing blemishes and lumps on the skin. Severe cases of leprosy can lead to deformitiesand mutilation (Abii & Amarachi, 2017). The extract of this plant is known for its anti-inflammatory properties and this suggests its inhibitory impacts against certain human pathogens. Aiden can be used for reducing inflammation of the body, arthritic pains and rheumatoid pains. Aiden supports the cardiovascular system due to its constituents of essential phytochemical and as such can be used for preventing and treatingheart diseases and jaundice (Atawodi, Ene-Ojo & Yakubu, 2014). The stem and bark extracts of Aiden (*Tetrapleura tetraptera*) can be used for preventing and treating hypertension. Researchers agree that *Tetrapleura tetraptera* is effective for preventing high blood pressure and for improving the oxidative position in salt model of hypertension patients.The stem and bark extracts of Tetr*apleura tetraptera* can be used for preparing herbal medicines for treating diabetes and its complications such as Oxidative Stress andHyperlipidemia. The leaves, roots, and bark can also be added for optimal performance. Aiden pods containessential chemical compounds such as flavonoids, triterpenoid glycoside (aridan) and phenols, which have been reported to be effective for healing wounds (Uchechi & Chigozie, 2010).

Aiden fruits are highly effective in the prevention, shrinking and total treatment of fibroids in women. Women who use Aiden fruits to spice up their foods rarely develop fibroids. Those who already have fibroidscan use *Tetrapleura tetraptera* to shrink it. Boil Aiden fruit for about 30 minutes and take one cup twice daily for two week (Mehmet, Riwan & Ahmet, 2016). Aiden pod is traditionally used for preparing special soups for postpartum mothers immediately they put to bed in order to avoid post-partum contraction. Although Aiden can be used alone for this sort of postnatal soup preparation. However, it can be used together with *piper guineese (uziza), gongronema Latifolium (utazi) and scotch bonnet (fresh* pepper) for supper action. Using this spice for post-partum care is attributed to its high constituents of calcium, iron andpotassium, which are very important for new mothers. Furthermore, it helps to restore and replenish lost

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blood for new mothers and promotes lactation, it also serves as contraceptives. (Nwanu & Allah, 2016). The Saponin and ethanol extract from the stem and bark of this plant has an inhibitory effect on luteinizing hormone released by the pituitary gland. This suggests why this plant equally serves as a contraceptive, (Akin-Idowu, Ibitoye, Ademogegun & Adenyi, 2011).

Preparation of Aiden for medications

To prepare the fruits for medication purposes, cut few pods into pieces and boil in water for about 40 minutes. Drink half cup morning and evening for a month. In serious cases, the pods are grinded and mixed with honey or palm kernel oil. Leaves, roots and bark are also cooked like the fruits and taken twice daily. (Mehmet et al 2016).

NEGRO PEPPER: (English name), *xylopia aethiopica* (Botanical Name)

Local Name: (Uda) Ibo, (unien) Benin. Negro pepper, is from the Annonaceae family. The high demand for the Negro pepper as a spice is due to its high constituents of essential phytochemical compounds, nutritional values and its contraceptive benefits for women since there are no side effects using Negro pepper water to prevent pregnancies on like the modern methods which have side effects such as cancer, depression,heart attack or stroke and obesity. It is also safe for women who are breastfeeding infants. Negro pepper water contains vitamins A, B1, B2, C, E and folic acid."(Abd-Algader, El-kamali, Ramadan & Ghanem 2013). Negro peppers can be added whole or crushed before using to prepare assorted food dishes such as soups, yam porridge, pepper soup, stews, sauce, meat and fish among others. It can be used alone or mixedwith garlic or ginger for making herbal tea. Negro pepper can also be used as a preservative. Every part of the Negro pepper plant such as the bark, seeds, stem, fruit, leaves are of great importance in folk medicine for therapeutic purposes. Furthermore, some parts of negro pepper can be combined with other plant parts for tackling many ailments and diseases. Researchers revealed that the Negro pepper contains anti-oxidizing, calmative, laxative and antimicrobial properties. (Okigbo, Mbajiuka & Njoku, 2015). Negro pepper can be used as a herbal stimulant for treating gastrointestinal problems such as stomachache, dysentery and gastriculcers.

The bark of the Negro pepper is soaked in palm wine and used for treating respiratory system diseases suchas bacterial pneumonia, asthma and bronchitis, and also rheumatism, arthritis and other inflammatory health conditions. (Puvanendran, Wickcrammasinghe & Karunaratne, 2018) Negro pepper seeds are crushed and applied topically on the skin for treating boils, itches and skin eruptions. It is also used to treat various premenstrual syndrome including any stomach ache, headache and even any unwell feeling. Therefore, it is good to consume negro pepper before menstruation period and also helps to regulate a better period too. Since Negro pepper is a good way to avoid inflammation and infection, it will lead to a better body immunesystem. Therefore, it is the best way to keep the body wellness and avoid any further effects of diseases. (Ezekwesili, Nwodo, Eneh & Ogbunugafor, 2010).

Negro Pepper contains the following compounds; phytosterols, tannin, glycosides flavonoid, alkaloids, cineol, beta-pinene, paradol and alpha-terpineol, (Kolawole & Omafuvbe, 2013).

Negro pepper has the following health benefits:

Hormonal Regulations*: T*he seeds of negro pepper helps to improve the hormonal system of the body and help to regulate the hormone secretion and lead to a better body system and also improve the metabolic and digestive system too. (Tarun, Hoffman & Schieberle, 2019).

Postpartum Herbal Tonic*:* Negro pepper is used together with Uziza, utazi leaves and pepper for preparing local soup such as nsala soup served for post natal mothers immediately after childbirth. These spices help to boost the healing and recovery process of wounds after delivery. It also helps to stimulate appetite, reducespain and helps the breast milk to flow. Some studies revealed that the negro pepper can also be used for inducing labour. Administering negro pepper to newborn mothers helps to clear blood clots in the womb after child delivery, this is done by boiling few seeds like seven in the water and drinking it when hot.

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(Abolaji, Adebayo & Odesanmi, 2017). It is also use as contraceptives, some women prepare a herbal concoction with negro pepper seeds, which they take immediately after sexual activities or before sexual activities to reduce the chances of becoming pregnant.

Negro pepper contains anti-spirochete properties therefore can potentially destroy pathogens that are capableof causing syphilis, relapsing fever, yaws, and other related diseases. (Ijeh, Omodamiro & Nanna, 2015).

Negro pepper is an excellent source of antioxidants, which are substances capable of removing free radicals and oxidizing agents in a living being. Due to the anti-oxidizing properties of negro pepper, it can be used for preventing and destroying cancerous tumors. (Abolaji, Adegboye & Odesanmi 2017) The anti-oxidizing abilities of negro pepper is due to its constituent of flavonoids, phenolics, limonoids and polysaccharides. Itis important to note that phenolic extracts have free radical scavenging activity and interestingly, the water extract of *Xylopia aethiopica* fruit contains high amount of phenolic compounds. (Puvanendran, Wickramasinghe, Karunaratne & Carr,2018).

Contraceptive: Take a glass of negro pepper solution immediately after sexual activities and some women also prefer to take this before sex (this is because some spermatozoa are stubborn). Madame (2013) explained that the presence of ethanol in negro pepper plant makes it to reduce the potency of spermatozoa which makes it possible to obstruct pregnancy.

Preparation of negro pepper Water

Negro pepper water can be prepared by purchasing a large quantity of negro pepper and putting in a pot e.g. 250 grams, Add about 60cl of clean water boil the negro pepper for 5 minutes, put down and allow to cool. Once the boiled negro pepper water has cooled, pour in a container and store in the chill room compartmentof the refrigerator. Do not store in the freezer so that the active ingredient will be stable although it is moreactive when it is not stored for too long (Madame, 2013).

Side Effects of the Negro Pepper

When negro pepper is taken in excess the aqueous extract of the negro pepper can reduce the haemoglobin concentration. Moreover, it also increases the bleeding and clotting time and as well as reducing the white blood cell count. As a result of these side effects of the negro pepper seeds, people should be careful when using this spice to prevent any anomalous effects on the blood system. (Obembe, Ofutet & Okpo-ene, 2015)

NUTMEG (English Name) Botanical Name: *(Myristica fragrans)* Local Name: ("Umilo") itshekiri) ehreoyibo (urhobo)

Nutmeg is a seed of a tree particularly known for its numerous health advantages. According to the Gas chromatography (2019), Nutmeg oil constitutes 25 chemical components that contributes to its fragrance, therapeutic attributes, consistency and quality of its oil. of which some of the chemical components include sabinene, alpha.-Pine, .beta.-Pine, Terpinen-4-ol, Limonene, .gamma.-Terpinen, Elemicin, .alpha.-Terpinen, Myristicin, .beta.-Phellandrene, Terpinolene, and alpha.-Thune. (Latha, Sindhu & Suja, 2019).

Nutmeg is additionally an effective tranquilizer. Nutmeg is really staple in ancient Chinese medicine. The Chinese utilize the spice to deal with inflammation as well as abdominal pain. It is also helpful to those suffering from painful joints, muscle pain, arthritis, sores and other ailments. (Food and Agriculture Organization, 2018). To ease the pain, nutmeg oil is applied on the affected areas. Nutmeg can successfully provide relief from digestion related difficulties such as bowel problem bloating flatulence among others. Nutmeg oil reduces stomach aches by eliminating the excess gas through the intestines. Nutmeg also enhances appetite. Due to its anti-bacterial qualities, nutmeg is used successfully to treat halitosis (Kaefer & Milner, 2018). Bad breath is generally the result of a build-up of bacteria within the mouth. Nutmeg is a common ingredient in lots of brands of toothpastes and may also be.

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Blood Pressure and Circulation: The mineral content of nutmeg is used for maintaining organ function. Potassium is really a vasodilator that relaxes blood vessels, therefore decreasing blood pressure as well as decreasing the strain on the cardiovascular system. In addition, nutmeg facilitates the uptake of nutrients from food making digestion effective as well as efficient and fast process. The calcium present in nutmeg can enhance the health of the bones by contributing to growth and repair, while relieving the signs of osteoporosis. Ultimately, the iron content can improve red blood cell count and lower the chances of developing symptoms of iron deficiency, also referred to as anemia. Nutmeg oil is believed to relieve coughand cold apart from the treating the respiratory disorder and asthma. (Patil, 2017). Nutmeg oil is highly beneficial for relieving menstrual cramps and treating menstrual irregularities and also boosts sexual activity,both libido and potency or sexual energy. Nutmeg extract is utilized just as one ingredient in lots of sex tonics intended for dealing with debility, impotency and spermatorrhadditionallyoea, with great aphrodisiac properties, nutmeg is highly beneficial for curing impotence, premature ejaculation and low libido. (Marcene, 2018).

***Brain Tonic*:** In the ancient times, Roman and Greek civilizations utilized nutmeg as a kind of brain tonic. It is because nutmeg can effectively excite the brain. For this reason, nutmeg gets rid of exhaustion as well as stress. If anyone suffers from anxiety or depression, nutmeg can also be a great treatment. Adding a dashof nutmeg in the diet, works as an antidepressant and releases stress by calming the nerves. It works as an adaptogen, which has sedative effects and also relieves stress and anxiety. Nutmeg usually increase concentration so that the individual can become more active as well at work. (Sangalli & Chiang, 2019).

Liver and Kidney Detox: Detoxification is a crucial factor in good health. The liver and kidney are two organs where toxin build-up generally. Nutmeg helps clean up the liver and kidney and take away these toxins. Nutmeg is good at stopping as well as dissolving kidney stones. Whenever the liver and kidney areeffectively detoxified, then they will be able to execute their functions properly, therefore little nutmeg should be added to the diet. (Agbogidi & Azagbaekwe, 2013).

Skin Care: Nutmeg can be incorporated into regimen and assist to accomplish smoother as well as healthier skin and prevent a number of skin problems such as eczema, acne, scars and blackheads. A scrub produced from nutmeg powder and orange lentil powder will help eliminate blackheads, a kind of acne pores clogged with excess oil and dead skin cells. Nutmeg could also help make scars less noticeable. Mix some nutmeg powder with honey to make a paste and apply on acne mark to completely erase them. (Gupta, Bansal , Babu& Maithil , 2013).

Insomnia - Nutmeg has a high content of magnesium, an essential mineral in the body that reduces nerve tension, and even stimulates the release of serotonin which is a hormone that creates the feelings of relaxationor sedation. This is why it is commonly used to treat sleeplessness and insomnia. Serotonin is changed to melatonin in the brain, which is a sleep inducer. A pinch of nutmeg in a glass of warm milk to rectify insomnia.
(Kim, Chen, Wang & McGregor, 2010).

Side-Effects of Nutmeg
Long-term use of nutmeg in doses of 120 mg or more daily has been linked to hallucinations, nausea, dry mouth, dizziness, irregular heartbeat, agitation, vomiting, diarrhea and other mental side effects (Joseph, 2019).

AFRICAN LOCUST BEAN (English Name) Botanical Name: *Parkia biglobosa,* Local Name: Ogiri (Ibo) iru (Yoruba) dawadawa (Hausa). Locust Bean belongs to the family of Mimosaceae plants. In WestAfrica the bark, roots, leaves, flowers, fruits and seeds are commonly used in traditional medicine to treat a wide diversity of complaints, both internally and externally, sometimes in combination with other medicinalplants. The bark is most important for medicinal uses, followed by the leaves. (Abioye, Akinpelu & Aiyegoro, 2013) Medicinal applications include the treatment of parasitic infections, circulatory system

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disorders, such as arterial hypertension, and disorders of the respiratory system, digestive system and skin. In veterinary medicine, a root decoction is used to treat coccidiosis in poultry. Green pods are crushed and added to rivers to kill fish. (Abioye, et al 2013).

Locust bean has the following components: carotenoid, saponins, tannins and hydrocyanic acid. Ntui, Uyoh, Urua & Ogbu (2012) reported that the health benefits of locust beans include: good eyesight; helps people with eye problem such as cataract, myopia, glaucoma and others because it also contains natural nutrients that can maintain eye health; helps in the treatment of stroke by consuming it regularly. (Aremu, 2019). Locust bean is also used to treat blockage of blood vessels caused by cholesterol a precousor of heart relateddiseases. Locust bean has been used in the healing of diarrhea and other gastrointestinal disorder as a result of the presence of tannin. (Heuzé, Thiollet, Tran & Edouard, 2018). Eating a good amount of locust beans improves digestion. Proper digestion will promote a healthy body as the excretion process will be facilitatedand prevent constipation. Locust bean is used to treat ulcer wounds internally by eating regularly as well as external wounds. The leaves when pounded and applied on wounds is capable of healing wounds. Consuming a good amount of locust bean reduce fever. It was traditionally used to reduce high fever and isstill practiced in some rural African communities. Therefore, consuming healthy locust beans gives good health. (Gernah, Inyang & Ezeora, 2017).

Side-Effects of locust Bean: Some people are allergic to locust bean. This allergy takes the form of asthma and breathing issues, and can be serious and some premature infants have bad reactions to formula that contains locust bean gum if it has been mixed incorrectly. (Adewumi, 2017).

WEST AFRICAN BLACK PEPPER (English Name) Botanical Name: *Piper guineese*, Local Names: (uziza) Igbo, (Ehien) Benin and (Ashanti pepper) Ghana. The plant that provide West African black pepper is a vine that can grow up to 20 m in length, climbing whole of tree by means of adventitious roots. West African black pepper is semi-cultivated in countries such as Nigeria where the leaves, is used as a flavouring for stews. Like other members of the pepper family, West African black pepper contains 5–8% of the chemical piperine which gives them their piquant taste. By its nature; it is spicy, aromatic and carminative (Youngs & Mohamed 2019). West African black pepper has the following components such as alkaloids, steroids, glycosides and flavonoids.

Health benefits of West African black pepper

Immune enhancer: West African black pepper exhibits immunomodulatory effect on human body. It is ableto boost and supports the number and the efficiency of white blood cells and assists the body to raise a powerful defense against invading microbes and cancer cells. The other health benefits of West African pepper leaves are: Treatment of rheumatism, lowers cholesterol, prevents diabetes, prevents hypertension, aids postpartum recovery, improves appetite, treats dysentery, eases indigestion. (Kiin-Kabari, Barimalaa, Achinewhu & Adeniji, 2011).

Management, prevention and treatment of diseases

Abila, Richens & Davies, (2010), recorded the following health benefits of West African black pepper. The spice generally clears the throat and causes a runny nose to cease. This ability is common to every spice. When one has a cough or finding it difficult to breathe due to influenza flu, chewing West African black pepper can quickly clear the mucus out of the way. To do this, one needs to get some West African black pepper leaves, whether fresh or dried, grind and put them in a clean bowl. Add some clean boiled water and allow to stand for at least ten minutes. Sieve the mixture and drink the filtrate. The spicy quality, coupled with the warm water, will help clear the cough as well as lubricate the throat for easy breathing. It prevents constipation when a person finds it difficult to have bowel movements for a few days, the problem is called constipation. Constipation is caused by the absence of roughages in our food. Roughages are dietary fiber. Interestingly, West African pepper is quite rich in dietary fiber. By adding West African pepper to meal always will help keep constipation out of one's health status. However, West African pepper cannot be usedto treat constipation; it can only be used to prevent it from ever occurring. It also prevents cancer, by

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consuming anti-inflammatory and anti-oxidants regularly, the free radicals will be neutralized, and the chances of the body developing cancerous cells will be significantly reduced. West African black pepper contains a substance called flavonoid; a powerful anti-oxidant that helps neutralize free radicals in the body. (Okoye & Ebeledike, 2013).

Improves fertility: West African pepper is used in many local herbal medicines to treat infertility. It is takenin combination with honey to address the problem of infertility in women and in men to improve low sperm counts. Thus, just like one of the health benefits of black pepper, West African black pepper boosts or improves fertility in men. It plays an important role in improving male fertility. It is known to increase testosterone levels as it is rich in zinc and magnesium, two minerals critical for male sex hormones. It also increases sperm count and its concentration. The zinc element also helps in the development and movementof sperm. In the eastern part of Nigeria, the leaves are used by local midwives to increase contraction rate ofthe uterine walls during childbirth. (Ashoke & Upadhyaya, 2012).

It keeps away mosquitoes: West African pepper leaves can also be used to keep mosquitos away from home.In some local areas, people sleep with West African pepper leafs close to their bed. This is because the leafs produce a scent that keeps mosquitoes away. Many insecticides are also based on compounds extracted fromthe leaves. (Juliani, Koroch & Giordano, 2013).

Relieve pain: West African pepper leaves contains alkaloids. Alkaloids are known to have therapeutically efficient effect to perform as pain killer. Therefore, taking West African pepper leaves to relieve pain such as headache, toothache, and painful joints will be a perfect solution. It is also effective in treating menstrualpain. The leaves show the effective result in relieving pain. It can be used to relieve pain by chewing or pounding either the seeds or leaves and rubbing it on the joint or if it is headache rub it on the forehead andby adding it to food (Srinivasan, 2019).

Lose weight: The dietary fiber in West African pepper leaves is effective in losing weight. Just like the health benefits of drinking green tea on empty stomach for weight loss, West African pepper leaves can also perform the same function either boiled fresh or drink the tea of dried West African pepper leaves. (Echo, Osuagwu & Agbor, 2013).

TURMERIC (English Name) Botanical Name*: Curcuma Longa,* Local Name : (Atale pupa) Yoruba, (Ganga Maui) Hausa, (Ohu Boboch nwadum) Igbo, (Agio) Benin. Throughout history, our ancestors have relied on numerous herbs and spices, not only for cooking but for their healing properties. Few have survived the test of time like turmeric, arguably the most well-studied dietary supplement in modern naturalmedicine. Turmeric root powder originates from the *Curcuma longa* plant. The *curcumin* oils within it havepotent anti-inflammatory and antioxidant activity with a wide variety of uses and benefits and very few sideeffects. (Kuo, Huang & Lin 2016). Turmeric has the following components alkaloids, flavonoids saponin and tannin.

***Management and prevention of diseases*:** Numerous trials on turmeric's potential to serve as a complementary treatment in cancer patients. Curcumin can selectively target cancer cells and inhibit tumor initiation and growth. Turmeric also helps reduce inflammation and pain from chemotherapy. Turmeric helps to prevent diabetes. Curcumin appears to have both an insulin-sensitizing and glucose-lowering effectwhile improving glycemic regulation.

Turmeric reduces candida overgrowth and target fungal infections, Parkinson's disease, is a neurodegenerative condition in elderly populations characterized by motor symptoms, including tremors, muscle rigidity, and postural instability. Curcumin shows significant neuroprotective benefits, helping reduce neurotoxicity and oxidative stress linked to disease progression (Rodrigo, Miranda & Vergara, 2011). It also improves Allergies and Asthma, an allergy transpires when the immune system mistakenly identifiesa foreign substance as harmful to the body and over reacts to it. During an allergic reaction, we produce

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antibodies that respond to these allergens, ultimately leading to an unwanted collection of symptoms (coughing, sneezing and itching, among others.).

The anti-inflammatory activity of turmeric powder helps to fight off many allergy-related symptoms and decrease the likelihood of asthma attacks, curcumin supplement reduces signs of sneezing, nasal congestion, and runny nose linked to restricted nasal airflow and hay fever. Turmeric stimulates bile production and release from the gallbladder, helping to eliminate unwanted waste from the body. (Aggarwal & Sung, 2019).

Enhances Brain Function: Turmeric improves overall mental health and cognitive function. Research shows curcumin enhances Docosahexaenoic acid (DHA) synthesis that is crucial for brain. Antioxidants improve cognition and increase neuroplasticity, the brain's capacity to create new synaptic connections, it also reduces anxiety and depression, turmeric extract influences neurotransmitter balance in the brain. Curcumin appears to have an antidepressant and anxiolytic effect through its ability to modulate levels of serotonin and dopamine. Therefore, it is a good complementary treatment for depression. (Iniaghe, Malomo& Adebayo, 2019)

Side-Effects of turmeric: Side-effects are rare, but when taken in large amounts can include: upset stomach, including diarrhea yellow stools headache rash (Heger, 2017).

Conclusion

Health benefits of selected local spices and condiment shown that spices obtained from plant origin has nutritive values that work like drugs and can be used to prevent and manage ill-health challenges if includedin daily meals. The health benefits of spice is widely known locally and internationally.

Recommendations

Based on the reviewed literature it was recommended that:

1. Spices should be used more in meal preparation to keep individual consumer maintain good health status.
2. Individuals should make conscious effort to find out the nutritive values of local spices around and take advantage of the useful constituents to enhance quality of life.
3. People who have ill-health challenges or the other, should seek out spices that have nutritive values that can help solve the problem instead of depending on drugs alone.
4. One should make conscious efforts to ensure that meal consumed from time to time contain spices that will help live healthy as one aged gracefully.

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FIGURE TYPES AND DEFECTS: IMPLICATION FOR FEMALECLOTHING SELECTION

[1]O. E. AKINYOTU [2]N. I. NWABAH [2]L. E. OSHIO

[1]Departmet of Home Economcis, Adeyemi Federal University of Education, Ondo City
[2]Department of Vocational and Technical Education, University of Benin, Benin City
*Corresponding Author: oseakin@gmail.com

Abstract

Clothing is meant to cover, beautify the wearer's body structure, build self –confidence, creates cultural, social identity, enhance styles, reflect the culture and hide part or parts that have defects. This paper aimedat educating the public and clothing designers on figure types and defects and their implications for female clothing selection. This paper reviewed the concepts of clothing, figure, figure types, defects, figure defects, ways of identifying related figure types, standard women's clothing conversion, specific clothing for women, among others. The female gender is specifically classified into four figure types from which there can be several derivatives. They are straight figure, pear –shaped figure, apple shaped figure and hour glass figure. The effects of figure types on clothing design and how clothing can be used to hide figure defects were specifically discussed. Factors affecting good apparel fittings such as appearance, comfort, design, fabric among others and the strategies for hiding figure defects were highlighted and discussed. Furthermore, constructing patterns for different figure types to hide their figure defects, good understanding of one's figure type and defect to expose an individual to the mistakes in taking darts, pleats and joining the balancemarks in clothing construction among others are some of the implications for Home Economics Education. The paper concluded that every figure type is beautiful on its own notwithstanding its defect, hence clothing must be designed to de-emphasize the figure defect but emphasize on the figure details to enhance the appearance of the wearer. Recommendations were proffered to guide female clothing consumers on the typeof garments that will help disguise figure faults, female youths should have a good knowledge of their figuretype and defect and should endeavor to select outfits that suit their figure types.

Keywords: female, figure types, figure defects, clothing selection

Introduction

Clothing articles are fundamental needs of humans used for covering and beautifying the body. Clothing simply refers to any garment, accessory, ornament and apparel placed on the body to adorn, protect, projector communicate intent. The kind and nature of clothing used by individuals portrays or reflects the economicstatus, role(s), religion and most times beliefs in a particular society. In other words, clothing includes make-ups, hair-do, jewelry, shoes and most importantly dresses. The way and manner of dressing goes a long wayto tell the kind of home or upbringing of a person. According to David (2018), clothing is one of the basic needs of man which influences individuals' health, wellness and status. The way people dress can tell a lot of things about them. The different socio- economic classes typically dress differently as a matter of class identification to impact the information to other members of the class, family or community. Stone (2011) defined clothing as a major aspect of personal appearance that often bears cultural shared meaning. Cultural shared meanings are learnt from birth, and it is expected that every female through her interaction with others have learnt these behaviours. Clothing has been identified as an essential need for every human existence allover the world.

However, four major theories have been used to explain the reasons behind individuals' clothing choices and decisions, such theories include modesty, immodesty, protection and adornment theories. Modesty theory is based on the fact that clothing is worn to conceal the private parts of the body. According to Patrick, Duut and Agaasa (2018), modesty theory alludes the concept of respectability, properness and suitability that certain body parts are dishonorable and ought to be consequently secured. Immodesty theory explains that

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clothing can be used as a sexual tool to highlight private parts of the body, that is clothing is worn to attract attention rather than to conceal. Adornment theory refers to the decorative nature of clothing which reflectsa holistic approach to fashion for beauty purpose and to improve appearance. Protection theory suggests that clothes protect humans from dangerous elements and against extreme climatic conditions. Clothing is meantto conceal the body parts, beautify, improve appearance, protect and hide part or parts of the body figure.

Figure is known as the outline or shape of a person's body that comprises of the lines, points or planes that form a closed boundary. Anikweze (2013) refers to figure as the shape of an individual human body particularly with regard to its slimness or attractiveness. Figure is the physique of an individual that comes in different types and is often determined by the chest or bust, waist and hip. Eyisi, Bala, Bello and Akanbi(2007) refer to figure as the way an individuals' body is shaped. Body figure can also be referred to as the molding of skeletal structure as well as the distribution of muscles and fat. Figures are shaped as either on disproportionately wide in any one place, or full at the bust and small at the hips (top heavy) or they are small in the bust and big at the hips (hip heavy type). Figure shape determines the garments design for properdress sense and good color combinations for females.

Females are fashionable in nature and always desire to look their best at all times. Females tend to have morefat mass and be curvier due to a combination of larger breasts, wider hips, larger buttocks and bigger thighs (Richardson, 2022). However, a person's figure is the fundamental shape which constitutes the foundation of patterns, clothing designs and clothing selections. Hubpages (2019) classified the female gender into fourfigure types from which there can be several derivatives; they are straight figure, pear shape figure, apple shape figure and hour glass figure. No two individuals are exactly the same in terms of body measurements,although certain individuals fall within a certain range and these ranges define the different figure types. Igbo and Iloeje (2012) state that the straight figure, pear-shape figure, apple-shape figure and hour-glass figure are the four major figure types for female gender.

Figure type is based on the height, width and depth of the figure. In analyzing an individual's figure type, the body proportions and shapes would be compared with the descriptions of the standard figure types. Simone and Sullivan (2019) explained that human body's figure types come in all different shapes and sizes,some are curvier, and some have narrower hips or broader shoulders among others. The straight figure typehas almost similar busts and hips measurement with no defined waist. This body type is quite common and sometimes regarded as the ruler or rectangle body type. The pear-shaped figure type is also known as triangleor A-shaped body type which is defined by narrow shoulders and small waist extending to significantly widerhips that is it has large hips wider than the bust and shoulder. Pear- shaped figures do have a well-defined waistline and maintains good curves. Most adult women's bodies are pear-shaped because they gain lower body weight, especially after marriage, as a result of middle-age spread.

The apple-shaped figure type is also known as inverted triangle or V shaped figure type and is characterizedby a body shape with bigger proportions on the top than on the bottom that is wider bust measurement, relatively flat buttocks and a nicely defined waist. Most women gain upper body parts in their teens as wellin the early 20s, and those who maintain this condition into later life often have nice slim legs. Finally, the hour-glass figure type is characterized by exact width for hips and shoulder, reasonably defined waistline, rounded buttocks, full thighs but slimmer than the lower hips and rounded and titled shoulders (Salameh, 2022).
From the four figure types described in the foregoing, there can be several other derivatives such as column-straight and briquette-straight figure types, skittle-pear and bell-pear figure types, top cello-hour-glass and vase-hour-glass figure types, spoon figure type, diamond figure type, oval figure type, petite figure type, athletic figure type, thick athletic figure type, and muscular figure type. However, it is important to note that none is critically bad, individuals in the world of art, fashion came up with standard figure and termed it Figure "8" good and acceptable figure type and expressed dissatisfaction with certain details of their figure that they perceived to be defective. The areas of defect are called "Figure Faults". For instance, dresses with

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fullness control, square neckline among others are unsuitable for fat ladies because it adds fullness to the fat figure, also vertical stripes garment are not meant for tall figure as all these are often regarded as body defects.

Defects are imperfections, deficiencies or faults that impair the quality of something or of a person's figure. Defect in clothing is an imperfection which can manifest itself in the shape or outline of a person's figure that spoils the appearance of such a figure. A defect in a person's figure reveals the flaws in such a figure which may be highly pronounced in some and mildly pronounced in others. It is the focal point in figure type that spoils the appearance or outlook of an individual especially if it is easily recognized or hid .These defects are referred to as figure faults. The faults in a particular figure type, similar to beauty, actually existin the mind of the person and subsequently in the eyes of the beholders. In other words, when a person is significantly concerned (worried or conscious) of the perceived faults in her figure, people pay attention to such undesirable details.

Figure defect refers to body features that are not balanced or regularly arranged either on opposite sides of a line or around a central point. Such body features create unequal appearance or disarming in the person's figure. Bodies with figure flaws are characterized by disproportionate parts of the body such as flat chest, large bust, short neck, long neck and large hips. They also manifest abnormally plump, obese and heavy proportions of body flat distributed around the waist and the abdomen presenting unequal appearance or disharmony in the person's figure. These figure defects can cause difficulties in wearing and removing of garments except where appropriate adjustments have been made to obliterate the figure problems though correct body measurements among others.

Body measurement is a veritable tool in excellent fitting of garments both for locally or foreign made garments. It is expedient for a seam mistress, tailor and fashion designer to get the accurate body measurement for the client they are sewing for. Inaccurate body measurements will result to unfitted garmentor badly constructed garment which will further expose the figure defects of such an individual.

People seem not to know their body figure type and not conscious of body defects, therefore the choice and use of clothes that do not match their body figure type and hide their body defects are seen worn by a good number of the female gender. Therefore, the researcher is worried that if this awareness is not created, people will continue to use clothes that do not fit their body figure and hide their body defects which are seen as an indecent dressing. It can therefore be deduced from the context of this paper that each figure type has its own unique beauty and figure defects which can only be de-emphasized through correct clothing selection. It is against this background that this paper aims to identify the different figure types and defects and its implication for female clothing selection.

Identification of Related Figure Type

According to Phyllis (2014), the following ways could be used by an individual to identify related figure type. First, a figure type of about someone's height is the person's figure type and the patterns designed for that figure will fit such an individual. Two same figure types with same measurement of bust, waist and hip measurements as well as the back-waist length is a figure type nearest to such an individual.

If a person's exact measurements are not listed for any figure types, decisions should be made on measurements, figure description and height. The closer one comes to a person's measurements and proportions, the better such garment will fit. In clothing, clothing size represents the label sizes used for both male and female garments in the selection of clothing items for one's size that is clothes that fit an individuals' figure type.

Below is the Standard Women's' Clothing Measurement Conversion Table that show size differences in American, United Kingdom, Europe, Italian, Australian and Japan.

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Table 1: Standard Women's' Clothing Conversion

UK	USA	EU	ITALY	AUSTRALIA	JAPAN
6	4	32	38	6	7
8	6	34	40	8	9
10	8	36	44	10	11
12	10	38	46	12	13
14	12	40	48	14	15
16	14	42	50	16	17
18	16	44	52	18	19
20	18	46	54	20	21
22	20	48	56	22	23
24	22	50	58	24	25

Source: Kiwi Sizing (2023)

Specific Clothing for Female Figure Types

There are various types of specific clothing for female figure types. According to Dress magazine (2022), there are straight figure type, pear shape figure type, apple shape figure type and hourglass figure type.

1. **Straight Figure Type:** This female body type has a much heavy bottom. A straight body type woman can wear any tube dress with a wide belt on it. The belt will define waist and will make a little hourglass look.

Figure 1: Straight Figure type
Source: Dreamstime (2023)

2. **Pear-shape Figure Type:** Pear shaped body type women should wear clothes with designer tops and upper body accessories. In this way, they can draw more attention to their upper body. A-line, fit and flare or wrap dresses that highlight the natural waist and flow out below the hips should be chosen. The hips also can be slimmed by wearing dark-colored skirts that are wide-leg, boot cut or flared. A wide neckline such as boat and scoop necks tops that broaden the shoulders and emphasize the bust is more appropriate for this figure type.

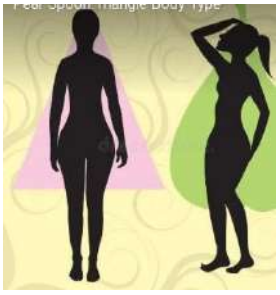

Figure 2: Pear-Shape Figure Type
Source: Dreamstime (2023)

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3. **Apple-shape Figure Type**: This figure type is characterized by a top-heavy figure. Women in this category should dress in a way that people do not get much attention on the upper body part. Their clothes should have ruffles, chain or some other designs at the lower part so it will draw people's attention. Loose peplum, soft- shaped fabric shirt are suitable for this figure type. They should wear bright colors on the lower body and avoid excessive fabric around the midsection.

Figure 3: Apple-Shape Figure Type
Source: Dreamstime (2023)

4. **Hourglass Figure Type**: Individuals with this figure type can wear anything simple and classic and it will look good on them. However, the best suggestions for them will be dresses fitted with a V-shape or round neckline; three-quarter sleeves, jeans with high and medium fit, and avoidance of too tight-fitting dresses.

Figure 4: Hourglass Figure Type
Source: Dreamstime (2023)

How Figure Types Affect Clothing Design

Garments can be worn to flatter appearance; thus, garments should be designed considering the elements of design such as lines, proportion, color and patterns to match the various figure types. The figure variations of people which come in a variety of sizes, shapes and proportions include:

- *Facial shape, for instance, oval, narrow, broad and wide*: Oval shape is seen as the 'perfect' shape. Hence people with this facial shape can wear any shapes as the neckline. Square face should use other neckline shapes to de-emphasize the roundness. While square facial shape need necklines such as round, scooped and 'V' shaped.
- *Neck length and width*: For instance, short, long, wide and narrow neck. Deep necklines look good on short neck figures. Strapped garments and off-shoulders are also good. High neckline cuts of clothes are most suitable for long neck figure.
- *Square shoulders figure*: This type of figure does not need shoulder pads and sleeve heads. V-necks, scoop-necks and collarless blouses hang well on this figure as they divert the attention towards the collarbones and chest.
- *Dropping shoulders figure*: This might be the result of a genetic condition or probably caused by lifestyles habits or by excess weight. It lacks a horizontal plane and slope downwards. The sleeve heads

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of the garment of such an individual needs to be raised and also a slight drop in armhole should be donein the sleeve pattern as it doesn't need as much ease for curving around the shoulder.

- *Large upper arms*: The armholes should be made deeper, the sleeves looser and sleeve length 2.5cm above elbow length. Three-quarter sleeves, long sleeves rolled up and kimono style blouses are more appropriate and fit.
- *Hunch back figure*: This figure type should avoid tight fitting tops, wear collars and add shoulder pads to their garments to help correct the defect. Portions on the figure which have grooves should be noted, located on the garments and padded to reduce visibility of the hunch. (Phyllis, 2014)
- *Hollow chest*: This is a posture problem characterized by a depression in the upper chest area above thebust line and often accompanies round back and shoulder problems. It causes clothing to fall in horizontal folds across the chest and causes the grain line to drop at the centre front chest. To correct this, the neckline gap should be smoothened out, V-necks tops or dresses fit well.

Using Clothing to Hide Figure Faults

Good knowledge of the figure type and figure fault will assist an individual in the choice of garment that will cover up her figure defect and prevent it from being pronounced. Use of standard measurements in clothing construction gives the proportion on the parts measured and better indication of shape. Ezike and Bob (2019) assert that dresses sewn on standard measurements based on average body measurements for various sizes do not normally fit individuals with figure faults. Hence, there is the need to make necessary alterations to take care of the faults. Furthermore, balance and proportion are essential consideration in designing and constructing garments for women with figure problems.

Hence, every woman wants to appear attractive and presentable and the image a person creates depends partly on apparel. Thus, apart from consideration of comfort derived from dress and the easy movement it confers, women should also be conscious of the type of personality and life-style that a particular dress confers on the wearer. For example, women with tiny figures should prefer small patterns which suit their size and color. If women with tiny figure choose large prints, the dress would appear overpowering and exaggerated for their size. However, confident and sophisticated ladies do not mind how they appear in theeyes of onlookers.

According to Sanchez (2012), Trivedi (2015), Perfectly Basic (2023), correction of sloping or narrow shoulder, fuller arms, small breast, big breast/large bust, flabby belly, wide hip, flat buttocks, full thighs, short legs, long legs, unpleasant knees, short and plumb, tall and thin figure faults can be corrected thus:

1. **Overall Fatness:** If a person has excess fat across her body, it is necessary to avoid baggy dresses. Dress that is not tight to the body, but comfortable and well-fitting will make a huge difference (Sanchez, 2012). Garments with vertical stripes that tend to make the wearer thinner should be worn.
2. **Long Neck:** Though a long neck is beautiful and elegant, a person who wants to conceal it should makesure that the neckline of the dress does not show too much bare skin. Also, long necklaces and short haircuts should be avoided while high collars, short necklaces, scarves and long and full haircuts will correct the perceived defect (Sanchez, 2012).
3. **Short Neck:** People with short necks should avoid high collars, lots of jewellery, scarves and long haircuts.
4. **Broad Shoulders:** In the occasion that the shoulders of a person are broader than deemed appropriate, bat or raglan sleeves with deep and narrow V-necks should be chosen. This will break the broad shoulderline. Shoulder pads, epaulettes, puffed sleeves and scoop or shallow necklines should be avoided.
5. **Sloping or Narrow Shoulders:** For shoulders that appear narrower than normal, raglan sleeve and bat sleeves, bare shoulders and deep and narrow V-necks should be avoided. Adequate and just enough shoulder pads, epaulettes, puffed sleeves and a boat neck or shallow neckline should be used.
6. **Fuller Arms**: In a situation where there are fats in the arms such that they are flabby, sleeves chosen should not dare be too tight, but a little too loose. Puffed sleeves, cap sleeves, and sleeveless tops shouldbe avoided, while tops with loose, wide sleeves and half or long sleeves should be chosen.

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7. **Small Breast:** Although small breasts look very beautiful in a lot of garments, there are certain ways to give them a little more volume. Additional details should be added at the height of the bust are stunning. Ruffles, pockets, prints or sequins should be used while necklines that are too open should be avoided.
8. **Big Breast/Large Bust:** Open necklines, a deep V-neck and loosely draped tops will give air to the top part of the body, covering the obvious largeness of the breast. The use of wrap tops and cardigans will help divide the bust and this is what makes them appear less large. High necklines, details at the heightof the breasts and skirts with a high waist are not desirable. Generally, dresses should be looser on the top and more form-fitting at the lower part of the body.
9. **Flabby Belly:** Tops with an accent on the side should be chosen for a striking closure. Pants and skirts with light pleats and tops that loosely fall along the curves will hide the love handles. Fabrics that clingto the body, tight tops and wide belts are less attractive. High-waist skirt with prints will cover the defect elegantly.
10. **Wide Hips:** Wide hips should be balanced out by putting the emphasis on the shoulders with epaulettesor shoulder pads. Pockets at hip height, hipsters, tight pants, skirts and pants with outstanding pleats and clingy fabrics should be avoided. Pants and skirts with a high waist line or flat pleats will help conceal the defects more. Trivedi (2015)
11. **Flat Buttocks:** More volume should be added by choosing peplum tops, catchy pockets, details at the back and heavy fabrics. Clingy fabrics, fitted skirts and pants optically will make the buttocks flatter.
12. **Full Buttocks:** Pants and skirts that loosely fall over the behind and a blazer that reaches to the hips will look on a person with full buttocks, as well as a dress that is form fitting at the waist but flowing under. Short jackets and shorts should be avoided. The goal should be how to keep the dress flowing and not baggy. A tighter fitting top will help show off the top part of the body and take attention away from the full buttocks.
13. **Full Thighs:** Pants with stretch will make a person with full thighs more comfortable. Emphasis shouldbe put on the shoulders with epaulettes and shoulder pads, thus bringing the fuller half of the body into balance. Jackets and tops that stop just above or just under the widest point of the body should be chosen and unwanted accents should not be placed on the downsides. Lighter colors at the top and darker colorsat the bottom are preferable.
14. **Short Legs:** Heels will give the body more length and enable upright walking. Pants should always reach a little over the shoes, and not too short, else the legs optically become shorter. Pants or skirt andshoes should be in the same color to ensure a flow.
15. **Long Legs:** Long cardigans, tunics, pants and skirts with a low waistline should be chosen. Pumps with fine heels will look beautiful with long and slim legs. However, a contrast in colors at the bottom will reduce perceived length of the legs.
16. **Unpleasant Knees:** Sailor trousers will help conceal dark, wrinkled or undesirable knees. Palazzos witha plain crop top and print are better alternatives than ordinary top and jeans (Trivedi, 2015).
17. **Short and plump figure:** People who are short and plump need to choose garments that give the illusionof height. Lots of vertical lines give an impression of height as well as slimness. A sheath dress which is long, straight and sleeveless with belt gives an illusion of height. Fabric patterns with vertical designs, straight cut dresses and one color suit with matching vest are good choices. Turtle necks are hence discouraged for this figure types.
18. **Tall and thin figure:** This is an ideal shape for wearing clothes by European standards. Gathered or pleated full skirts, flared or wide-legged trousers and horizontal stripes or seams should be chosen. Multicolored outfits with bright, large patterns are also good. Double breasted jackets and coats can be worn. The reduction of height works well if the top and blouse are of contrasting colors. Tight, high turtle necks, sleeveless styles and small accessories should be avoided to de-emphasize slimness.

Implications for Home Economics Education

In relation to Home Economics Education, the understanding of different figure types and faults call for thefollowing:

1. Special patterns for different figure types and defects should be developed and taught to students inHome Economics classes.

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2. Home Economics prepares learners for latter lives therefore its programmes should be designed in a manner that students think beyond getting scores for cognitive development, but also receive feedback for the way the knowledge of recommended clothing articles for different figure types and faults are demonstrated in their daily clothing choices.
3. Home Economists should engage female and male youths such as colleagues, family members and friends informally about the need to play down the defects that are easily identifiable with their figure type.
4. In order to improve the services and goods used by the family and for individuals to derive maximum satisfaction, Home Economics will impart and give opportunity to both boys and girls to make and adjust their own patterns to suit the figure types.
5. The study of figure types and faults will enlighten Home Economists on the advantages of taking accurate measurements and use of drafted patterns before cutting and sewing of dresses in order to suitthe person's figure.
6. Good understanding of figure types and faults will expose individuals to the mistakes in taking darts, pleats and joining the balance marks in clothing construction.

Conclusion

This paper concludes that every figure type is beautiful in its own right and has its own figure fault or defect. There is specific clothing for different female figure types which automatically covers the defects, hence clothing must be designed to either emphasize the figure details in order to enhance the appearance of the wearer, raise an individual's self- esteem and build the confidence. Dressing to suit one's body type is more important than trying to force an outfit to keep up with a trend. Hence, it is pointless to be worried or anxious over one's figure type or perceived defects. However, observed faults can be corrected. Also, the importationof foreign clothing especially second hand clothes has significant effect on the choice of female clothing without considering if the clothing article actually fits their figure types. Clothing should be made to cover figure defects and the road to actualizing this will start with determined effort of both the garment designerand the consumer to sew and wear the appropriate garment for a figure type. It is therefore pertinent for females to either appreciate their figure type or correct the perceived defects through the right choice of clothing.

Recommendations

The following recommendations are given to assist female youths in clothing selection:

1. Female youths should have a good knowledge of their figure type and defect and should endeavor to select outfits that suit their figure types.
2. Nigerian female youths should appreciate their figure types and have a good knowledge of figure faults.
3. Informed clothing choice should be used to correct perceived faults in a figure type instead of plastic surgeries and use of mercury-dense makeovers
4. Female youths with pronounced figure defect should learn to sew their own clothes and avoid imitating styles seen on other figure types.

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THE ROLE OF PHYTOCHEMICALS IN GOOD HEALTH

[1] Dorcas Olajoju OBISESAN [2]Ekemini E. UKO-AVIOMOH
[1]Home Economics Department School of Secondary Education,
Vocational and Technical Programmes
Federal College of Education (Special) Oyo, Oyo State, Nigeria
Obisesandorcas@Gmail.Com. 08137221902
[2]Department of Vocational and Technical Education, Faculty of Education,
University of Benin, Benin City Edo State, Nigeria.
08056650906

Abstract

The study examines the role of phytochemicals in good health. Phytochemicals are chemicals of plant origin. They are generally regarded as research compounds rather than essential nutrients because proof of their possible health effects has not been established yet. Naturally occurring compounds, known as phytochemicals are thought to be largely responsible for the protective health benefits of these plant-based foods and beverages. Conclusively plant-based foods are complex mixtures of bioactive compounds; information on the potential health effects of individuals, phytochemicals is linked to information on the health effects of foods that contain those phytochemicals. It is recommended that prolong cooking of fruits and vegetables should be avoided which destroy the phytochemical present in the food.

Keywords*: Role, Phytochemicals, Good Health.*

Introduction

Phytochemicals are chemical compounds produced by plants, generally to help them resist fungi, bacteria and plant virus infections, and also consumption by insects and other animals. The name comes from Greekword (phyton) 'plant'. Some phytochemicals have been used as poisons and others as traditional medicine such as red, blue, and purple colors of berries derive mainly from polyphenol phytochemicals called anthocyanins. Cucurbita fruits, including squash and pumpkin, typically have high content of the phytochemical pigments called carotenoids. As a term, phytochemicals is generally used to describe plant compounds that are under research with unestablished effects on health and are not scientifically defined as essential nutrients. Regulatory agencies governing food labeling in Europe and the United States have provided guidance for industry limiting or preventing health claims about phytochemicals on food product or nutrition labels (Sclbert , Johnson and Satlmarsh 2005).

The Concept of Phytochemicals

Phytochemicals are chemicals of plant origin. Phytochemicals (from Greek phyto, meaning "plant") are chemicals produced by plants through primary or secondary metabolism. They generally have biological activity in the plant host and play a role in plant growth or defense against competitors, pathogens, or predators. Phytochemicals generally are regarded as research compounds rather than essential nutrients. Phytochemicals under research can be classified into major categories, such as carotenoids and polyphenols, which include phenolic acids, flavonoids, and stilbenes/lignans. Flavonoids can be further divided into groups based on their similar chemical structure, such as anthocyanins, flavones, flavanones, and isoflavones, and flavanols. Flavanols further are classified as catechins, epicatechins, and proanthocyanidins. In total, there has been over 25,000 phytochemicals discovered and in most cases, these phytochemicals are concentrated in colourful parts of the plants like fruits, vegetables, nuts, legumes, and whole grains, and so many other (Kris 2021).

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Phytochemists study phytochemicals by first extracting and isolating compounds from the original plant, followed by defining their structure or testing in laboratory model systems, such as cell cultures, in vitro experiments, or in vivo studies using laboratory animals. Challenges in that field include isolating specific compounds and determining their structures, which are often complex, and identifying what specific phytochemical is primarily responsible for any given biological activity. Without specific knowledge of their cellular actions or mechanisms, phytochemicals have been used as poison and in traditional medicine. Salicinfor example with anti-inflammatory and pain-relieving properties, was originally extracted from the bark ofthe white willow tree and later synthetically produced to become the common, over-the-counter drug, aspirin. The tropane alkaloids of Atropa belladonna were used as poisons, and early humans made poisonous arrows from the plant.

In Ancient Rome, it was used as a poison by Agrippina the Younger, wife of Emperor Claudius on advice of Locusta, a lady specialized in poisons, and Livia, who is rumored to have used it to kill her husband Emperor Augustus. (Kris 2021) The English yew tree was long known to be extremely and immediately toxic to animals that grazed on its leaves or children who ate its berries. However, in 1971, paclitaxel was isolated from it, subsequently becoming an important cancer drug. As of 2017, the biological activities for most phytochemicals are unknown or poorly understood, in isolation or as part of foods. Phytochemicals with established roles in the body are classified as essential nutrient. (Webb 2013). The phytochemical category includes compounds recognized as essentia

Phytochemicals Role in Good Health

Studies suggest that consuming foods and beverages rich in these compounds may help prevent disease. Much of early medicine relied on the prescription of specific plants and herbs for healing, a practice still supported by contemporary research. One of the principle recommendations from the 2010 Dietary Guidelines is to eat more fruits, vegetables, and whole grains by having fruits and vegetables represent one-half of the food on the plate and making whole grains account for one-half of the recommended six or more daily servings of grains (Webb 2013). That recommendation was developed based on several population studies suggestingdiets rich in fruits, vegetables, and whole grains may offer some degree of protection against cancer, cardiovascular disease, type 2 diabetes, and neurodegeneration.2-5.Consumption of tea, wine, and cocoa, which also are plant based (tea comes from the dried leaves of the Camellia sinensis bush,wine from grapes, and cocoa from the dried and fermented seed of the Theobroma cacao tree), has been associated with reduced risk of these diseases as well.6- (Kris 2021).

Naturally occurring compounds, known as phytochemicals (phyto means plant in Greek) are thought to be largely responsible for the protective health benefits of these plant-based foods and beverages, beyond those conferred by their vitamin and mineral contents. These phytochemicals, which are part of a large and varied group of chemical compounds, also are responsible for the color, flavor, and odor of plant foods, such as blueberries' dark hue, broccoli's bitter taste, and garlic's pungent odor. Research strongly suggests that consuming foods rich in phytochemicals provides health benefits, but not enough information exists to make specific recommendations for phytochemical intake.(Bauer, Johnson, Beebe-Dimmer 2012)**.**

Phytochemicals, also referred to as phytonutrients, are found in fruits, vegetables, whole grains, legumes, beans, herbs, spices, nuts, and seeds and are classified according to their chemical structures and functional properties. The terminology used to describe phytochemicals (flavonoids, flavonols, flavanols, proanthocyanidins, procyanidins) can be confusing. Phytochemicals include compounds such as salicylates, phytosterols, saponins, glucosinolates, polyphenols, protease inhibitors, monoterpenes, phytoestrogens, sulphides, terpenes, lectins, and many more. The Phytochemical Family Tree shows the major groups of phytochemicals found in foods. Tens of thousands of phytochemicals have been identified, and researchers speculate that there are likely many more they haven't yet discovered in the foods we eat. Though the broadest groups of phytochemicals, such as flavonoids, isoflavones, or anthocyanidins, often are referred toas if they were a homogenous group, the individual compounds within each group have different chemical

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structures, are metabolized differently by the body, and may have different health effects. Flavonoids are the largest, most varied, and most phytochemicals (Uzzo ,Brown,& Horwitz, 2004).

How Phytochemicals Work

There are many phytochemicals and each works differently. These are some possible actions:

- Antioxidant - Most phytochemicals have antioxidant activity and protect our cells against oxidative damage and reduce the risk of developing certain types of cancer. Phytochemicals with antioxidant activity include; allyl sulfides (onions, leeks, garlic), carotenoids (fruits, carrots), flavonoids (fruits, vegetables), polyphenols (tea, grapes).
- Hormonal action - Isoflavones, found in soy, imitate human estrogens and help to reduce menopausal symptoms and osteoporosis.
- Stimulation of enzymes - Indoles, which are found in cabbages, stimulate enzymes that make the estrogen less effective and could reduce the risk for breast cancer. Other phytochemicals, which interfere with enzymes, are protease inhibitors (soy and beans), terpenes (citrus fruits and cherries).
- Interference with DNA replication - Saponins found in beans interfere with the replication of cell DNA, thereby preventing the multiplication of cancer cells. Capsaicin, found in hot peppers, protects DNA from carcinogens.
- Anti-bacterial effect - The phytochemical allicin from garlic has anti-bacterial properties.
- Physical action - Some phytochemicals bind physically to cell walls thereby preventing the adhesionof pathogens to human cell walls. Proanthocyanidins are responsible for the anti-adhesion properties of cranberry. Consumption of cranberries can reduce the risk of urinary tract infections and will improve dental health. (Thomas, Williams,& Bellamy (2014)

How Do We Get Enough Phytochemicals.

Foods containing phytochemicals are already part of our daily diet. In fact, most foods contain phytochemicals except for some refined foods such as sugar or alcohol. Some foods, such as whole grains, vegetables, beans, fruits and herbs, contain many phytochemicals. The easiest way to get more phytochemicals is to eat more fruit (blueberries, cranberries, cherries, apple) and vegetables (cauliflower, cabbage, carrots, broccoli). It is recommended take daily at least 5 to 9 servings of fruits or vegetable. Fruits and vegetables are also rich in minerals, vitamins and fibre and low in saturated fat.

Future of Phytochemicals

Phytochemicals are naturally present in many foods but it is expected that through bioengineering new plants will be developed, which will contain higher levels. This would make it easier to incorporate enough phytochemicals with our food. The known phytochemical containing foods should be planted on a larger scale to increase the supply of phytochemicals to humans for healthy living.

Phytochemicals for Health Living

Phytochemicals are natural compounds found in plants that are responsible for the colour, taste and aroma of foods. As well as these pleasant attributes, they protect us from environmental and ingested carcinogens by arming antioxidant enzymes and enhancing DNA repair pathways. They also have direct effects on the fundamental hallmarks of cancer progression and metastasis.It is not a surprise then that the World Cancer Research Fund and other academic bodies report that individuals eating phytochemical-rich foods have a lower risk of cancer or relapse after treatments. **(Voorrips, Goldbohm, Van , &Poppel 2000).**

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Groups of Phytochemicals

There are three major groups of phytochemicals namely:

1. Polyphenols – sub categorised as the flavonoids, phenolic acids and other non-flavonoid polyphenols

* Flavonols**:** quercetin, kaempferol (onions, kale, leeks, broccoli, buckwheat, red grapes, tea, apples)

*Flavones**:** apigenin, luteolin (celery, herbs, parsley, chamomile, rooibos tea, capsicum pepper)

*Isoflavones**:** genistein, daidzein, glycitein (soya, beans, chick peas, alfalfa, peanuts)

*Flavanones**:** naringenin, hesperitin (citrus fruit)

*Anthocyanidins (red grapes, blueberries, cherries, strawberries, blackberries, raspberries, tea)

*Flavan-3-ols (tannins): catechins, epicatechin, epigallocatechingallate (tea, chocolate, grapes)

*Flavanolols: silymarin, silibinin, aromadedrin (milk thistle, red onions)

*Dihydrochalcones**:** phloridzin, aspalathin (apples, rooibos tea

Phenolic acids: These include**:**

*Hydrobenzoic acids: gallic acid, ellagic acid, vanillic acid (rhubarb, grape seed, raspberries, blackberries,pomegranate, vanilla, tea)

*Hydroxycinnamic acids**:** ferulic acid, P-coumaric acid, caffeic acid, sinapic acid (wheat bran, cinnamon,coffee, kiwi fruit, plums, blueberries)

Other non-flavonoid polyphenols: These include**:**

*Other tannins (cereals, fruits, berries, beans, nuts, wine, cocoa)

*Curcuminoids: curcumin (turmeric)

*Stilbenes**:** cinnamic acid, resveratrol (grapes, wine, blueberries, peanuts, raspberries)

*Lignans**:** secoisolariciresinol, enterolactone, sesamin (grains, flaxseed, sesame seeds)

2. Terpenoids – These are sub categorised as the carotenoids and non-carotenoid terpenoidsCarotenoid terpenoids:

*Alpha, beta and gamma carotene (sweet potato, carrots, pumpkin, kale)

*Lutein (corn, eggs, kale, spinach, red pepper, pumpkin, oranges, rhubarb, plum, mango, papaya)

*Zeaxanthin (corn, eggs, kale, spinach, red pepper, pumpkin, oranges)

*Lycopene (tomatoes watermelon, pink grapefruit, guava, papaya)

*Astaxanthin (salmon, shrimp, krill, crab)

Non-carotenoid terpenoids:

*Saponins (chickpeas, soya beans)

*Limonene (the rind of citrus fruits)

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*Perillyl Alcohol (cherries, caraway seeds, mint)

*Phytosterols: natural cholesterols, siosterol, stigmasterol, campesterol (vegetable oils, cereal grains, nuts,shoots, seeds and their oils, whole grains, legumes)

*Ursolic acid: (apples, cranberries, prunes, peppermint, oregano, thyme)

*Ginkgolide and bilobalide (Ginkgo biloba)

3. Thiols – includes the glucosinolates, allylic sulfides and non-sulfur containing indoles

Glucosinolates include sothiocyanates (sulforaphane) and dithiolthiones (cruciferous vegetables such as broccoli, asparagus, Brussels sprouts, cauliflower, horseradish, radish and mustard)

Allylic sulfides such as allicin and S-allyl cysteine (garlic, leeks, onions)

Indoles such as indole-3-carbinol (broccoli, Brussels sprouts)

Other phytochemical groups, which although have some properties within these groups, have been classified within a miscellaneous category, including betaines (beetroot), chlorophylls (green leafy vegetables),capsaicin (chilli) and peperine (black peppers)

Importance of Phytochemicals

The health benefits of phytochemical-rich foods or concentrated nutritional supplements are often being highlighted in the medical and popular media, and hence they are an increasing topic of conversation between medical practitioners and their patients, especially those with cancer who have a particular interestin over-the-counter self-help strategies 2, 3. There is increasingly convincing evidence to show that plant phytochemicals, particularly polyphenols, have significant benefits for humans, such as reducing our risk ofcancer and helping people living with and beyond treatments. Living well programmes, slowly being introduced in the UK, are beginning to highlight the importance of phytochemical-rich diets, as well as other lifestyle factors, largely being driven by the National Survivorship Initiative and guidelines from influential organisations such as the American Society of Clinical Oncology (ASCO)

Going a step further and concentrating these foods, or extracted elements of these foods, into nutritional supplements gives an opportunity to boost their beneficial anti-cancer effects, but have their pitfalls. Studiesof concentrated minerals, vitamins and phytoestrogenic supplements have reported detrimental effects. No study has reported detrimental effects of whole, non-phytoestrogenic food supplements and some have reported significant advantages.(Thomas, Willam & Bellamy 2014). Despite these potential benefits and reports that over 60% of patients living with and beyond cancer take nutritional supplements, oncologists have been reluctant to discuss their pros and cons due to lack of randomised controlled trials from academic institutions. Hopefully this trend will change, particularly following the success of the study and ongoing studies registered with the National Cancer Institute.

Conclusion

Phytochemicals in general, in the strictest sense, are chemicals produced by plants. However, the term is generally used to describe chemicals from plants that may affect health but are not essential nutrients. Meanwhile there is ample evidence to support the health benefits of diets rich in fruit, vegetables, legumes, whole grains and nuts, evidence that these effect are due to specific nutrients or phytochemicals is limited because plant based foods are complex mixtures of bioactive compounds, information on the potential health effects of individuals phytochemicals is linked to information on the health effects of foods that contain those phytochemicals

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Recommendations

1. There should be more emphasis on health talks or nutrition educational programme for the populaceon the role of phytochemicals in good health.
2. Meal planning should be majorly based on natural food which is plant origin rather than processed food or product which has no good benefit rather high risk of people with cancer, cardiovascular disease or diet related diseases.
3. Prolong cooking of fruits and vegetables should be avoided which destroy the phytochemicals present in the food.

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THE ROLE OF HOME GARDEN AS EFFECTIVE STRATEGY FOR PROMOTING FOOD SECURITY

[1] Valentina OJAOWHE [2]Lucy, E. OSHIO

Department of Vocational and Technical Education,
Faculty of Education
University of Benin, Benin City
Email: Valentineojaowhe@Gmail.Com; 07063068935
Oshio4christ@Gmail.Com

Abstract

This paper examined the role of home garden as an effective strategy for promoting food security. Food security is an essential part of human life because it affects human health and also influence the economy and political stability of a nation. Food security is the persistent concern about access to sufficientand affordable food at all time. Food insecurity set in when there is limited supply of food and this affect thegeneral wellbeing of household members. The paper reviewed the causes of food insecurity, its effect and the role of home garden in promoting food security. As well the benefits of home garden and some challengesfaced by home gardening.This paper concluded that home garden is an effective strategy to promote food security as it provide easy and quick access to nutritious, safe and wholesome food offers several other benefit which include improving health and well-being, generate income, provide employment amongst others. It was recommended that household members and unemployed youth should adopt home garden. Sack garden and container garden should be used in urban area where they lack space and food waste anddung should be used to increase the fertility and productivity of home garden.

Keywords: ***Food Security, Home Garden, Container garden, Sack garden, Food waste***

Introduction

Globally food and nutrition adequacy are facing critical challenges, as population increases, demand for food increases, if the level of food production is not at equilibrium with the increase demand for food, food insecurity set in. The world food summit held in 1996 defines food security as a situation that exists when all people at all-time have physical, social and economic access to sufficient, safe and nutritious food that meet their dietary need and food preferences for an active and healthy life (Perez-Escamilla, 2017). Food security is an essential part of human life because it affects human health and also influence the economic and political stability of the nation. Food security has four pillars which are food availability, food accessibility, food utilization and food stability. Several measures have been put in place to alleviate hungerproblem, yet food insecurity and under nutrition remain serious problem in many countries. United State Department of Agriculture (2022) defines food insecurity as a household level economics and social condition of limited or uncertain access to adequate food. Food insecurity seems to be influenced by several factors such as Poverty/unemployment, population growth, low productivity and unstable price of food, climate change and natural disaster, urbanization, conflict and insecurity, polices, food insecurity often haveserious effect at the household level, state and national level and if not address with several complications such as malnutrition both in children and adult, impaired immune system, social deviant amongst others. Food insecurity remains prevalent and have force many household to adopt destructive strategy for survivallike reducing portion sizes, consuming more stable food instead of nutrient dense food. These strategies could have negative impact on nutrition, health and general wellbeing, these consequently necessitated the need for home garden.

Home gardening is a mixed cropping system that encompasses vegetables, fruits, plantain, spices, herbs, ornamental and medicinal plant as well as livestock that can serve as supplementary source of food and

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income (Odebole, 2006). Home gardening entails the cultivation of herbs, vegetables, fruits, and shrubs mainly for personal consumption at home (Algert, Diekmann, Renvall & Gray, 2016). Home garden provides quick access to nutritious safe and wholesome food and it could help enhance food security. Despitethe many benefit of home garden, a larger number of household are yet to adopt home garden due to lack ofawareness and agronomy skills, pest attack and disease infestation**,** lack of fertile soil**,** lack of farming inputs**,**shortage of space**,** climate and natural disasters and theft of farm produce..

Hence the objectives of the paper is to examine:

- The concept of food security.
- The concept of food insecurity.
- The causes and effect of Food insecurity.
- The role of home garden in promoting food security and other benefits of home garden

The Concept of Food Security

Food security is defined as the persistent concern about access to sufficient and affordable food at all time (Paslakes, Dimitropoulos & Katzma, 2021)**.** According to Perez-Escamilla (2017) The first world food summit held in 1996 defines food security as a situation that exists when all people at all-time have physical, social and economic access to sufficient, safe and nutritious food that meet their dietary need and food preferences for an active and healthy life. Food security is an essential part of human life because it affects human health and also influence the economic and political stability of the nation Food security has four pillars, which are accessibility, availability utilization and stability (Ahmad, Shahnawaz, Husain, Qamar & Alam, 2021).

1. *Availability:* This is the physical, social and economic access to sufficient and nutritive food by all people and at all time. Such food must satisfy the dietary need and preference of the people. To a large extent food availability depends on the level of local production, imports stock levels and net trade in food items.
2. *Access*: These refer to economic, social and physical access to food by all people at all time. That an adequate amount of food is available at the regional, national or international level does not imply accessible and affordable.
3. *Utilization*: Generally, utilization refers to the pattern in which the body makes use and benefits from the various food nutrients. Utilization is determined by food quality, nutritional values, preparation method and storage as well as feeding pattern
4. *Stability***:** Stability defines the temporally dimension of food and nutrition security, individually the time frame in which food security is being considered. Stability is assumed when the supply food income and economic resources remain constant in a household level, during the year and in the long term. It is also essential to minimize external risks such as natural disaster, climate change, price, violence conflicts or epidemics and many more

The Concept of Food Insecurity

United States Department of Agriculture (2022) defines food insecurity as a household level economics and social condition of limited or uncertain access to adequate food A food insecure situation is said to exist when there is an imbalance between demand with the supply side .Food insecurity and economic hardships force people to consume less and to settle for food that is of low nutritional quality. Several measures have been put in place to alleviate hunger problem, yet food insecurity and under-nutrition remain serious problems in many countries.

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Causes of Food Insecurity at the Household level

1. ***Poverty low income/ unemployment:*** Poverty is one of the leading causes of food security. Many people suffer from chronic poverty. According to Ahmad et al., (2021) Poverty and food insecurity have a very close relationship, poverty can be due to low income or unemployment. It has been observe that people with low income or unemployment have little access to quality food and that Inability of people to gain access to food due to poverty in developing countries is the root cause of food insecurity. Slimane, Huchet-Bourdon and Zitouna (2016) observed that the unemployed are 8% and more likely to be food insecure when compared to employed persons. Hunger, poverty and disease are interlinked, hunger causes malnutrition and low immune system to poor people who cannot purchase enough food to eat. This makes them to be vulnerable to disease and death.

2. ***Low food Productivity/decline in home garden practices*** **:** The agricultural sector have face several challenges and depended too much on primary agriculture system with limited land space, low fertile soils, poor technology, limited research, less external farm inputs utilization and significant loss of food crops both before and after harvest, and lack of facilities for storage and preservation of food all of which have cumulatively contributed to low productivity and food price hike which have resulted in food insecurity. Agriculture is mostly practiced by the farmers who cannot access facilities required for optimum food production. Also, the practice of home garden have reduce and its rarely done in urban area due to limited land space and concrete floors.

3. ***Unstable food prices*****:** Nigeria has witness dramatic changes in price of food in recent years, reaching a peak of 20.32% in September 2017 (Central bank of Nigeria, 2018). Increased demand for food due to population growth, low productivity of food and price increase in fuel resulting in high cost of production have affected food distribution, availability and accessibility of food. According to Abimbola and Bolaji in Echebiri, Abode, Andrew, Onoghise and Amolo (2022) Price increase In fuel have made transport operators all over Nigeria to increase the cost of transporting human being and goods in order to meet up with their operational and maintenance cost. Cost of transporting food items and vendors from the point of purchase to the place of business has increased. This leads to poor distribution of food thus compelling food vendors that manage to obtain food items to increase the price of available food items,the increased in price have made the patronage of food dwindled (Echebiri et al., 2022).

4. ***Food wastage*****:** Food waste is said to be pronounced more in developing countries (Thi, Kumar & Lin , 2015) and Nigeria, being a developing country, is not an exception. The major causes of food waste are numerous and mostly occur during production, distribution, processing, retailing, and consumption of food (Umoru, 2021). Food wastage at the farm is due to poor harvest and post harvest handling techniques and lack of infrastructure for proper storage and preservation. Food wastage that occurs at the home is particularly due to lack of food resources management like portion control, poor cooking skills, lack of proper preservation and food storage at the home.

5. ***Lack of nutrition education*****:** Nutrition education improve food utilization, According to Hejazi, Aminzare, Ayatollahi, Mohammad, Hassan and Mehran (2023) nutrition education programs can be an effective and inexpensive method to improve food quality and security. Lack of nutrition education affect individuals food choices and dietary habit. Nutrition education assist individuals to improve their meal planning, interpretation of product nutritional indices and correct preparation methodologies to prevent food nutrient loss before consumption. The provision of nutrition education is also crucial to the efficient use of food resources, proper preservation techniques and portion size control, which help eliminate food wastage.

6. ***Lack of consumer education:*** Lack of consumer education have made individuals purchase stale, unsafe, unwholesome, expired, mislabeled, and adulterated food product at exorbitant prices. Consumereducation according to Giordan (2015), is the preparation of an individual to be capable of making

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informed decisions when it comes to purchasing products in a consumer culture. Individuals have bought expired food product and food product that contains unsafe additives without reading labels on food product. Some buy food product that are not fresh because they do not know the qualities to watch put for, for instance one have to be very observant when buying fresh fish and egg. Failure to do so could result in purchasing product that could easily go bad leading to food wastage. People lack budgeting skills which help prevent impulse buying, also bulk buying of food especially food in season and storing for future use through proper preservation help saves cost and makes food available all year round.

7. ***Population Growth:*** Rapid increase in population causes food insecurity. The global populationexceeded 7.6 billion people in 2018 (Food and Agricultural Organization, 2020) and it is predicted to reach 9.2 billion by 2050. Food production is currently below the population requirement resulting in food insecurity. Population growth exacerbates pressure on environmental degradation social causes, climate change and these further causes food insecurity (Ahmed et al, 2021)

Effect of Food Insecurity

Food insecurity has serious effect at the household level, state and national level and if not address, it couldleads to the following;

1. *Malnutrition:* Lack of nutritious food causes malnutrition, undernutrition results in low productivity; reduce physical and mental capacity, low immunity diseases and morbidity. Malnutrition increases the risk of low birth, weight, childhood stunting and anemia in women of reproductive age among others. Food insecurity can result in child stunting, wasting and micro-nutrient deficiencies by negatively affecting the sufficient intake of vitamins, protein, calories, and minerals will also obstruct factal, infant and child growth and development (World Health Organization, 2018).
2. *Poverty and Hunger:* Food insecurity causes hunger and poverty. A hungry person will be less productive and will continue to be poor. Hunger reduces immunity against most diseases and makes them prone to illness. Hunger, poverty, and diseases are interlinked. Poor people often cannot produceor purchase enough food to eat which makes them to be more vulnerable to diseases. (Ahmed et al., 2021).
3. *Increase in Crime Rate and Low Self Esteem:* People who are food insecure tend to engage in criminal activities. Kitenge (2023) opines that lack of food and its affordability can result in higher crime ratein impoverished neighborhood. Some people could resort to stealing in order to meet their needs, other end up being beggars. Food insecurity could increase crime rate. Other effect of food security is the development of low self-esteem. Insufficient food supply could make people to scramble for food in parties. This could result in low self-esteem.
4. *Chronic Diseases:* Food insecurity increases the risk of developing chronic diseases such as cardiovascular diseases, arthritis and other infections disease. One's immune system drops due to food shortage. Food insecurity make it difficult for individuals to manage existing health problems and this can worsen the condition. Food insecured individuals may struggle to adhere to therapeutic diets and forgo necessary medication because of the cost.
5. *Depression:* Food insecure people are prone to mental health problems. Zahid et al, (2021) in their study found out that poverty and mental health problems have a great linkage, basically depression, anxiety and stress.
6. *Poor Economic Growth:* Food insecurity impedes economic growth and national development. According to Ayinde (2019) no country can achieve economic development without addressing food insecurity. Food security and it derivatives are used as indicators because of the relationship that exist between the two (Otekunrin, Momoh &Ayinde, 2019). Food security must be sustained, for a nationto develop.

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Overview of Home Garden

Home garden is a garden close to the home, used for the cultivation of crops that are consumed by the household. Sometimes livestock are also reared alongside. Home garden is also called kitchen garden, back yard garden, rooftop garden and compound garden. According to Odebole (2006) Home gardening is a mixed cropping system that encompasses vegetables, fruits, plantain crops, spices, herbs, ornamental and medicinal plant as well as livestock that can serve as supplementary source of food and income. Common crop grown in home garden include yam, cassava, potato, plantain, Banana, maize, vegetables like bitter leaf, water leaf, pumpkin leaf, tomato, garden egg, pepper, garden egg, trees like mango, pear, pawpaw, orange, guava, herbs like curry and scent leaf etc. Common animals raise in home garden include goat, poultry, snail, rabbit, grass cutter, cattle, sheep, fish, pig etc. Home garden requires little or no resources, waste from animals can be use as manure. Kitchen waste, animal manure, and other organic residues help to increase the productivity and fertility of these gardens.

The beginning of modern agriculture can be dated back to subsistence farming that started in small garden farm around the home. Home garden can be found in rural and urban area. Sack gardening, container gardening and vertical garden exist in urban area due to limited land space, most of the land have been covered with concrete. The practice of farming in sack involves growing seedlings in large sacks filled withsoil (Kamadi, 2012). Container gardening is growing crops in containers filled with soil. Vegetables are most commonly grown in container food gardens, but many small fruit trees are also common. Several form of vertical farming exist which serve as good substitute. They enable urban farmer manage spaces and cultivate their crops in places unsuitable for in ground production.

Home garden employ family labor. Women, children, and elders are of particular importance in their management but, depending on the economic capacity and affordability, households may hire wage laborersto cultivate and maintain the home garden that in turn affect the composition and intensity of home garden activities. Home garden other than promoting food security offer several benefits such as economic benefitof income generation, improve mental wellbeing, promote health, preserve indigenous culture and knowledge as well as social and environmental benefits

The Role of Home Gardening in Promoting Food Security

Globally, home gardens are important supplementary source contributing to food and nutritional security and livelihoods. A previous study by Rezai, Shamsudin and Mohamed in (2016) showed that the availability and accessibility of fresh food among households in Putrajaya improved when they grew gardens. Developedhome garden contributes significantly to daily food needs, supplying households with all their daily food need (Nwaneke & Chude, 2017). Suri (2020) states that any action that promote nutrition garden that can ensure improved income, food access and dietary diversity will also provide sustainable nutrition for families and that any of such actions should be encouraged. Home garden promote food security in the following way:

- Home gardening provides access to nutritious, safe, diverse and healthy diet. Food product from home garden are mostly safer, fresher, healthier and more nutrient dense than the ones sold at the market which are grown with chemicals. Some farmers speed up growth, maturation and ripening with chemicals which may not be too safe for human consumption.
- Home garden help saves cost of transportation and time because it gives easy and instant access to fresh produce. This prevent forceful visit to the market.
- Homestead gardens serves as an avenue for making food available to the most vulnerable low income population.
- Home garden provides access to fresh medicinal herbs and spices, growing your own medicinal herbs save you money in the long run. Store-bought remedies can be expensive and their quality and effectiveness is not certain.
- Home gardens have been proposed as an option for food and nutritional security in disaster, conflict,

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pandemic and other post-crisis situations. Home garden played a significant role in ensuring food security during the Covid 19 pandemic lockdown, findings by Lal (2020) stated that home gardening ensures food security for urban households during period of crisis.

- Home garden give households added immunity against fluctuating global food prices

Conclusion

Home garden is an effective strategy to promote food security, it provide easy and quick access to nutritious, safe and wholesome food, it offers several other benefit which include improving health and well-being, generate income, provide employment to the unemployed, preserve indigenous culture and knowledge, improve mood and self-esteem, home garden provide multiple environment and ecological benefit .The implication for this work is for individual and household to adopt home garden and learn how to manage home garden for sustainable food security.

Recommendations

The following recommendations were made;

1. Household members and unemployed youth should adopt home garden to provide sufficient food for consumption, excess food can be sold out to generate income for the family. Unemployed youthshould be encourage to adopt home garden as a means of livelihood, they should acquire the necessary knowledge and skills required to manage a home garden as well as marketing skills neededto sell their product.
2. Sack garden and container garden should be used in urban area where they lack space for farming
3. Food waste should be process into compost manure to improve the fertility of the soil and increase yield. Dung and other organic residues can help to increase the fertility and productivity of home garden.

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SOCIAL MEDIA AS A PANACEA FOR THE GROWTH OF SMALL AND MEDIUM ENTERPRISES IN EDO STATE

[1]Ewemade IYAMU [2]Michael Osayande EKHOVBIYE

[1]Department of Vocational and Technical Education,
Faculty of Education, University of Benin, Benin City
[2] Department of Business Educations, Edo State College of Education, Edo State
michael.osayande@gmail.com
corresponding authorewemade.iyamu@uniben.edu*

Abstract
The paper examined social media as a panacea for growth of SMEs in Edo State. The concept of small and medium scale enterprises as well as social media was critically examined. Some prominent examples of social media networking were also outlined such as Facebook, WhatsApp, Twitter, SnapChat and so on. Benefits of social media on SMES growth were also examined to include; that there is a significant relationship between social media and the growth of SMEs in Edo State; that the use of Social Media develop the business; reduce running cost, improve efficiency and customer service; gives competitive edge from global accessibility; that social media advertising has positive effects on the Growth of SMEs; while the challenges of power and network congestion constitute a significant barrier to the successful utilization of Social Media in Edo State. It was concluded that social media networking is a viable tool in the hand of any modern entrepreneur for business differentiation and success because the business world is becoming more competitive in the emerging global village. It is therefore recommended that entrepreneurs should not lag behind in joining social media that will help them to get current and relevant information from far and wide to run their businesses. Government should also help in providing adequate infrastructural facilities that will enhance ICT growth in Nigeria and Edo State in particular.

Keyword: Facebook, Twitter, YouTube, Instagram, WhatsApp, Google+, SMEs.

Introduction

The world of information and communication technology is yet to experience something more phenomenal than the phenomenon of social media. According to Onah and Nche (2014), without doubt, social media currently seem to take the centre stage in the field of information and communication technology (ICT). In the same vein, Adaja and Ayodele (2013) observed that one of the breakthroughs in information and communication technology in the 21st century was the discovery and emergence of some media which have facilitated the creation of the different platforms for social interaction.

The term social media is quite often mentioned these days. It is a new phenomenon and one would probably imagine that everyone knows or understands what it means. Nearly ninety percent (if not more) of all onlineor internet users use social media in one way or the other. The emergence of social media began in the earlydays of internet when people started sharing information and communicating with one another but unfortunately; the platforms used then were more '*technology intensive*' and required some level of expertisebefore use. Hence, the number of people using social media platforms then was limited.
Sanusi, Gambo and Bashir (2014) opined that social media are media that allow users to meet online via the internet, communicate in social forum like Facebook, Twitter, WhatsApp, telegram and so on, and other chat sites, where users generally socialize by sharing news, photos or ideas and thoughts, or respond to issues and other contents with other people. Social Media is an interactive media format that allows users to interact with each other as well as send and receive content from and to each other generally by means of the Internetfor the successful operation of their businesses.

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The success of a business can be attributed to a number of factors, but the greatest determinant of a business's success is the entrepreneur. People who start up and run businesses need to know their own strengths and weaknesses because entrepreneurship involves the ability to build a 'founding team' with complementary skills and talents, Social media are becoming increasingly important to business owners as they provide firms with access to markets, ideas, information, advice, business opportunities, and other resources (Ogunnaike & Kehinde, 2013).

Adegbuyi, Akinyele and Akinyele (2015) opined that social media plays a vital role in marketing and creating relationships with customers. With limited barriers to entry, small businesses are beginning to use social media as a means of marketing. Unfortunately, many small businesses struggle to use social media and have no strategy going into it. As a result, without a basic understanding of the advantages of social media and how to use it to engage customers, countless opportunities are missed. Social media marketing and social media campaigns provide a window to market a product or service on the Internet through different social networks. The most common and successful means of social media marketing are found onsites like Facebook, Twitter, LinkedIn, YouTube, *Instagram,* WhatsApp, telegram and even company blogs(Ogunnaike & Kehinde, 2013). What is not yet clear to the researcher is does social media serve as a panaceafor growth of small scale business in Edo State?

Concept of Small and Medium Enterprises (SME)

There is really no agreed definition for Small & Medium Scale Enterprises (SMEs). The term SMEs coversa wide range of perceptions and measures, varying from country to country and between various sources reporting SME statistics. SMEs are commonly defined in terms of the number of employees, sales, total net assets and level of investment. Notably, the most common criterion for defining SMEs is the number of employees, although even with this yardstick, there is considerable variation in the upper and lower size limit of an SME. According to Udechukwu (2013) defined SME as an industry with a labour size of not more than 10 workers, or total cost of not more than ₦1.50 million, including working capital but excludingcost of land is a micro/cottage industry.

The author called an industry with a labour size between 11 – 100 workers or a total cost of not more than ₦50 million, including working capital but excluding cost of land a small scale industry, while medium scale industry is that industry with workforce between 101-300 workers or a total cost of over ₦50 million but not more than ₦200 million, including working capital but excluding cost of land. Udechukwu further opined that a large scale industry is with a workforce of over 300 workers or a total cost of over ₦200 million, including working capital but excluding cost of land. In Nigeria, similar definitions have been adopted in identifying SMEs in the nation's economy. The Central Bank of Nigeria (CBN) under its Small and Medium Enterprise Credit Guarantee Scheme (SMECGS) (CBN, 2019) defined SME as an enterprise that has asset base (excluding land) of between ₦5million – ₦500million and the labour force of between 11 and 300.

Concept of Social Media

Social media are defined as "a second generation of Web development and design, that aims to facilitate communication, secures information sharing, interoperability, and collaboration on the World Wide Web" (Paris, Lee, & Seery, 2020). There are numerous social media sites; among the most popular are Facebook, LinkedIn, Twitter, instagram WhatsApp, telegram. In 2018, Facebook announced it had over 2.23 billion users; in the same year, Twitter reported 335 million users, Instagram quoted 800 million users, while linkedin reported 467 million members. On average, consumers spend more than 5.5 hours per day participating on social media websites (Nelsonwire, 2020). With their increasing use, these sites are perceived as tools for creating online communities of users who share interests, activities, and objectives. The internet has revolutionized communication, allowing individuals and organizations to overcome geographical and time constraints, which in turn allows consumers and companies to connect around the world at any time (Harris & Rae, 2019). Social Media and online communities allow people to gather together on the Internet for various reasons, including searching for and sharing information, discussing

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communal issues, and making inquiries. With rapid changes in information technology, these online activities are now performed via a new form of communication technology known as "Web 2.0" or social media (Gretzel, Kang, & Lee, 2018).

Prominent Types/Examples of Social Media

According to Okolo, Ugbonna, Nebo and Obikeze (2017), most of the common examples of social media tools include:

- **Facebook:** is a popular free social networking website that allows registered users to create profiles, upload photos and video, send messages and keep in touch with friends, family and colleagues. According to statistics from the Nelsonwire Group (2020), Internet users within the United States spend more time on Facebook than any other website

- **Twitter:** is a free micro blogging service that allows registered members to broadcast short posts called tweets. Twitter members can broadcast tweets and follow other users' tweets by using multiple platforms and devices.

- **Google+:** is Google's social networking project, designed to replicate the way people interact offline more closely than is the case in other social networking services. The project's slogan is "Real-life sharing rethought for the web."

- **Wikipedia:** is a free, open content online encyclopedia created through the collaborative effort of a community of users known as Wikipedians. Anyone registered on the site can create an article for publication; registration is not required to edit articles. Wikipedia was founded in January of 2001.

- **LinkedIn:** is a social networking site designed specifically for the business community. The goal ofthe site is to allow registered members to establish and document networks of people they know andtrust professionally.

- **Reddit:** is a social news website and forum where stories are socially curated and promoted by site members. The site is composed of hundreds of sub-communities, known as "subreddits." Each subreddit has a specific topic such as technology, politics or music. Reddit site members, also knownas, "redditors," submit content which is then voted upon by other members. The goal is to send well-regarded stories to the top of the site's main thread page.

- **Pinterest:** is a social curation website for sharing and categorizing images found online. Pinterest requires brief descriptions but the main focus of the site is visual. Clicking on an image will take you to the original source. For example, if one clicks on a picture of a pair of shoes, one might be taken to a site where one can purchase them. An image of blueberry pancakes might take one to therecipe; a picture of a whimsical birdhouse might take one to the instructions.

- **YouTube:** YouTube is a popular video sharing website where registered users can upload and share videos with anyone able to access the site. These videos can also be embedded and shared on other sites. YouTube was developed by former PayPal employees in 2005 and was acquired by Google in 2006. It has had a profound impact on media and advertising

- **WhatsApp:** WhatsApp messenger is a cross-platform instant messaging application that allows iPhone, BlackBerry, Android, Windows Phone and Nokia smartphone users to exchange text, image, video and audio messages for free. In addition to basic messaging, WhatsApp provides group chatand location sharing options.

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- **Instagram:** Instagram is a free, online photo-sharing application and social network platform that was acquired by Facebook in 2012. Instagram allows users to edit and upload photos and short videos through a mobile app.

- **SnapChat:** Snapchat is a mobile app that allows users to send and receive "self-destructing" photos and videos. Photos and videos taken with the app are called snaps.

Social Media and the Growth of Small and Medium Enterprises

Before the application of social media in production activities, manufacturing companies used labor intensive (human resources) or manual system to produce products to the market. The manual system or labor intensive systems slow down the productivity of labor per hour. In the modern market today, a companywill only survive and meet up consumer needs, if only company uses social media in its production activities.

Adewoye and Akanbi (2018) maintained that in order to succeed in this dynamic world, companies must take not only traditional actions such as lowering cost but also keep pace with ever changing capabilities ofsocial media. They also pointed out that social media can play an important role in bringing about sustainableeconomic development. Technical skills interact with other factors of production to ensure that resources available to the manufacturing enterprise are efficiently and profitably employed to maintain or improve thefirms share of the product market. They also stated that investment in social media and its application in manufacturing activities can spur substantial productivity increase that would significantly improve the performance of SMEs in Nigeria.

Oliner and Sichel (2020) used time serves data and sectoral productivity model form to determine the impactof IT on labor productivity in non-farm business from 1995 to 2000 in US. The study found that output perhour in non-farm business grew at an average annual rate of about 2½ percent compared with increases of only about 1½ percent per year from 1973 to 1995, this improved performance can be linked to IT revolutionspread through the U.S economy.

Namani (2019) who study the role of social media in SMEs using Kosova SMEs as a case study found that social media application in the manufacturing sectors of a developing country create employment and job opportunities. The author also indicated that without using social media today, SMEs will have serious and total consequences in the future and will imply the risk of lagging behind economically with all the implications that this entails. Labour quality and social media investment continue to provide a positive contribution to growth (Van Ark, 2020).

Hawash and Lang (2020) used panel data regression model for 33 developing countries to study the impactof social media on productivity, their findings show that higher social media investments have resulted in higher economic growth in developing countries. The period of 1995-1999 witnessed the social media revolutions in the Asian Tigers' economy. Social media revolution contributed immensely to the productivity growth of the South East Asian Tigers (South Korea, Singapore, Hongkong and Taiwan) between early 1960s – 1990 (Ezra in David, 2020).

Adewoye and Akanbi (2018) maintained that the role of social media in advancing the growth of national economies through enhanced efficiency, profitability and expanded market reach is both undisputed and irreversible. Gust and Marquez (2014) indicated that social media production and expenditure are associated with higher productivity growth. Social media mainly stimulates the introduction of organizational changesin manufacturing firms (Zhang, Kardes and Cronley, 2020). The increase of social media in enterprises leadsto a substitution of social media equipment for other forms of capital and labour and may generate substantialreturns for the enterprises that invest in social media and restructure their organization.

Hawash and Lang (2020) posited that investment in technology can equip people with better tools that enhance their productivity and in turn enhance the growth process of the developing countries. Oliver and

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Sichel (2020) used new growth accounting sectoral productivity model and data from Bureau of Economic Analysis (BEA) and the Bureau of Labour Statistics (BLS) in Atlanta, USA, their findings concluded that output per hour accelerated substantially after 1995 in U.S, driven in large part by greater use of social media capital goods by businesses throughout the economy and by more rapid efficiency gains in the production of social media goods.

In the study of Adeoti (2015) who investigated the impact of social media on the competitiveness of firms in a late industrializers, using Nigeria manufacturing sector as a case study, the researcher found that investment in social media by a firm would attract learning effort that stimulate improvement in competitiveness among the manufacturing companies in Nigeria.

Benefits of Social Media on the Growth of SME

Social media has become indispensable for small and medium enterprises globally, Nigeria inclusive. Social media capability is essential to participation and engagement in modern society. The development in telecommunications has impacted enormously on the applications of social media and their uses. Social media can be used to find, develop, analyze and present information, as well as to model situations and solveproblems. It enables rapid access to ideas and experiences from a wide range of people, communities and cultures, and it is a powerful force for change in any society (Okwuonu, 2013).

Hyvönen, Järvinen, and Pellinen (2013) advocated that the utilization of social media is one of the key areas that modern companies develop in order to achieve strategic gains. In a similar manner, Ashrafi and Murtaza (2018) stated that organizations around the globe are now utilizing social media not just for cutting costs and improving efficiency, but also for providing better customer service. According to Spanos, Prastacos and Poulymenakou (2013), buyers and sellers are able to share information and transfer goods across national borders with the use of social media, which helps to increase access to global supply chains. Similarly, Buhalis (2013), stated that businesses can now interact more efficiently with the use of social media. Sharingand disseminating information is a key role played by social media which also assists in increasing the supply of information within organizations. The emergence of the internet has allowed small and medium-sized enterprises (SMEs) to compete effectively and efficiently in both domestic and international markets.

Social media play a very important role in helping SMEs to have hedged over competitors in term of accessibility to global markets. Duan, Mullins, Hamblin, Stanek, Sroka, Mavhado, and Araujo (2020) ascertained that the use of social media in many organizations has assisted in reducing transactional cost, overcome the constraints of distance and have cut across geographical boundaries thereby assisting to improve coordination of activities within organizational boundaries. In fact, social media has the potential to improve the core business of SMEs in every step of the business process. Through the use of social media, SMEs can gain from developing capabilities for managing information, intensive resources, enjoy reduced transaction costs, develop capacity for information gathering and dissemination of international scale and gain access to rapid flow of information.

Sajuyigbe and Alabi (2018) also argued that social media are being used for strategic management, communication and collaboration, customers' access, managerial decision making, data management and knowledge management since it helps to provide an effective means of organizational productivity and service delivery. Ashrafi and Murtaza (2018) also agreed with the assertion that social media have positive effect on firm performance in terms of productivity, profitability, market value and market share.

Spanos *et al*. (2013) affirmed that buyers and sellers are able to share information and transfer goods across national borders with the use of social media, which helps to increase access to global supply chains. Social media enhances the production process in organizations as monitoring technologies could be used to reducethe number of supervisors required in the process. In the same view Brynjolfsson and Hitt (2016) confirmed that there is a substantial long-term productivity gain with the use of social media in organizations. Buhalis(2013) also noted that the application of social media in businesses causes fundamental changes that can

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provide powerful strategic and tactical tools for organizations if properly applied and used. This could have great impact in promoting and strengthening SMEs competitiveness. Sakai (2020) study also stressed that the extensive use of social media can allow micro-enterprises with ideas and technologies to remain small and profitable or generate substantial global sales by exploiting their intellectual property over the Internet.

Other benefits of social media are:

1. Social media can be used to find, develop, analyze and present information, as well as to model situations and solve problems.
2. For cutting costs and improving efficiency
3. Businesses can now interact more efficiently
4. Social media play a very important role in helping SMEs to have hedged over competitors.
5. Used for strategic management, communication and collaboration, customers' access, managerial decision making, data management and knowledge management.
6. To Develop Business: Social media play a very important role because it can help SMEs to create business opportunities and combat pressures from competition. Appropriate social media can help SMEs cut costs by improving their internal processes, improving their product through faster communication with their customers, and better promoting and distributing their products through online presence. In fact, social media has the potential to improve the core business of SMEs in every step of the business process.
7. For Advertising: Online media enable businesses and other organizations to nurture and develop relationships with their customers and other stakeholders, in a way never before available on a global scale at very efficient cost. Social media gives individuals the chance to connect to the companies and brands they like and learn more about their products and services.

Challenges of Social Media Utilization on Small and Medium Scale Enterprises

Adebayo, Balogun and Kareem, (2013) discovered that cost, funds, infrastructure, skills and training, management support and government support attitude are the main factors that affect social media adoptionin Nigeria by SMEs. The study of Sajuyigbe and Alabi, (2018) also confirmed that infrastructure, cost of acquisition, lack of finance, skills, management and government support are the main challenges of social media adoption by SMEs in Nigeria.

Pinsonneault and Kraemer (2013) in their study have categorized internal and external barriers that impede adoption of social media by SMEs in developing countries. The internal barriers include; owner manager characteristics, cost and return on investment, and external barriers include; infrastructure, social, cultural, political, legal and regulatory factors, such as owner/manager characteristics, the role of top management, firm characteristics, costs and return on investment, lack of adequate telecommunication infrastructures suchas poor internet connectivity, lack of power, lack of fixed telephone lines for end-users, dial-up access and the underdeveloped state of the Internet Service Providers (ISPs) have been identified by Kapurubandara and Lawson (2016) as problems that hinder SMEs' adoption of social media in a developing country. The lack of knowledge on how to use the technology and the low computer literacy are other contributing factors for not adopting social media (Knoll & Stroeken, 2021). Duan *et al*, (2020) also identified lack of social media skills and knowledge in SMEs as one of the major challenges faced by all European countries, particularly in the UK, Poland and Portugal.

According to Cloete, Courtney and Fintz (2020) in their findings in a study of SMEs in South Africa discovered that social media adoption is significantly influenced by lack of access to computer software, other hardware, and telecommunication at a reasonable cost; security concerns and unclear benefits from social media. A similar study in China by Kunda and Brooks (2020) confirmed that limited diffusion of computers, high cost of internet access and a lack of online payment processes are the major factors that directly inhibit social media adoption by SMEs. Similarly, a survey conducted by Lal (2017) on globalizationand the adoption of social media in Nigerian SMEs discovered that poor physical infrastructure is a major factor inhibiting social media diffusion. Arendt (2018) agreed with previous researchers that cost of social

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media equipment and networks, software, and re-organisation are barriers to social media adoption in most SMEs.

Okwuonu, (2013) concluded that poor communications infrastructure leads to limited access and higher costs. Many SMEs operating in Nigeria still experience this, as they still use outdated equipment and state owned monopolies, which often lead to expensive charges and limited coverage, especially in the rural areas. This discourages SMEs from adopting even the basic social media application.

Other challenges of the utilization of social media are:

- Lack of adequate telecommunication infrastructures such as poor internet connectivity, lack of fixed telephone lines for end-users, dial-up access and the underdeveloped state of the Internet Service Providers (ISPs)
- Lack of knowledge by SME operators: The owner's lack of knowledge of social media technology. The lack of knowledge on how to use the technology and the low computer literacy are other contributing factors for not adopting social media.

- Lack of Social Media Skill**:** Lack of social media skills and knowledge in SMEs is one of the major challenges faced by SME operators in Nigeria.
  Others are Cost, Funds, Infrastructure, Skills and training, Management support, Governmentsupport attitude and Irregular Power supply

Conclusion

The paper concluded that small and medium enterprises operators (entrepreneurs) in a developing country like Nigeria have been taking advantage of social media for their business networking. It has been further established that there is a significant positive relationship between social media and the growth of SME in Nigeria and Edo State in particular. It can be concluded that social media networking is a viable tool in the hand of any modern entrepreneur for business differentiation and success because the business world is becoming more competitive in the emerging global village.

Recommendations

Considering the findings the following recommendations were made:

1. Entrepreneurs should not lag behind in joining social media that will help them to get current and relevant information from far and wide to run their businesses.
2. It is recommended that entrepreneurs should adopt networking in their businesses in order to enhance business efficiency thereby creating more demands and new market.
3. Government should help in providing adequate infrastructural facilities that will enhance ICT growth in Nigeria and Edo State in particular.
4. Entrepreneurs should endeavour to learn and adopt electronic social network in order to fit into the business world at large since the world is becoming a global village.
5. Investment should be made on ICT and particularly on the right social media that will enhance the efficiency of their operations to be of high quality, reliable and effective.
6. It is also important for media houses to ensure that they have a digital platform in place which is highly interactive. This is likely to enable marketers to reach out to as many current and prospective customers as possible and also get feedback in real-time or almost real-time.
7. The media houses are also advised to take advantage of quick feedback from customers byprocessing or addressing the customers' needs promptly. This is bound to enable them to have a cutting edge over other firms that often use conventional marketing strategies.

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INFLUENCE OF COMPUTER AIDED INSTRUCTION (CAI) ON STUDENTS' ACADEMIC PERFORMANCE IN WOODWORK TECHNOLOGY

[1] Wasiu Olayinka ODUGBEMI [2]Stephen Ayemwenre AIGBODUWA
Department of Building/Architectural Technology, School of Technical Education, Federal College of Education (Technical) Ekiadolor, Benin City, Edo State.

E-mail:owasiu617@gmail.com (Tel: +2348132789213) Email: aigboduwa.stephen@gmail.com (Tel:+2348029413348)

Abstract

This study examined the influence of computer aided instruction (CAI) on students' academic performance in woodwork technology. Computer aided instruction (CAI) are constructivist in nature, hence they promote cognitive development and active learning which in turn enhances performance. Historically, the teaching of woodwork technology has been far from what has been expected. Teaching approaches in woodwork technology have not adopted the computer based learning instructions. Therefore it is important that the teaching of woodwork technology must develop both mental and manual skills in students. However, the study emphasized the significance and benefits of employing CAI computer-aided instruction to improve the instructional process in the teaching and learning of woodwork technology. Furthermore, the benefits of CAI as wells as it use for improving students' academic performance in woodwork technology were discussed. Additionally, this paper recommends among others that, for effective teaching and learning activities, the usage of CAI for instructional facilitation for woodwork technology and other vocational and technical subjects/courses should be made mandatory.

Keywords: computer-aided instruction, academic performance and woodwork technology

Introduction

Educational institutions employ a variety of teaching and learning strategies. These comprise observational techniques, explanatory techniques, and inquiry techniques, project approaches, and concept-based learning (Adeyemi et al., 2012). Nonetheless, the majority of teachers employ teacher-centered approaches, sometimes known as the "chalk and talk" or "banking" form of instruction. These teacher-centered strategiesare based on behaviorist theory, which holds that lecturers, teachers, and other educators are the only ones who can truly teach their students. Students were exposed to Pavlov's notion—that people might be conditioned to exhibit certain predicted behaviors—as a result of the behaviorist theory (Burke, 2009). This makes the assumption that students are unable to participate in their own education as teachers were perceived as all-knowing.

Academic performance is an achievement result that shows how well a person performed in relation to particular objectives that were the focus of activities in instructional environments, particularly in schools. Academic performance, according to (Scott's, 2012), relates to how successfully students are completing their assignments and studies. It refers to the academic success of pupils and their ability to manage or complete the many learning tasks assigned to them by their teachers.

In senior secondary schools, technical colleges, colleges of education (technical), and universities that offer technical education, woodworking technology is a vocational subject or course that is taught for the manufacturing of furniture and cabinetry. Woodwork technology places an emphasis on a combination of basic and sophisticated machine operations. It is aimed at transmitting both theory and practical skills.

If one were to examine the topics covered in Woodwork technology, one would see that the course's or subject's goal is to not only provide students with a foundational understanding of the subject, but also to

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instill in them the practical skills necessary to foster their own personal growth. The pedagogical approach, which is focused on teachers' methods of transferring facts and concepts of the disciplines, is highly necessary in order to accomplish this. This suggests that instruction in woodworking technology must be efficient and worthwhile.

Nevertheless, since woodwork technology is a practical-oriented course, it will undoubtedly take on a more positive and engaging aspect when it is taught to the students using more up-to-date methods of instruction, such as computer-aided instruction (CAI) or practical methods. As a result, there is a need for an alternative teaching strategy that can help teachers concretize the abstract concepts in the curriculum contents of woodwork technology while presenting lessons.

On the other hand, the current technological revolution has improved the educational system. New opportunities for the delivery of teaching are made possible by the usage and expansion of technology in the classroom (Ochoyi & Ukwumunu 2008). Additionally, Adedamola (2015) noted that educators using technology to improve teaching and learning have grown in number across a range of disciplines, and the approach has been demonstrated to be successful. When used effectively, technology in the classroom can support pedagogy and improve instruction.

Computer technology has been applied to education in a number of ways to enhance the teaching and learning process, such as computer assisted instruction (CAI) and computer managed instruction (CMI). Aneducational system of instruction known as computer assisted instruction (CAI) involves the use of computers nearly exclusively for instruction. It consists of many computer-based programs that offer interactive training. Computer Assisted Instruction (CAI) is a method of teaching where students are taughta variety of disciplines. The computer is used to interactively convey information and messages to the student through drill, practice, tutorials, and discourse (Imhanlahimi and Imhanlahimi, 2008).

Significantly, CAI activities appear to be at least as cost-effective as and sometimes more cost-effective than other instructional methods, such as teacher-directed instruction and tutoring. Students also learn instructional contents faster with CAI than with conventional instruction alone and retain what they have learned better with CAI than with conventional instruction alone (Mudasiru and Adedeji 2010).

Concept of Woodwork Technology

Woodwork is a form of education and training that is aimed at preparing students to earn a living through application of technology and design (Okwori, 2012). It provides the learner with knowledge and skills to necessitate self-employment and self-reliance. Umar (2014) and Chinonso (2014) views Woodwork as a course aimed at transmitting both theory and practical skills.

Agbo (2000) defined woodwork technology as the kind of education aimed at preparing students to find employment in a field where success is largely reliant on knowledge of technology as applied to contemporary technology and design. And this kind of education, in accordance with

Concept of Academic Performance

Students' academic performance is a concept that has gained increased momentum recently, this is not just because of the increased concern on the performance of students in public examination but because of its importance in the field of education (Sunday-Piaro, 2018).

Academic performance is the degree to which a student successfully completes their assignments and academic work (Scortt's, 2012). It is the result of a student's tenacity, diligence, and academic endeavor. Academic achievement was defined by Pandney (2008) as how well students performed in the courses they were taking in school. The students' standing in the class is determined by this. Children can use this as an opportunity to grow academically, develop their talents, and raise their grades.

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Olaitan (2017), posited that academic performance is a very important tool with which the success, ability and capability of a student to contribute to the development of a society are measured. This implies that behavior that can be observed at a particular time is what performance measures. Additionally, Bell (2012) defined academic performance as the methods or approaches that students take to manage their studies andthe many duties that they are assigned by their teachers. It is the capacity of students to learn, retain information, and convey knowledge either orally or in writing.

Academic performance is the degree to which a student, teacher, or institution has met their short- or long-term learning objectives. It is also defined as performance on task with measures such as comprehension, quality and accuracy of test answers, quality and accuracy problem-solving, frequency and quantity of desired outcomes, time or rate to solution, time on task, level reasoning and critical thinking creativity, recall and retention, and transfer of tasks (Kobaland and Musek, 2011).

Understanding of Computer-Aided Instruction (CAI)

Computer-aided instruction (CAI) is the use of a computer to deliver lesson content through simulations, tutorials, and drill and practice. According to Kyaw, Koki, and Chang (2008), the phrase is used interchangeably with the terms computer-based learning (CBL), computer-based instruction (CBI), and computer-assisted learning (CAL).

Although CAI can relate to the employment of computers in a classroom, it more widely refers to a controlled environment in which computers are employed for educational objectives. Students can work at their own pace and receive personalized feedback directly from computers thanks to applications like CAI. Confusioncan be cleared up as it arises with the aid of CAI, and the instructor has access to the students' records and results.

Models of Computer Assisted Instruction

There are two models for designing interactive educational programmes.
1. Instructional System Design (ISD)
2. Hypermedia Design (HMD)

Instructional System Design (ISD)
Instructional design is where enhancements are infused into the basic lesson structure and made part of it. Instructional design is the systematic approach to the analysis, design, development, implementation, and evaluation of learning materials and activities (Sam, 2013).

(Barry, 2011) posited that instructional design is where digital learning is harnessed, a teacher's relationship with students is materialized, and learner choice, gamification, and project-based learning are given constructive limits. Instructional Design is focused on the systematic process of learning.

Instructional design aims for a learner-centered rather than the traditional teacher-centered approach to instruction, so that effective learning can take place. This means that every component of the instruction is governed by the learning outcomes, which have been determined after a thorough analysis of the learners' needs.

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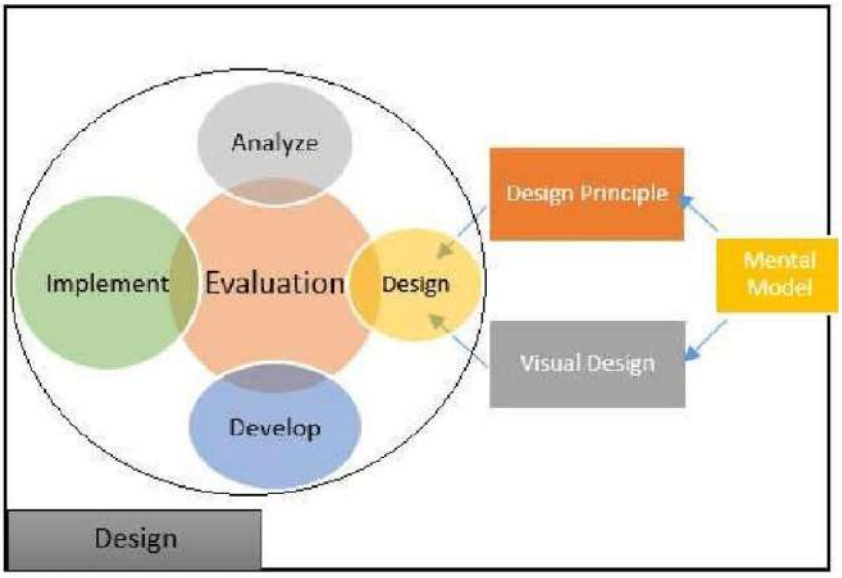

ADDIE MODEL OF INSTRUCTIONAL DESIGN

Hypermedia Design (HMD)

Hypermedia is any interactive media system that permits a user to navigate through hyperlinked informationby means of various user-selected paths including such application as interactive websites, electronic catalogues, intranet, interactive e-commerce system CBT and online information services (Barry and Lang 2013).

This definition recognizes that hypermedia technologies include but also pre-date the Web, and the traditionsof hypermedia development are longer than usually acknowledged. Notwithstanding these traditions, hypermedia systems development is in many regards different from "conventional" systems development. Chief amongst these differences is its multidisciplinary nature.

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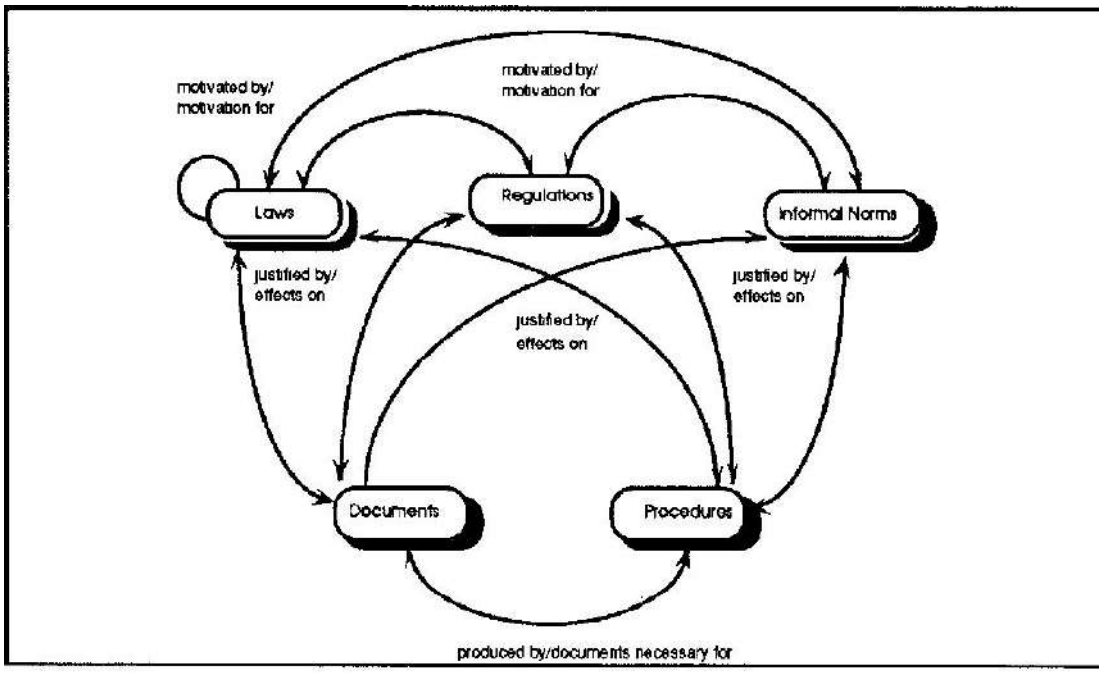

Figure 1. Schema of Entity Types and Application Link Types for a Banking Application.

Types of CAI Programmes

There are many types of Computer Assisted Instruction Programs. Each of the CAI program is appropriate under different instructional circumstances and therefore takes a different pedagogical approach. Although the beginning of CM was presentation of programmed instruction through computer and initial forms of CAI i.e. tutorials, drill and practice and games were oriented to behaviourist theories of learning.

However, due to the sophistication of computer languages, any type of CAI can now be modified in accordance with any theoretical framework, so no longer is any type of CAI simply tied with a particular learning theory. The following types of CAI software have been referenced and described by Poole (2007), Cox (2005), Geisert and Futrell (2005), Maddux, Johnson and Willis (2007), and Bitter and Pierson (2009):

Drill and practice
Tutorials Instructional
games
Information retrieval systems
Simulations
Micro worlds
Cognitive tools for learning
Productivity Tools Communication
Tools Integrated learning system
(ILS)Problem solving

Drill and practice: Packages for drill and practice provide methodical reinforcement of ideas that have already been learnt. They are built on exchanges of questions and answers and ought to provide the student with useful feedback. Games may be incorporated into drill and practice programs to boost motivation. Drill and practice are frequently used to boost a student's performance's speed or accuracy. Students can solve issues or respond to questions using drill practice software and receive feedback on their accuracy. It is a crucial method of learning for developing fundamental knowledge and intellectual abilities, such as word

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usage, spelling, sentence composition, and number sense. The building blocks of higher order intellectual activity are these abilities.

Good Drill and practice software is typically associated with behaviourism, because students are commonly given 'stimuli' (questions), and they are required to make responses to the stimuli, and then receive some sort of reinforcement.(Hsu, Chen & Hung; 2000; Roblyer & Edwards, 2000; Poole, 2004; Geisert and furtell,2005; Maddux, Johnson and Willis 2007).

Tutorials: Tutorials are used to educate fresh ideas and procedures. The student is given the material in a systematic manner. Worked examples are typically included in tutorial software, which also offers the learner the chance to gauge their comprehension through questions, responses, and feedback. Based on the student's activities, intelligent tutoring systems can provide remedial feedback and modify their presentations to the student. The program keeps track of progress based on the outcomes of the quiz that either has the user review previous content or move on to new material. An excellent tutorial presentation is engaging, comprehensive, sensitive to the user's capabilities, and it offers timely feedback. User engagement and persistence depend heavily on interactivity (Cox 2005; Poole 2007; and Roblyer 2000).

Instructional Games: By incorporating game rules into learning activities, instructional games are a type of courseware designed to boost motivation. Drill and practice or simulation courseware can be similar to educational games, but because of the fun and competition they foster, educational games have a different meaning for students. Because of the challenge of the competition and the possibility of winning, students anticipate an enjoyable activity when they know they will play a game (Roblyer and Edwards, 2008). Role-playing is frequently used in some simulations that are intended to be games, according to Ugwu (2008). In these simulations, the program focuses on how the learner interacts with the model as well as the underlying model.

Information Retrieval Systems: Information retrieval systems allow learners to browse or search for information as needed and preserve knowledge in a systematic manner. Online databases, structured information systems like dictionaries and encyclopedias, as well as hypertext and hypermedia reference systems are among them.

Simulations: Simulations represent an experiment, a real-world or made-up circumstance. The simulation's setting could be a business proposal, a lab experiment, or an animation of a chemical factory in operation. A simulation emphasizes discovery and exploration learning. There may be more than one way to complete the activity; there isn't always a single right or set answer. Through direct manipulation of the factors in the modest in a computer simulation, students have the chance to explore and uncover linkages. AIessi and Trollip (2008) identified two primary categories of simulations:

Those that teach about something Those that teach how to do something

These two main types are further classified into four categories i.e. physical process, procedural and situational simulations.

Micro Worlds: Micro worlds use the computer to create a problem solving environment and are derived from the work of the cognitive psychologist Jean Piaget. Seymour Papert, for example, introduced the Logo language into schools to encourage children to learn about mathematics in a Math land micro world.

Cognitive tools for learning: Cognitive tools for learning are based on the constructivist principle that learners need to construct their own understanding of new concepts. These tools give the learner a way (often graphical) of representing their understanding of new knowledge and concepts and how they relate to existing knowledge and concepts. Expert systems and authoring tools can also be used in this way, allowingthe learner to present his/her understanding in a way that can be accessed by other learners.

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Productivity Tools: Productivity tools include applications such as word processors, spreadsheets, databases, graphics, desktop publishing and presentation packages. Whilst these tools are not specific to Learning Technology, if used within a pedagogical framework, they can support learning by enhancing the quality of the learning process and by improving student productivity. For example, word processing encourages drafting, reflection and editing and removes from the student the chore of having to re-write any written submission. Spreadsheets can promote a structured approach to problem solving and enable the student to spend more time on the task in hand rather than on routine or lengthy calculations. Databases can be used to help students, as well as staff, to organize information related to their courses and to develop their information handling skills.

Communication Tools: Computer-mediated communication takes several forms including electronic mail, electronic conferencing, video conferencing and the World Wide Web. These tools allow learners to share ideas and information, to cooperate, to collaborate on joint work and can also be used for submission and publication of students' assignments and of tutors' comments on students' work.

Electronic Mail: (e-mail) is an asynchronous communications medium, not requiring the recipient of a message to be co-ordinate in time or place with the sender. Further, e-mail can be used one-to-many, as wellas one-tone. These characteristics are helpful in maintaining communications between tutor and student, tutor and students and among students since they overcome constraints of distance and time.

Characteristics of CAI Programmes

The field of CAI is intriguing because of its many distinctive characteristics. Its suitability for distance learning is one of its most advantageous features. Before microcomputers were the norm, distant learning was primarily carried out using PI or the US mail system, with telephone interaction as a backup (Jonassen,2000). Contrarily, CAI offers frequent, timely communication with the instructor and up-to-date feedback. Repeating tutorials as often as necessary allows students to progress at their own speed.

According to Sansanwal (2000), CAI can be used with more pupils than a regular classroom could accommodate. Individuals with disabilities now have access to resources that were previously unavailable thanks to CAI and web-based education. Intelligent computer-assisted instruction (ICAI) is computer-programmed to adjust to each student's unique learning needs. It gathers data on the student's prior knowledge of a subject and learning objectives, then builds a user profile based on this information. After that, it can customize itself to each pupil. The distinctive feature of web-based education is that it allows instructors and/or students to instantly contact with one another from any location in the world over the Internet. You can get the instructor's feedback right away. some other unique qualities of CAI include:

Individualization: A computer software can offer a variety of learning paths that are suited to each learner's needs (Stelberg, 1991). Students discover a variety of courses to take; each student choose a path based on his or her needs, including prior subject knowledge, aptitude, interest, and intellectual potential. The use ofa game format can increase motivation, foster fantasy, and keep learners' interest. With the use of illustrativeanimation, dynamically producing images, and interspersing voice explanations, concepts can be conveyed in tutorials. Simulations can offer fresh perspectives on relationships and events that would not be possible otherwise.

Remediation Options: After examining student responses, the computer can change educational strategies and customize them to account for individual variances. The order of instruction is decided by the student's performance history records. In one kind of remedial program, the instructor runs a computer program to assess the student's cognitive style, achievement level, and capacity for learning.

The instructor selects student-specific content in accordance with the diagnosis. By utilizing branching method and/or incorporating hyperlinks to give text, pictures, or any other sort of material for remediation, computer assisted training applications can quickly provide corrective measures.

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Graphics and Sound: Graphic representation plays an important role in instruction. In addition to pictures, computer graphics also include the use of screen formatting feature s such as arrows, boxes and illustrationsto emphasize the concept. This nonverbal mode of instruction helps to build comprehension in areas that are difficult to teach by other instructional techniques. Sound in a program CIA prompt, focus, or "reinforce students and thus enhance instruction. At a more sophisticated level, some CAI programs include speech synthesizers that produce words or sentences. Synthesizes are especially applicable with software for the very young or handicapped users. Computer graphics and sound infuse movement, excitement and animation into a program.

Self-pacing: Self-pacing lets students proceed at a pace appropriate for their individual learning levels. Students using self-pacing can control the time allowed to solve problem as well as the rate of presentation they can spend several weeks with remedial material or skip entire lesson. When they feel ready to be testedon the specific material, they can choose the testing cycle. Self-pacing can help to individualize instruction for those students who have used the program before or have prior knowledge of the subject. Self-pacing can be combined with self-placement testing, which directs the 'student to an appropriate beginning point and to an optimal instruction rate.

Using computer-aided instruction (CAI) to raise students' academic performance in woodwork Technology

According to studies, the methods employed to instruct students have a significant impact on their academic performance. Many studies have been carried out employing technology-based resources that support students' active participation and are capable of enhancing their capacity for thought and problem-solving.For institutions, computer-based instruction is preferable to the traditional teaching approach (Khirwadkar,2011). As previously said, using CAI in addition to traditional training has the potential to result in more achievement than using traditional instruction alone. The level of retention may also be higher with CAI than with conventional approaches, and students can absorb instructional materials more quickly with CAI.

Marr (2011) claimed that CAI could raise students' motivation. Additionally, research has shown that student who use computers are more successful and eager to learn, compared to those who use some traditional methods (Wishart, 2008). Contrary to traditional teaching and learning approaches, CAI is beneficial for all student levels, including those with special needs.

According to Ivers (2008), employing computer instructions can provide students the chance to learn and put their newfound skills to use in the actual world, which is a benefit that conventional teaching techniquesdo not offer. According to the International Society for Technology in Education (2009), teachers who switch from traditional learning environments to new learning environments encourage active learning, higher levelthinking, collaborative learning, and multimodal stimulation. Online contact and a broader knowledge basecan both be provided via computer assisted training. The context is presented during computer-assisted training, which aids students in maintaining their focus (Becker, 2009).

Khirwadkar (2011) did research on the creation of a CAI chemistry package for pupils in standard 6 science utilizing the Baroda Indian Government Science and Technology Board (GSTB) Syllabus. The results of the study demonstrated that the software program created for teaching three units of the GSTB's grade 6 chemistry textbook was more efficient than teacher-centered techniques in terms of student accomplishment and time. It also demonstrates that factors like IQ, academic ambition, and attitudes were discovered to havean impact on the academic success of children in the experimental group.

Woodwork as an applied science and technical course requires intensive practice in order to ensure that students properly comprehend the skills embedded in it. Chikasanda et al. (2011) pointed out the lack of research to study instruction approaches in technical education is a major challenge. The impact of woodwork as a subject in our day-to-day lives is largely dependent on the skills that teachers have (Umar, 2014).

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However, emphasis should be placed on the mode of teaching woodwork technology practical aspects of woodwork other than theory as it provides skills that promote self-reliance in individuals. In this regard, theuse of computer-aided instruction in woodwork technology becomes very vital as it will promote students' performance. This agrees with the position of Okwo (2008) that, the use of computer makes learning of science, technology and mathematics faster and easier as well as consequently made learning effective, efficient and fun.

The need for using computer-aided instruction (CAI) in woodwork technology is quite necessary as this approach will expose learners to self-learning which helps them process and retain knowledge without the help of another person. Alade (2011), posited that there is need to shift teaching of technical courses from traditional didactic technology to approaches that are constructivist in nature where learners are expected to construct knowledge from their experiences.

Conclusion

This study through related literature has revealed that computer - aided instructions (CAI) will influence students' performance in woodwork technology if used as a means of teaching the subject/course.

Computer aided instruction (CAI) becomes an essential mode of instruction especially when there is absenceof modern woodwork technology equipment and machines needed to teach the required skills. CAI through simulations, pictures and videos helps students learn the use of woodwork tools and machines.

Additionally, many studies have indicated that students who learn sciences and technology subjects through CAI outperformed the group that learn through traditional approach in content acquisition, knowledge interpretation, application of concepts and principles and analytical skills. Likewise, some studies have also reported the success of CAI in many other fields.

The study finds that, compared to traditional teaching methods, computer-assisted instruction has a stronger potential for enhancing students' learning and performance in woodwork technology. The advantage of computer-assisted training over the traditional teaching approach appears to be related, among other things,to the concept's realistic style of display and the students' participation in realistic activities. Thus, it can besaid that computer-assisted instruction has the potential for better and more efficient student learning, which will ultimately lead to increased academic success.

Recommendations

Based on the related empirical studies, the following recommendations were made:

1. For effective teaching and learning activities in woodwork technology and other vocational and technical subjects/courses, computer-aided instruction (CAI) should be adopted for instructional facilitation.
2. Effective training in the creation and application of CAI in the teaching profession should be made available to all educators.
3. Every idea that calls for the application of unique teaching techniques, such as CAI, should be identified and expressly stated to be supported by such a learning package.
4. Particularly in science and technology-based disciplines and courses, the incorporation of technology-based teaching methodologies ought to be made mandatory.

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INFLUENCE OF SOCIAL MEDIA ON SMALL AND MEDIUM SCALE ENTERPRISE IN NIGERIA

[1]Joyce .C. OBIALOR [2]Victor.I. IGBINEDION [3]Sheriff .A. ADEOYE
Department of Vocational and Technical Education, Faculty of Education, University of Benin City,Benin City, Edo State, Nigeria.
obialorjoyce24@gmail.com, vicidion@gmail.com & sheriff.adeoye@uniben.edu

Abstract

Small and medium-scale enterprise account for the vast majority of businesses worldwide, and they are critical to job creation and global economic development. SMEs are perceived as an engine of socio-economic transformation in both developed and developing countries. However, poor marketing strategies, low capital base and high interest on payback loan have become the major challenges facing the development of SMEs particularly in developing countries like Nigeria. Sequel to this, social media have become a major platform for advertising and promoting SMEs. This paper, therefore, discusses the influenceof social media on small and medium-scale enterprises. Furthermore, the paper x-rayed the concept SMEs,described what social media is all about, and emphasized the roles and benefits of social media to SMEs. Interestingly, the findings revealed that, social media is a powerful tool that can be leveraged to boost SMEs.It was concluded that social media plays a pivotal role in enhancing the development and profitability of SMEs, thereby promoting the Gross Domestic Product (GDP) of a nation. It was recommended, among others, that government and other stakeholders should provide necessary modalities and establish a level playing ground to enable owners of SMEs launch their businesses on various social media platforms for further growth and development, since they are integral to the growth of any economy.

Keynotes: Social media, small and medium scale, enterprise

Introduction

In most economies, especially in developing nations, small and medium enterprises (SMEs) play a critical role in development. SMEs account for the vast majority of businesses worldwide, and they are critical to job creation and global economic development. According to World Trade Organization (WTO 2016) SMEs represent over 90% of the business population, 60-70% of employment and 55% of Gross domestic productin developed economies. In emerging economies like Nigeria, SMEs also contribute up to 40% of Gross domestic Product (World Bank, 2020). According to Somaya (2019), small and medium enterprises have created a competitive market, which leads to better satisfaction of consumer's needs. SMEs also contribute in supplying certain activities to help big enterprises by producing goods and services efficiently. They are labour-intensive and capable of creating different jobs to reduce unemployment. In Nigeria, small and medium-scale enterprises are perceived as the key to economic growth, poverty alleviation, and job creation (Agwu & Emeti, 2014).

According to National Policy on Micro, Small, and Medium Scale Enterprises (SMEDAN, 2013), the role of SMEs in economic development is becoming increasingly important. They play a pivotal role through different pathways that go beyond job creation. The growth-supporting sectors not only contribute significantly to improving standards of living but also bring substantial local capital formation and are also responsible for driving innovation and competition in developing the economy. Generally, SMEs are seen as increasing the attainment of wider objectives such as poverty alleviation and wealth creation, among others. With the general objectives of reducing poverty through wealth and job creation and facilitating national economic development, SMEs are perceived as an engine of socio-economic transformation in bothdeveloped and developing countries.

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The definition of small and medium-sized enterprises varies depending on a country's economic situation. Itis difficult to have a general definition of small medium scale enterprises because of the classification of businesses into large-scale or small-scale. Phakisa (2009) indicated that there are no universally accepted small business definitions. Different institutions and nations use different standards to define SMEs becausea lot of their bodily processes depend on the industry in which they operate, also, the kind of persons and goals of those in charge of these businesses. In the same vein, Safinyu and Njogo (2019) opined that the definition also changes over time, owing to changes in the price level, advances in technology, and other considerations. Small and medium-scale enterprises are business enterprises that employ less than 200 persons and possess assets whose value, excluding land and buildings, is less than N300 million. (Ebitu, Basil & Ufot, 2015). SMEDAN (2013), defined SMEs with respect to the number of persons employed andassets possessed. The importance of small and medium-scale enterprises in the Nigerian economy cannot beoveremphasized. Small and medium-sized businesses are the backbone of a country's economy (Ramadani,2011).

Imeokpaira and Ediagbonya (2014) defined small and medium-scale businesses as those who capital does not exceed N750000. This definition tries to emphasize the capital requirement in the formation of the business. Small and medium-scale businesses are businesses whose number of employed workers falls belowor above a specified limit and are generally seen as the engine of economic development in the world economy.

Small and medium-scale businesses can include content writing, cleaning services, ushering agency, copy writing and graphic designing. According to Kihombo (2019)**,** these small businesses can include bakeries, photography, hairdressing, guest houses, tradesmen, restaurants, online businesses like programming and web design, small-scale manufacturing, convenience stores, among others. Furthermore, Obi (2015) suggested several examples of SMEs based on the area of business in which the individual intends to operate. These businesses include cassava processing businesses, soap and pomade production, plastic manufacturingbusiness, cloth weaving, block molding, clay brick making, leather and animal skin processing, hair dressingand barbing saloon, tailoring/fashion designing services as well as welding work. The SMEs serve in the efficient distribution of goods and services in an economy and also render direct and personal services to public. In addition, small businesses also serve as training schools that promotes the acquisition of new innovative skills which stimulates healthy competition among indigenous entrepreneurs and aspiring business owners.

According to Hernita, Surya, Perwira, Abubakar and Idris (2021) small-scale enterprises promotes the generation of additional employment opportunities and improving the quality of lives. By providing more job that facilitates in equipping capital and human resources that are essential driver of economic growth. Alot of small retail shops, cottages, POS shops, restaurants, poultry farms, and telecommunication/telephone shops have been established and managed profitably by Nigerians who would have been unemployed to datethrough SMEs. The entrepreneurs have in turn provided jobs for other Nigerians, who serve as support, technical and administrative staff for them. It has uplifted the dignity of labour. There is the spirit of "I too can do it" attitude. People derive joy in working for themselves and seeing their businesses grow and mature into conglomerates (Ayozie, Oboreh, Umukoro & Ayozie 2013).

Although SMEs play important role in national development, it is important to note that many small and medium enterprises start well but in a long run, the businesses fold up. Which can be attributed to inadequate finance, poor product design, and little or no research on consumers' needs, poor business management strategy and planning. It could be possible that a decrease in business profit or poor sales are traceable to lack of customers as a result of using an obsolete medium of advertisement. This has resulted to lack of customer feedback that is needed for business growth. Poor innovation, high interest rate, as well as stiff competition from well-established local and foreign competitors, and most importantly poor marketing strategy appears to be the reason in which the use of social media particularly in a technologically driven era has become an indispensable point to focus on, in order to navigate some of the challenges SMEs experience.

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Eze, Iwu and Ruhode (2021) stated that many small and medium-scale businesses in Nigeria do not make it past the first few years of operation. This could be as a result of inadequate marketing or failure to integratethe current advertising trends and techniques, such as applying social media to the firm's marketing plan. While Walt (2013) opines that ineffective marketing techniques are some of the most significant issues thatsmall businesses confront when it comes to advertising. Ude in Ebitu, Basil, and Ufot (2016) observed thatsmall-scale industries shy away from advertising their products and offer neither credit nor home delivery services to their customers. For SMEs to overcome these problems and become more competitive, they needto improve their marketing strategies and operations in all ramifications. Interestingly, the importance of social media advert to SMEs businesses cannot be overemphasized, particularly in Post Covid-19 era, where business productivity, advertising, buying and selling are done online. Thus, social media advertising becomes a viable tool for small and medium enterprises to increase in productivity, maximization of profit and expansion of capacity (Balan & Rege, 2017).

Concept of Social Media

Social media is a concept used to describe an online platform for communication, idea sharing, and seekingout a wider range of people. It facilitates participation, interaction, and openness among online users. According to Madu and Nwosu (2018), social media encompasses a wide range of online word-of-mouth forums, including blogs, company-sponsored discussion boards, consumer product or service ratings websites and forums; internet discussion sites (containing digital audio, images, movies, or photographs) and social networking websites, to name a few. Ibechukwu and Uzoma (2014) opined that social media is a form of electronic communication (such as the Internet, websites, or mobile phones, usually for social networkingand blogging) through which users create online communities to share information, ideas, personal messages, and other content.

According to Zeeshain and Hussain (2017), social media is the usage of web-based and mobile technologiesto create, share, and consume information and knowledge without any geographical, social, political, or demographical boundaries through public interaction in a participatory and collaborative way. Sisira in Ekwueme and Okoro (2013) asserted that social media is any website that allows users to share their content, opinions, views and encourages and community building. This assists in creativity, open communication, and the sharing of knowledge among users. They are internet-based platforms through which people can create and exchange information in a participatory manner on a real-time basis, (Odii, 2013).

The major feature of social media lies in the fact that users can have personal profiles and profile pictures, individuals are able to express their thoughts, feelings, interests, and qualifications (music, hobbies, preferences) and link to other people (friends or professional fan pages) who also have a profile. This profileis very unique to each owner and allows users to describe themselves. The users have total control over the content that they choose to share, the applications they allow on their pages, and how they display themselvesin the most appealing manner. In essence, the profile of a person depicts an ideal description of every user. Ekwueme and Okoro (2013) stated that social media networks are platforms through which individuals express their opinions, wants, needs, and organizations thus leverage such platforms to understand their customers and seek innovative ways to meet these needs; information on price, product, and place are being communicated by brands to their customers through an online platform that has the highest audience. It is this feature (large audience) of social media pulling an incredible crowd that makes it such a viable mediumas well as a mass medium suitable for advertising.

Using various social media such as Facebook, Twitter, Instagram, blogs, and other channels allows people to interact online with whomever they want without any restriction in terms of quality or quantity (Rugova & Prenaj, 2016). Zheyu (2021) asserts that TikTok, a video-based App and, type of social media platform that allows you to create videos and share them directly with friends or the public, is well known for its unique video editing features, and users are regardless of young or older generation. Zheyu (2021) revealedthat user growth of Tiktok grew from 157 million in 2019 to 301 million in 2020 as some small businesses and brands' products blew up because of TikTok.

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Needlman in Thirushen (2013) stated that popular websites such as Facebook, Twitter, and YouTube have close to five million visitors daily and thus have to be considered important hubs for marketing; promoting a business via these sites serves as a very attractive business proposition due to the vast amount of steady traffic every day. To date, Facebook has about 2.2 billion active users, or nearly 20% of the global population(Statista, 2018). With the increase in the use of social media, one will agree that it is possible to create a tremendously positive impact on small and medium-scale enterprises because of the wide range of audiences social media attracts. Madu, Udemba, and Nwosu (2018) asserted that social media is an important tool forall businesses because it allows them to communicate with, listen to, and learn from their customers in a way they have never been able to do before.

Furthermore, several social media applications exist that allow the creation, transformation, and exchange of online content with the use of smartphones and computers. SMEs can easily use various platforms for their business. These platforms include Facebook, WhatsApp, Twitter, LinkedIn, and Instagram, TikTok among others. Findings have shown that only 26% of small business owners use social media strategies effectively enough to reach their potential customers (Bennett, 2017). Failure to incorporate social media strategies as part of formal marketing plans may result in the decline of brand awareness and market share for small and medium enterprises (Tafesse & Wien, 2017). Owners of brands who engage customers through social media channels enjoy higher loyalty from their customers and have an increased likelihood of influencing customer conversion rates in their favor (Iblasi, Bader & Al-Qreini, 2016). To actualize the purpose of setting up an SME, it is important that the entrepreneur find a way to advertise her product to consumers for business growth and development, and one of such ways is through social media platforms.

The Roles of Social Media in Sustaining SMEs

Product advertisement is heavily reliant on social media. According to Hassan, Nadzim, and Shiratuddin (2015), with the presence of social media, SMEs are enabled to carry out advertising activities in an efficient manner. Thus, through social media, the prospects of SMEs to promoting their goods or services and market their brands worldwide have increased due to enhanced access to external resources, and the development of product innovations, which affects their sales performance positively (Bocconcelli, Cioppi, & Pagano, 2017). A critical success factor for small businesses is their ability to market themselves efficiently and cost effectively by reducing or eliminating marketing and sales costs, and social media provides an opportunity to do just this (Schaupp & Bélanger, 2014). According to Bonsón and Ratkai (2013), SMEs can fully use social media for selling, advertising, and marketing at a lower cost, and also promote their products and services through messaging, tagging, commenting, and notifying. As a result, social media is regarded as one of the most effective promotional platforms for companies, particularly SMEs, throughout the world (Bernhard & Abukar, 2012).

Social media also plays a crucial role in promoting business motivation. Zhang and Penina (2012) revealed that social media in the form of Facebook, and YouTube integration has brought about marketing intelligence. Cohen and Lancaster (2014) also affirmed that the introduction of social media has enabled SMEs to create company awareness and promote the company from different perspectives with minimal cost. According to Kamboj, Yadav, and Rahman (2018), business motivation is achieved because customer brand loyalty and trust are gained through the use of social media. Through social media, customers who become addicted to particular goods and services maintain brand co-creation and therefore impact the firm positively.

Social media allows businesses to gain access to resources that might not otherwise be available to them. It also aids the development of a firm's worthiness, increases customer and supplier contacts, brings to light where resources and funding are available, promotes innovation, and helps in the cultivation of strategic partnerships. This makes social media not only appropriate for large organizations but for small and medium-sized companies as well (Kaplan & Haenlein, 2009). There is an opportunity for greater access to different audiences, and improved customer service. Parveen, Jaasfar and Ainin (2014) opined that cusstomer service becomes easy as SMEs generates effective communication and develops positive relationships with

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customers. Social media quite effortlessly provides platforms for convenient communication with customers whereby business are able to respond to customers' queries immediately by answering consumers' queries via social media and directing them to the relevant places for more details and services.

Social media serve as a tool in maintaining customer relationship. Which enables SMEs to increase its customer and market base, thereby contributing towards the business growth. Social media offers unparalleled constant connectivity for users, allowing them to share, collaborate and establish online communities. Both businesses and consumers use the media to exchange opinions and recommendations and display certain consumption behaviors (Kotler & Armstrong, 2011). SMEs customer relationships are enhanced as they are freely allowed to communicate directly with the business, and also receive feedback within the shortest possible time at a lower cost and higher efficiency as compared with traditional communication networks like radio and TV (Crammond, Omeihe, Murray, & Ledger, 2018). Social media is an extension of public relations because it helps businesses (especially smaller enterprises) to maintain relationships with their customers by providing direct communication to their target markets. Social media allows businesses to open dialogue with customers in order to reach out and ascertain what interests them (Faraj, 2014).

There is also a link between social media and understanding of customers. By paying attention to and thus understanding customers' issues, questions, concerns, and experiences voiced on social media platforms. SMEs are able to better tailor their products, services and marketing strategies to match customer preferences and perceptions. Understanding the customer leads directly into crafting the next step of the sales process (Andzulis, Mick, Panagopoulos, & Rapp, 2012). The initial approach to the customer gives the SMEs an opportunity to build rapport, gain the prospect's attention, introduce themselves while establishing credibility, and qualify the prospect, among other things (Andzulis, Mick, Panagopoulos, & Rapp, 2012). He, Wang, and Zha, (2014) stated that posting local community information or social responsibility activities on social media pages could very well strengthen customer trust and loyalty, improve business reputations, as well as encourage followers and their friends to participate in the online promotion and marketing of products and services.

Benefits of Social Media to SMEs

Social media boosts sales and generates opportunities to come up with new products and services and facilitate a business to expand its scope extending through market penetration and product development (Johansson & Corvera, 2012). It generate the sales of any given product or service, including increased market share, revenues, and product improvements (Schaupp & Bélanger, 2014).

Customers intelligence gathered from social media is important for driving innovation in a business. The use of social technologies provides insights, thoughts, and ideas on how to better serve customers and enable businesses to discover innovative ways to conduct business or new products and services to offer customers (Evans & McKee, 2010). Singh and Ratna (2017) maintained that the use of social media as a tool for innovation can facilitate gathering insights and ideas from customers to come up with innovative products in terms of new packaging, delivery of products, payment methods, and ways to serve customers.

Improved brand loyalty is gained through the use of social media. One of the main goals of almost all businesses is to develop a loyal customer base. Considering that customer satisfaction and brand loyalty typically go hand in hand, it is important to regularly engage with consumers and begin developing a bond with them. Social media is not just limited to introducing your brand's products and promotional campaigns. Customers see these platforms as a service channel where they can communicate directly with the business (Abdelmadjid, 2018). Many trans-national corporations use social media to fulfil business imperatives suchas driving website traffic, increasing customer loyalty and retention, enhancing sales and revenues, and improving customer satisfaction. However, such benefits of social media are certainly not limited to large businesses and are also crucial for small businesses (He, Wang, & Zha 2014). Some studies have shown that consumers prefer to interact with small business owners than with large corporations. Some consumers even

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see small businesses as their "friends" and enjoy supporting small business owners (He, Wang, & Zha, 2014). Bazi, Filieri and Gorton (2020) similarly confirm that firms through social media are always in close interactions and good contacts with customers. By so, new customers are attained based on recommendations from customers to others. Dwivedi, Rana, Tajvidi, Lal, Sahu and Gupta (2017) revealed that consumers are comfortable using social media to access small and medium enterprises' products and services. The experiences gained by consumers are therefore shared with others by recommending the benefits derived from the firms, hence promoting customer-driven sales.

Social media provides current information. Through the use of social media, familiarity can be created in order to influence purchase intention. People on social media sites connect with strangers, as well as their close referential groups. They share information about themselves and their beliefs online through images, text posts, and videos in order to build their publicity (Kaplan & Haenlein, 2009). Singh and Ratna (2017) asserted that social tools can also help to strengthen brand perception by communicating core values to a wider audience. This in turn, opens up the opportunity to start conversations, grow business partnerships and expand the online community to win new followers and potential customers. Social media leads to massive exposure due to its worldwide access, sharing capabilities, and a huge number of daily users. It delivers instant information in the digital marketplace, thus giving businesses the ability to advertise their products, going beyond distance.

Kenly and poston (2016) examined 91 manufacturing and service companies and discovered that those who employed social media in their business reaped a range of benefits. The advantage included a cheaper way of advertising, more innovative concepts developed from the virtual community, and brand awareness. This advancement increased the exposure of the business and its revenue. These observations expose the relevance of marketing on social media and why businesses cannot do without the platform. Robert and Candi (2014) revealed that the platform has made it possible for consumers to propose new product ideas, and suggest the sectors that organizations need to improve upon. Alakali, Alu, Tarnongo and Ogbu (2014) explained how some enterprises exploited social media technology to access the global market. They furthermentioned that companies in Nigeria were able to sell their product, ideas, and services internationally withgratitude to social media marketing. With the fact that small businesses are known to be sited in their surrounding area, social media supplies them with an opportunity to expand their customer base globally.

According to Experian Marketing Services (2014), social media sites serve as a way of marketing and promoting the general growth of SMEs. SMEs can use social media technology as a lens through which theycan better understand their environment and position themselves to take advantage of various market opportunities. Positioning will help SMEs understand their specific niche within their scope of influence, consequently positioning them for continued survival in the marketplace (Joshua, 2019). Pookulangara and Koesler (2011) suggest social media alternatives should be incorporated into marketing mixes and state thatif companies and brands do not do that, then they are practicing poor customer service. Exploiting the capabilities of social media will enable SMEs to better understand the environment and position themselvesfor both the present and the future (Tuten & Solomon, 2018).

Conclusion

This paper highlighted the influence of social media on SMEs and projected the role of social media in promoting SMEs for national development. This paper also examined the several advantages that SMEs stand to gain from having their business portrayed on social networks and in the media. In conclusion, creating communities online, satisfying customers efficiently, boosting sales, advertising products, and services, gaining current information and building brand loyalty among other are specific goals achieved effectively by leveraging the power of social media platforms. Thus, social media is not only beneficial to the immediate businesses through usage and profitability of SMEs, but also play an active role in promoting the Gross Domestic Product (GDP) of a nation through the contributions of these businesses.

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Recommendations

Based on the salient points of this study, the following recommendations are made:

1. Government and other stakeholders should provide SMEs with skill acquisition programs that will enlighten them on the use of social media marketing skills and smartphones as well as other gadgets that can assist them to launch on every social media platform for product and service advertisement.
2. The use of social media for promoting the growth of small and medium-scale enterprises can only be made possible through the use of computer gadgets, smartphones containing various social media applications installed, as well as internet services. Government and other stakeholders should assistin providing sufficient infrastructure al facilities that will enhance digital marketing to promote SMEs growth in Nigeria.
3. All small and medium-scale business owners who desire growth and development should pitch their businesses on social media networks.
4. Government should also subsidize charges on internet connection via various telecommunication companies in order to encourage SMEs to carryout advertisements on social media platform

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NARRATIVE REVIEW OF THE PHILOSOPHY OF HOME ECONOMICS PROFESSION IN NIGERIA

[1]Feranmi B. OLUWAGBEMILEKE [2]Ekemini E. UKO-AVIOMOH
Department of Vocational and Technical Education, Faculty of Education, University of Benin, Benin City, Benin City
Corresponding Author: lekeferanmi2019@gmail.com; +2349030118082

Abstract
This study reviews the philosophy of Home Economics as a profession in Nigeria. It delves into the fundamental concepts of philosophy in a profession and underscored the imperative to articulate a clear and explicit philosophy especially for Home Economics. It examines the components of the philosophy of Home Economics profession, especially its forms and substances, and explored the traditional statements on the philosophy of Home Economics profession. In the subsequent sections, the review scrutinizes the evolution of the philosophy of Home Economics profession and the factors responsible for it. The review then shifts its focus to the contemporary philosophical issues in Home Economics around the world, such as change in nomenclature and paradigms. In addition, it examines the challenges to the effective implementation of Home Economics philosophy, and highlights the implications of the review for the profession in Nigeria. The study concluded that the philosophy of Home Economics must continue to evolve, adapt, and engage with these complex issues to fulfill its mission of promoting the well-being and quality of life for individuals, families, communities, and societies worldwide. It was recommended that professionals should engage in more deliberate discussions about the several aspects of Home Economics professional philosophy in Nigeria.

Keywords: Home Economics profession, narrative review, philosophy, Nigeria

Introduction

Home Economics transcends its conventional perception as merely a school subject; it has evolved into a full-fledged profession dedicated to enhancing human development, family finances, housing and interior design, food science, nutrition and wellness, textiles, apparel, and various consumer concerns. The overarching aim is to elevate the quality of life for individuals, families, and societies (American Association of Family and Consumer Sciences, AAFCS, 2015). Historically, Home Economics courses were designed to professionalize household responsibilities, offer intellectual fulfillment for women, and underscore the significance of "women's work" within society, preparing them for their traditional gender-based roles (Danovich, 2018; Elias, 2006). However, this paradigm is undergoing a profound transformation in contemporary times.

Professor McGregor Sue L.T. from Mount Saint Vincent University in Halifax, Canada, has, in recent times, endeavored a clear-cut definition and elucidation of the philosophies underpinning Home Economics. During her keynote address at the Fifth International Scientific Conference in Jelgava, Latvia (2012), she delineated the four essential dimensions, referred to as the "4 Ps," integral to any profession. They are professionalism, professionals, practices and philosophy. Professionalism, also to be known as profitability, refers to the capacity to deliver services that benefit society as a whole. Home Economics unmistakably qualifies as a profession because it furnishes services that center on family welfare and the betterment of humanity, with a primary focus on optimizing well-being and quality of life.

Home Economics also have professionals to uphold her professionalism. Professionals refer to individuals who draw upon both general and specialized knowledge while adhering to high standards of professional ethics in their practice. The provision of services by Home Economists involves rigorous and responsible intellectual engagement, particularly in making moral judgments. They persistently scrutinize existing

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knowledge to align it with the evolving needs of individuals, families, and societies. The professionals engage in practices towards ensuring their professionalism. Practices encompass identifiable, repeatable actions intrinsic to a given profession. Home economists engage in practices that do not preclude self- reflection and self-critique to ensure the ethical integrity of their work, as they pursue clarity in presenting their profession's contributions to society (McGregor, 2012).

The pursuit for a clear identity by the professionals within a profession cannot be divorced from their philosophical tenets**.** Philosophy as the fourth dimension of a profession entails embracing ideas, beliefs, and a set of rules and principles that define what is crucial in achieving high-quality and ethically normative practice. The practice of Home Economics demands a high level of ethical competence and independent, intellectual thought. While the scope and purpose of the profession may be limited, the complexity of knowledge and practice remains unrestricted, ideally guided by the philosophies of practice (McGregor, 2012). The onus is on professionals to deliberately engage themselves with the philosophy of their profession so that they can progressively be capable of addressing the dynamics that goes on within the society they aim at serving. It is arguable that this kind of engagement exists among Home Economists in Nigeria, but the intentionality or deliberateness of it seems to be lacking.

The dearth in literature on philosophical discourses among Nigerian Home Economists has been documented in an earlier systematic review conducted by the researchers. There is therefore the need to review whatever has been deliberately done before on the subject of philosophy by Home Economics professionals within the country. This is necessary to identify gaps of knowledge that needs to be brought to the table of discussion among the professionals. Hence, this study is a narrative review of the philosophy of Home Economics profession in Nigeria.

Objectives:

The main aim of this study was to review the philosophy of Home Economics profession in Nigeria. Specifically, this review documented the:

1. concept of philosophy in a profession
2. rationales for the statement of Home Economics philosophy,
3. components of the philosophy of Home Economics profession,
4. traditional statements on the philosophy of Home Economics profession,
5. evolution of the philosophy of Home Economics profession,
6. factors responsible for the evolution of Home Economics philosophy,
7. contemporary philosophical issues in Home Economics around the world,
8. challenges to the effective implementation of Home Economics philosophy, and
9. implications of the review of the philosophy of Home Economics profession in Nigeria

Methodology

This study adopted a narrative review research design. The researcher began by conducting a scoping review of the documents available on the philosophy of Home Economics on the internet, and physically at the time of the study. At first, the researchers studied some documents that contain strands of information on the philosophy of Home Economics, such as university and colleges of education handbooks. The researchers further reviewed a few published journal articles. It was discovered that though there are sporadic allusions to the philosophy of Home Economics in some of the published journal articles, the only document that appears to have been intentionally written on the subject of Home Economics philosophy was that of Balogun, Adebanjo, & Mundi (2009). The distance of time between the time this document was published and the time the study was carried out made the review quintessential. Also, the keynote address of McGregor (2012), which was a very comprehensive elucidation of the philosophy of Home Economics profession on a broader scale, was reviewed. The important points from these documents were noted and finally organised to ensure a logical flow.

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Concept of Philosophy in a Profession

The term "Philosophy" is a commonly used word both in academic circles and everyday conversations. Its origin traces back to ancient Greece, where it is derived from the fusion of two words: "Philein" (meaning love) and "Sophia" (signifying wisdom). Essentially, "philosophy" originally meant "Love of wisdom," with wisdom denoting the capacity to connect facts from various realms of knowledge to real-life experience (Balogun, *et al.*, 2009).

Philosophy can be delineated in three distinct senses. The first is the exploration of the nature and meaningof existence: In this sense, philosophy encompasses the investigation into the fundamental aspects of the universe and human existence. According to this definition, the Greeks considered anyone who acquired knowledge in any domain to be a philosopher. Consequently, philosophy is seen as encompassing almost every facet of human knowledge. This comprehensive perspective is reflected in the highest academic degree attainable in any field of study, the Ph.D. (Doctorate of Philosophy). Another delineation of the term philosophy is a specific system of beliefs derived from the pursuit of knowledge: Philosophy can also be seen as a particular framework of beliefs that emerges from the quest for understanding life and the universe. This viewpoint positions philosophy as a discipline akin to "Science," where philosophical knowledge spansvarious areas such as analytical philosophy, moral and political philosophy, and philosophy of religion.

The third delineation of the term philosophy is a set of beliefs or life attitude guiding behavior. In this context, philosophy pertains to a set of beliefs or a life stance that serves as a compass for the behavior of an individual or a collective entity. It is within this third definition that the discourse on a profession or discipline like Home Economics gains significance. In essence, the philosophy of a profession or disciplineconstitutes a foundational set of beliefs or knowledge-based attitudes that steer the practice within that profession or discipline. Moreover, philosophy, in this context, can also be regarded as the value judgmentsof the discipline, as one's values inherently evolve into one's philosophy (Balogun, *et al*., 2009).

Philosophy plays a pivotal role in shaping the other essential components of any profession, particularly professionalism and practice. It provides a framework of goals, values, and attitudes to aspire to during professional practice. Furthermore, it fosters awareness among practitioners regarding the rationale behind their actions, facilitating a deeper understanding of their professional conduct.

Moreover, philosophy aids practitioners in making decisions that lead to the establishment of ethically consistent and morally defensible practices that impact the human condition. In the context of Home Economics as a profession, its philosophy serves as the bedrock for determining what constitutes the ideal aspects of daily life within households. The absence of a philosophy of practice leaves home economists without a clear motivational compass when making numerous critical decisions imbued with moral implications, potentially resulting in harm if the wrong choices are made.

Therefore, philosophy delineates four key facets, often referred to as the 4 Rs of professional practice. The first facet includes *rules* that encompass the principles, values, beliefs, and attitudes that underpin the practice. They serve as the guiding framework that directs the conduct and decision-making of practitioners.Aside rules, a philosophy of profession should have specify the *roles* that practitioners are expected to assume and uphold within their professional domain. These roles define the functions and responsibilities they are tasked with in their respective fields. *Relationships* are also specified by the philosophy of a profession. Practitioners are not only expected to engage with others within their profession but also to cultivate productive relationships with colleagues in other fields, clients, or partners. Lastly, philosophy imposes a set of *responsibilities* on practitioners, spanning their commitment to the discipline, the profession as a whole, and the individuals or entities they serve as clients or partners. These responsibilities encompass ethical obligations and duties that practitioners are obliged to fulfill in the course of their practice. These facets of professional practices are built on philosophy which is susceptible to transformation based on the

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evolving values, needs and standards within the society where the profession operates. This underscores the significance of examining the rationales for articulating the philosophy of Home Economics.

Rationales for the Statement of Home Economics Philosophy

The significance of formulating a philosophical statement within a profession or discipline cannot be overstated. Each profession or discipline rests upon a philosophical foundation that underpins the education and practice of its members. In the context of Home Economics, its philosophy comprises a set of fundamental beliefs that serve as the bedrock for the training and professional conduct within the field.

According to Balogun*, et al.* (2009), the necessity for articulating the philosophy of Home Economics arises from several crucial considerations such as the following:

1. **Cultivating adequate human resources and competence:** A well-defined philosophy is instrumental in nurturing the essential human resources and competencies required to excel in diverse educational and community settings.
2. **Articulating and defending personal philosophy:** It enables practitioners to articulate and defend their own personal philosophy of Home Economics, grounded in professionally pertinent conceptualization.
3. **Facilitating professional resourcefulness and growth:** A clear philosophy aids in organizing one's professional resourcefulness, fostering development, and promoting growth in areas linked to Home Economics.
4. **Enhancing communication and collaboration:** It helps open up avenues of communication and collaboration with colleagues from related fields, facilitating effective planning and implementation.
5. **Understanding evolving philosophies:** It fosters an understanding of alternative philosophies within the discipline and their evolution in response to societal changes.
6. **Formulating education and development goals:** Lastly, it assists in the formulation of goals, objectives, and plans tailored to Home Economics education and development within the relevant nation.

In summary, the philosophy of Home Economics serves as a guiding framework that not only informs the profession's values but also influences the development of its practitioners and the trajectory of the discipline itself.

Components of the Philosophy of Home Economics Profession

The philosophy that underpins Home Economics has evolved over time, yet its core objective of advancing family well-being remains steadfast. Various articulations have surfaced through the years, all ultimately converging on the same intent and purpose (Balogun *et al.,* 2009). Like any philosophy, it possesses two major elements - form and substance that are in a constant state of evolution. In this context, “form” pertainsto the focus of the philosophy (ontology), the methodology for acquiring knowledge (epistemology), and the values and ethics shaping its practice (axiology). Conversely, “substance” represents the distinctive perspective (logic) brought to bear on the philosophy, defining the boundaries of practice and infusing meaning into the profession (McGregor, 2012).

In Home Economics profession, the presently accepted philosophical form can be summarized as answering three questions. The first is *what* the profession is concerned with. This has to do with ontological inquisition about reality, which readily is that Home Economists focus on individuals and families, whether consideredin isolation or as integral components of broader social institutions. The second question relates to values and desired outcomes, that is *why* the professionals do what they do. In Home Economics profession, the overarching intent is to enhance and uplift their well-being, quality of life, and daily existence to the greatest extent possible. The third question is about *how* professionals go about their practices. In Home Economics,

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understanding is attained by examining their everyday lives as they unfold within their homes andhouseholds, influenced by both internal and external factors.

On the other hand, the substance of the Home Economics philosophy revolves around crafting a unique perspective on its core subject – families. The substance is not uniform worldwide, as practitioners in different countries draw from various philosophical foundations. However, there are three distinct approaches to articulating this perspectives and thought process in Home Economics profession. The first approach is that of *a unified philosophy*. In this approach, proponents advocate for the establishment of a globally agreed-upon professional philosophy of Home Economics. They believe this would foster a more sustainable profession on an international scale, instill greater consistency in practice, enhance adaptabilityto changing dynamics, and promote a profound sense of solidarity. Consequently, the profession would maintain a uniform form and substance across the globe.

The second approach is *comparative Home Economics philosophies*. This approach acknowledges and respects the global diversity within Home Economics practice across different periods, regions, and cultures.It envisions a scenario where there may be an agreed-upon form, but the substance varies, or conversely, different forms but a consistent substance, contingent upon contextual factors. Through ongoing comparisons and dialogues, both form and substance may undergo transformation. The third approach to thesubstance of Home Economics is *multiple philosophies*. In this case, each region would adopt a context- specific Home Economics philosophy, giving rise to divergent forms and substances. This approach embraces the idea of different regions cultivating their own distinct philosophies, leading to a rich tapestry of diversity in both form and substance.

Traditional Statements on the Philosophy of Home Economics Profession

The philosophy underpinning Home Economics has historically been articulated in various widely accepted ways around the world. According to the American Home Economics Association in the 20th century, (now, American Association for Food and Consumer Sciences, AAFCS), for example, Home Economics is a domain of knowledge and service primarily concerned with the strengthening of families (Cangage, 2022). Similarly, the Berlin International Meeting of the Permanent Council of Home Economics (1965) characterized Home Economics as encompassing comprehensive knowledge related to all aspects of home and family life. It emphasized the generation and dissemination of research findings pertaining to essential facets such as food, clothing, shelter, health, and human relationships.

In Nigeria, however, the philosophy of the Home Economics profession has been articulated as follows: “to develop values that provide guidance and direction in life and enhance societal well-being” (Tate, cited in Nwabuona, 2000). This perspective has consistently appeared in university colleges of education handbooksas well as some scholarly works, such as Okolie and Okpala (2006) and Ejinkeonye and Uloko (2010). Additionally, Ukpore and Obunadike (2010) have slightly broadened this concept by including intellectual growth, the attainment of maturity, and the promotion of physical development within the scope.

In contrast, Balogun, *et al.* (2009) formulated the philosophy as “to nurture individuals with essential competencies for offering scientific solutions to resource utilization challenges, information acquisition regarding life's realities, and the enhancement of living conditions within families, communities, the nation,and the global context.” However, this expression remains somewhat analogous to the former in its overall vagueness. More recently, Ehumadu (2020) replaced “improvement of the quality of life” with “strengthening” and characterized the philosophy of Home Economics education as enabling students to acquire skills facilitating the fulfillment of their roles as family members to the utmost satisfaction of themselves, their families, and their communities or societies. Around the same period of time, Uko-Aviomoh (2020) emphatically asserted that Home Economics education should encompass providing skillsto students to enable them participate in future fortification of families.

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These historic viewpoints collectively capture the essence of the Home Economics philosophy, which centers on the fortification of families, comprehensive knowledge of home and family matters, and the responsible utilization of resources for the welfare of humanity. These statements are apparent and self- assertive, since the constructs they contained are not adequately elucidated. There is therefore the need to intentionally subject these traditional statements to the probing searchlight of active philosophical engagement by Home Economics professionals. This is especially necessary because viewpoints are susceptible to change over time, and the philosophy of Home Economics is not exempted.

Evolution of the Philosophy of Home Economics Profession

Individual philosophies are prone to change, as they evolve in response to shifting values, influenced by age, environment, and experiences. Likewise, the philosophy of a discipline is dynamic and adapts to evolving societal values. The rapidly changing landscape of societal development motivates the continuous evolutionof Home Economics philosophy. These motivating factors, rooted in values, have driven the need to restatethe philosophy of Home Economics across different eras.

The contemporary philosophy of Home Economics is a testament to the discipline's adaptability and its wide-ranging knowledge base. It involves the application of knowledge from various domains, including thepure and applied sciences, social sciences, arts, and humanities. This interdisciplinary approach aims to cultivate men and women with fundamental competencies capable of providing scientific solutions to resource utilization for family needs, enhancing access to information about life's realities, and improving living conditions within families, communities, nations, and the global arena.

The definition of contemporary Home Economics philosophy underscores the discipline's diverse knowledge foundation. It draws from pure sciences such as Biology, Chemistry, Physics, Mathematics, and applied sciences like nutrition, information technology, and engineering of home appliances. Additionally, it incorporates social sciences encompassing subjects such as sociology, family living, human development,and psychology. Even fields within Arts and Humanities, such as Fine Arts, Environmental Sciences, and Communication Arts, contribute to the multifaceted knowledge spectrum of Home Economics. These diverse disciplines collectively empower Home Economics to produce competent individuals capable of elevating not only family life but also the well-being of the broader community, nation, and the world.

The evolution of Home Economics philosophy has transitioned from a simple focus on acquiring skills related to cookery, child care, housekeeping, and handcrafting, primarily aimed at preparing girls for homemaking. Today, the philosophy of Home Economics has ascended to a higher level of professionalism, embracing a broader scope of knowledge and skills.

In Nigeria, the evolution of Home Economics philosophy has been influenced by a rich tapestry of historical factors, cultural dynamics, and educational paradigms. The philosophy of Home Economics in Nigeria has always been anchored in the overarching goal of enhancing the well-being of individuals, families, and communities. Traditional values and practices have been seamlessly integrated into the philosophy, emphasizing the importance of family cohesion, nutrition, housing, clothing, and overall domestic harmony.

Over time, as Nigeria has witnessed significant sociocultural and economic changes, the philosophy of Home Economics has adapted to meet the evolving needs of its society (Uko-Aviomoh, 2013). It has embraced a broader perspective, encompassing not only traditional family roles but also the empowerment of individuals, particularly women, as agents of positive change in their communities. The philosophy recognizes the interconnectedness of Home Economics with broader societal issues such as gender equality,sustainable living, and community development.

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Furthermore, the philosophy of Home Economics in Nigeria has incorporated global perspectives, drawing inspiration from international best practices while maintaining its deep-rooted cultural foundations. The profession has evolved into a dynamic field that equips practitioners with the knowledge and skills to address contemporary challenges while preserving and celebrating the cultural heritage of Nigeria (Uko-Aviomoh & Salami, 2007).

In essence, the philosophy of Home Economics in Nigeria reflects a fusion of tradition and modernity, acknowledging the importance of adapting to change while preserving the core values that underpin the discipline (Uko-Aviomoh & Nwabah, 2005). It embodies a commitment to improving the quality of life for individuals, families, and communities in Nigeria, serving as a guiding compass for practitioners as they navigate the multifaceted landscape of Home Economics in the nation.

Factors Responsible for the Evolution of Home Economics Philosophy

Several factors have spurred the development of this new, organically changing philosophy for Home Economics:

1. **Nutrition as a science:** The recognition of nutrition as a science with significant implications for healthful living necessitates the inclusion of physical and life sciences within the Home Economics curriculum.
2. **Urbanization:** The shift from small, traditional communities to complex urban living environments demands changes in housing design and land-space management.
3. **Institutional living:** Increased human mobility, whether for business or leisure, has led to the creation of institutional settings that replicate a home environment, such as hotels, hostels, and hospitals.
4. **Dining trends:** Changing societal dynamics, including longer work hours and a preference for eatingout, require competence in institutional food management.
5. **Technological advancements:** Technological innovations have transformed domestic tasks, mandating proficiency in the operation and maintenance of domestic and institutional equipment.
6. **Aesthetic and functional values:** Improved socio-economic status has elevated preferences for higher aesthetic and functional values in clothing and housing designs.
7. **ICT and globalization:** Information and Communication Technology (ICT) has globalized information, ideas, and experiences, influencing societal standards and necessitating scientific research in Home Economics.
8. **Shifting roles:** As more women engage in activities outside the home, early childhood education is increasingly entrusted to alternate institutions, demanding knowledge of child care and developmentby Home Economists (Balogun, *et al.,* 2009).

These factors have driven the transformation of Home Economics philosophy, aligning it with the dynamic needs and aspirations of contemporary society.

Contemporary Philosophical Issues in Home Economics around the World

This penultimate aspect of the review shall address two major issues that relate to the philosophy of Home Economics across the world. The two issues are the changes in nomenclature and paradigms of the profession's philosophy.

Changes in Nomenclature

Over the course of its history, the field of Home Economics has grappled with the challenge of finding a name that fully encapsulates its principles and ideals. Originally known as "Home Economics," or often abbreviated as "Home Ec" or "HE," this term was the primary identifier in the United States. However, as the field expanded to cover aspects beyond domestic life and wellness, various organizations, including theAmerican Association of Family and Consumer Sciences, adopted the term "Family and Consumer Sciences(FCS)" to better reflect its broader scope. Other names have been associated with Home Economics

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throughout its history, including “Human Sciences,” “Home Science,” “Domestic Economy,” and, in earlier decades, “the Domestic Arts,” “the Domestic Sciences,” or “the Domestic Arts and Sciences.” Additionally, Home Economics shares a historical connection with human ecology, leading some university-level programs to adopt the name “human ecology.” Cornell University, for example, transitioned to this name. The nomenclature issue highlights the ongoing evolution of the field's identity (AAFCS, 2015; Cornell University, 2012).

Changing Philosophical Paradigms: Form and Substance

Another substantial philosophical issue in Home Economics revolves around the continuous shifts in both form and substance across different regions of the world. This may be because the choice of philosophical insights often varies, with North America and Oceania leaning toward Habermas, Europe and Scandinavia favoring Merleau-Ponty, Husserl, and Heidegger, Japan aligning with Bollnow, and China following Confucius (McGregor, 2012). These regional preferences often disregard the works of philosophers like Karp Popper, Jean-Paul Sartre, Michel Foucault, John Dewey (with some exceptions in Home Economics education), Friedrich Nietzsche, Karl Marx, John Stuart Mill, Noam Chomsky, and others.

In other words, Home Economics philosophy takes different forms in various regions. In Canada, for instance, the profession embraces transdisciplinarity, transformative philosophies, and a focus on the humancondition. In the United States of America, Home Economics professionals Prioritize reflective leadership,critical science, qualities of living, and communities of practice. Europe and Scandinavia advocate for competent thoughtful practice, understanding the sacredness of everyday life, narratives, and integral specialists, Australia embraces a “carnival-esque” approach, expert novice dynamics, challenges traditional patriarchy, and focuses on generational theory and future-proofing, while Asia (especially Japan) envisionsa humane society, emphasizes human protection, views the home as habitation, and addresses the concept of civil minimum (McGregor, 2012).

These shifts in philosophy also result in changes to ideologies, research methodologies, theoretical frameworks, methods, reporting of results, and practical applications. This evolving philosophy of Home Economics, referred to as the Philosophical Mosaic, harmonizes perceptions of the field among practitioners worldwide. It encompasses various aspects, such as shifting the focus from well-being and quality of life tothe human condition and qualities of living, embracing the concepts of whole sight and being-in-the-world, promoting universal access to basic education for life competence, emphasizing a rights-based approach to foster a culture of family life, and reimagining the home as a place for humanity's ascendency rather than just shelter. The mosaic also emphasizes prioritizing human protection, focusing on the soundness and fullness of human life and existential hope, recognizing the significance of everyday life and meaning- making within daily routines, moving beyond patriarchal structures, adopting an agent-centered body of knowledge that emphasizes communities of practice, and rethinking competent practice, considering sustainability, personal and social responsibility, and the ability to live and manage together. Other points of emphasis include embracing reflective leadership, emphasizing ethical, spiritual, and authentic dimensions, transitioning from integrated practice to integral practice, expanding interdisciplinary approaches to transdisciplinarity and integral thinking, promoting fun, pleasure, resistance to normalization, and embracing the margins, and redefining expertise as “expert novice” and “integral specialist” (McGregor,2012).

These philosophical shifts illustrate the dynamic nature of Home Economics and its adaptability to changing societal needs and contexts. This evolution is organic because there is no point in view when paradigms will cease to shift. It is therefore necessary to adopt an organic approach to welcoming and handling the shifts as they continue to come. Although many Home Economists in Nigeria have been concerned with some of these pressing philosophical issues, there remains a vast gap to be covered with respect to intentional and progressive engagements of professional over the issues. This may be because, even internally, the implementation of Home Economics Philosophy is besieged by challenges.

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Challenges to the Effective Implementation of Home Economics Philosophy

While Home Economics holds the potential to enrich family life, foster community happiness, contribute to national progress, and promote global harmony in line with its philosophy, there exist significant challenges and limitations hindering its full implementation in Nigeria and other developing countries. These obstacles encompass various factors:

1. **Cultural and gender dynamics:** Cultural and social norms often relegate women, who are traditionally the homemakers, to roles where they have limited control over decision-making in matters affecting their homes. This gender disparity stems from disparities in education and empowerment between men and women. Initiatives, such as the United Nations' fifth Sustainable Development Goal, seek to address and rectify these inequalities by striving for gender equality and the empowerment of women and girls (Salami & Uko-Aviomoh, 2005).
2. **Cultural and socioeconomic diversity:** The rich diversity in cultural, religious, and socioeconomic environments in Nigeria and similar countries necessitates diverse solutions to family and national challenges. This diversity can fragment efforts to implement a uniform Home Economics philosophy tailored to different contexts.
3. **Economic constraints:** Economic challenges, including a declining economy, have limited the adoption of new technologies that could simplify domestic work. Additionally, economic factors have constrained funding for research efforts aimed at identifying evolving family and societal needs and developing solutions to address them.
4. **Resistance to change:** Nigerian society, in particular, has displayed a certain resistance to embracing and adapting to change in the face of evolving challenges impacting families, communities, and the world at large. This resistance can hinder the acceptance of innovative Home Economics practices.
5. **Competition for students:** Home Economics programs often face competition with other disciplines, especially those oriented toward the sciences, when attracting students. This competition can restrict enrollment in Home Economics learning institutions, limiting the pool of individuals who could benefit from the discipline's philosophy and principles (Balogun, *et al*., 2009).

In light of these challenges, the effective implementation of Home Economics philosophy requires concerted efforts to address cultural, gender, economic, and societal factors, fostering a more inclusive, adaptable, and empowered approach to improving family life and societal well-being.

Implications of the Review of the Philosophy of Home Economics Profession in Nigeria

This study has reviewed some existing documentation of the philosophy of Home Economics, as it is foundout that there is yet a wide gap to be filled by progressive deliberate discourse of the subject matter in Nigeria.Aside this, this study has germane implications for Home Economics profession within the country. Some of the implications are as follows.

1. This review identifies the philosophical foundations that underpin Home Economics in Nigeria, helping to define its core principles and values.
2. This narrative review aids the understanding of the historical context of Home Economics in Nigeria, and thus insights into its present as well as philosophy and practices.
3. This review emphasizes the importance of incorporating cultural sensitivity into Home Economics, ensuring that practices align with Nigerian traditions and values.
4. The review highlight the role of socioeconomic factors in shaping the philosophy of Home Economics,particularly in addressing issues related to poverty and inequality.
5. Insights from this review can lead to recommendations for improving Home Economics education and curriculum to better align with the needs and aspirations of Nigerian students and society, from the most rewarding philosophical perspectives.
6. This review also emphasizes the role of Home Economics in community development and how philosophical considerations can guide community engagement efforts.
7. This review evaluates the extent to which salient sustainability principles are integrated into the philosophy of Home Economics over time.

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8. This review provides insights that can facilitate ethical considerations in relation to food safety, consumer rights, and other areas within Home Economics, offering insights into safe and best practices.
9. A narrative review also underscores the importance of an interdisciplinary approach and highlight areas where collaboration with other disciplines can be beneficial.
10. This review provides a basis for policy recommendations that align with the philosophical tenets of Home Economics in Nigeria, advocating for policies that support family well-being and education.

Conclusion

It is obvious from the narrative review that the philosophy of Home Economics should be dynamic and evolving, being shaped by various motivating factors. Given the significant moral responsibility of the Home Economics profession towards humanity, ongoing dialogue and collaboration are essential to ensure that practice aligns with the core values and objectives of the field, encompassing both philosophical form and substance. However, the effective implementation of Home Economics philosophy, particularly in developing countries, faces considerable challenges. These challenges include gender inequality, socio- economic disparities, and the diversity of cultural and religious practices within nations. Addressing these limiting factors represents a critical philosophical concern that necessitates thoughtful consideration and action within the discipline. The philosophy of Home Economics must continue to evolve, adapt, and engage with these complex issues to fulfill its mission of promoting the well-being and quality of life for individuals, families, communities, and societies worldwide.

Recommendations

Based on this narrative review, the following recommendations were made:

1. Home Economics professionals should be more intentional and deliberate about discussing the evolving philosophy of the profession through platforms such as seminars, conferences, and so on.
2. The curriculum goals in Home Economics education should align with the needs and aspirations of Nigerian students and society from the most rewarding philosophical perspectives.
3. Ethics is an aspect of the philosophy of Home Economics that should be given attention to ensure ethical, safe and best practices.
4. Home Economics profession should adopt an interdisciplinary approach to inquiry and practices, knowing that the philosophy of the profession is progressively integrative.
5. Home Economics professionals should advocate for policies that support family well-being and education, with reference to the philosophical tenets of the profession.
6. Scholars should engage in more of such reviews as this, especially with respect to the specific aspectsof Home Economics professional philosophy.

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HEALTH BENEFITS OF NATURAL HERBS AND SPICES: IMPLICATIONS FOR HEALTHY LIVING

[1]Lucy E. OSHIO [2]Adama ADAMU

Department of Vocational and Technical Education, Faculty of Education
University of Benin, Benin City.
adama.adamu@educ.uniben.edu

Abstract

The study reviewed health benefit of natural herbs and spices. It focused on classification of herbs and spices and their health benefits. Herbs and spices were found to contain anti-oxidants, antimicrobial properties, and anti-inflammatory substances. The paper fully examines the concept of different herbs for health benefits. The potential health benefits of ten most commonly used herbs and spices such as garlic, ginger, turmeric, cloves, black pepper, cinnamon, rose mary, thyme, aleo-vera and bay leaves were reviewed. It emphasized the functions and roles of these herbs and spices and the implications of herbs and spices for healthy living. The study concluded that herbs and spices make favorable additions to meals. It was thereforerecommended among others, that herb and spices should be consumed as often as possible, to keep the bodyfit.

Keywords; Natural Herbs and Spices, Health benefits, Implications, Home-Economics

Introduction

Spices and herbs have been use for centuries both for culinary and medicinal purposes. Spices not only enhance the flavor, aroma, and color of the food but they can also protect acute and chronic diseases. Recent increase in the adulteration of spices and aromatic herbs in food industries constitutes a problem that requiresa plan of action by parents, teachers and government to change and address unhealthy dietary pattern and lifestyle to reduce the risk associated with diet related chronic diseases. The use of chemically produced food seasonings as flavor enhancers is a common practice globally. These enhancers contain very harmful substances, but ignorantly many people now prefer to use these artificial food seasonings, to enhance the flavor, aroma, color and taste of their food. However Peace (2018) a nutritionist of Health and Healthy livingadvised against excessive use of these seasonings, as they often contain some questionable ingredients that can be harmful to the human health when used over time.

Also, they do not have any additional nutritional value to foods. In addition there are three main ingredients used in the production of almost all the synthetic seasonings. They are salt, hydrogenated oil (Tran's fat), and Monosodium Glutamate (MSG).These three ingredients are what give the seasoning their long-lasting and meaty taste that leave you wanting more. Researchers have found these items harmful to health. It is widely known that excess salt in our diets can increase blood pressure and those with high blood pressure are peopleat high risk of dying from stroke. It is not only the salt from these cubes that make it excessive, but the fact that many people add several of these cubes in their meals plus additional salt. Thus excess use of these products may be the cause of the high blood pressure in some particular cases. The extra water stored in the body raises the blood pressure. According to biomarkers of intake based on human intervention studies (Rosana, 2019) the more salt you eat, the higher your blood pressure. The higher the blood pressure, the greater the strain on the heart, arteries, kidneys and brain. This can lead to heart attacks, strokes and kidney disease. Another primary ingredient is hydrogenated oil which is a type of fat that food producers use to keeptheir foods fresher for longer period of time. Majority of the products that contain hydrogenated fat are highlyprocess with added sugar and salt. Trans fat have been shown to harm heart health, also studies reveals that

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trans-fat increases the level of low density lipo protein (LDL) bad cholesterol and at the same time decreasesthe level of high density lipo protein(HDL) good cholesterol, both of which are risk factors for heart disease.Food manufacturers use Tran's fat as preservative and also enhance the texture of the food seasoning. Lastly is Monosodium Glutamate (MSG) with the taste of umami. Umami is the fifth taste joining the sweet, sour, salty and bitter. Monosodium Glutamate has been linked to such diseases as, liver inflammation and memory problems. People have reported reactions after eating foods with Monosodium Glutamate (MSG), but researchers have been unable to scientifically prove the allergy.

Health issues can be avoided by using natural food additives (herbs and spices) derived from plants and other natural sources (Henrietta, 2017). Some of the health effects attributed to natural herbs and spices include antioxidant, anti-microbial, and anti-inflammatory effects as well as potential protection against cardiovascular disease, neurodegenerative, type 2diabetes, and cancer (Christine, 2022). Herbs and spices have played and continued to play important roles as flavoring agents in food preservative and medicine for centuries. The aim of this paper was to review the health benefits of natural herbs and spices, and their implications for Home Economics education. Specifically, this paper will highlight the classifications for herbs and spices according to their usage, itemize the general importance of herbs and spices, it will also describe common Herbs and Spices and their health benefits, and enumerate the implications of herbs and spices for healthy living and the potential health benefit of some among the most commonly used herbs and spices such as garlic, ginger, turmeric, cloves, black pepper, cinnamon, rosemary, thyme, Aleo-vera and bay leaves will be reviewed. The aim also is to create awareness towards natural herbs and spices and ignored contemporary food habit hence review the risk associated with synthetic food seasonings. A total of 10 herbs and spices were initially chosen, including garlic, black pepper, clove, ginger, Curcumin, Aleo-vera, nutmeg, rosemary, bay leaf, and thyme. In many studies, the herb or spice of interest was administrated in the form of a capsule or extract and very few studies were performed with actual foods. Although the daily intake ofherbs and spices is very low compared to most other foods, this important set of food seasoning agents should not be underestimated, especially given their potential benefits to human health.

According to Dini (2018), herbs and spices have been used for generations by humans as food and to treat ailments. Scientific evidence shows that many of these herbs and spices do have medicinal properties that prevent disease. A growing body of research has demonstrated that the commonly used herbs and spices such as garlic, black cumin, cloves, cinnamon, thyme, allspices, bay leaves, mustard, and rosemary, possess antimicrobial properties that, in some cases, can be used therapeutically. According to Henrietta (2017) Other spices, such as saffron, a food colorant; turmeric, a yellow colored spice; tea, either green or black, and flaxseed do contain potent photochemical, including carotenoids, curcumins, catechins, lignan respectively, which provide significant protection against cancer (Peter,2019).

Classification of Herbs and Spices

The herbs and spices according to usage are classified in four parts: Medicinal herbs, culinary herbs, Aromatic herbs, Ornamental herbs.

Medicinal Herbs: Medicinal plants, also called medicinal herbs, have been discovered and used in traditional medicine practices since prehistoric times Over 2,300 years ago, Hippocrates said, let food be thymedicine and medicine be thy food. At that time, natural medicine was simply medicine there were no pharmaceutical companies, but herb garden. We have left those days behind to a great degree, but we have not forgotten them. Many modern drugs are modeled on natural substances still readily available today. Medicinal herbs have been discovered and use in traditional medicine practices since prehistoric times (Peter,2014). Plant synthesizes hundreds of chemical compounds for various functions including defense and protection agent's diseases. An example the bark of willow tree which contains salicylic acid, the active ingredient of aspirin and it has been use to relief pain and reduces fever. Ebers and Lund (2019) from ancientEgypt, people in 1550BC describe over 850 plant medicine. This formed the basis of pharmacopoeias for 1500 years. Drug research sometimes makes use of ethno botany to search for pharmacologically active

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substances. Medicinal herbs have curative powers and are used in making medicines because of their healing properties.

Ornamental Herbs: Ornamental plants are plants that are grown for their beauty rather than their practicaluse. There are many different types of ornamental plants, and they can be classified in many different ways.Some common ways to classify ornamental plants are by their type of flower, the way they grow, or the color of their leaves. Ornamental plants can be used to add beauty to any garden or landscape (Fidler, 2019).Ornamental herbs are used for decoration because they have brightly colored flowers and foliage they include: yarrow, lavender, jewelweed, fuchsia, chicory and marigold.

Yarrow (*Achilleamillefolium*): Yarrow flowers grow in clusters of tiny blooms, with colors that range from **white to yellow to bright pink**. Their leaves are similar to those of the fern plant. Yarrow is popular among many gardeners for its lovely colors. In addition, this plant can provide a number of health benefits - most importantly, it can **reduce inflammation**. A **yarrow tea** can not only reduce fever, but also relieve stomach discomfort (Rosenblatt, 2018)

Lavender (*Lavandula* spp.): Well-known for their delicate **purple blossoms** as well as their **fragrant, soothing scent**, lavender plants are a great ornamental and aromatic addition to any herb garden. But lavender's scent is more than just enjoyable - it can actually help to **reduce depression and anxiety**. Studies have found that lavender's aroma alters brainwaves, helping to relax the body and improve mood. A few drops of **lavender essential oil** in a warm bath can help relax your nerves at the end of the day (Dan, 2020).

Jewelweed (*Impatiens capensis*): The cup-shaped, **bright orange flowers** of jewelweed, also called touch-me-not, bloom in small clusters along the stem. As many other *Impatiens* species, it's beautiful flowers are a lovely addition to any garden. Since they also offer a useful benefit of **soothing the skin**, they can be applied topically on skin irritations to reduce pain, especially the ones caused by burns. In order to relieve the irritation caused by poison ivy, rub jewelweed flowers directly over the affected area (pillans, 2016)

Fuchsia (*Fuchsia* spp.): Fuchsia is known for the bright pinkish-purple color of its flowers, which inspired the name of the color fuchsia. Its beautiful blooms add a perfect vibrant touch to any garden. Additionally, fuchsia has a number of health benefits. Notably, it can be used to help lower blood pressure thanks to its high content of diuretic tannins, which flush excess of sodium from the body (Dan, 2020)

***Chicory* (*Cichoriumintybus*):** Not only does chicory have lovely bluish-purple flowers that will add a nice touch of color to our garden, but it can also help prevent liver damage. Chicory contains active compounds, lactucin and lactuprikin, both of which have been shown to possess a hepatoprotective action. A chicory infusion will encourage bile flow and help release toxins by stimulating urination (Jiang, 2019)

***Marigold* (*Tageteserecta*):** Often confused with the also popular calendula, marigold's flowers (also knownas Mexican or Aztec marigold) have a bright, summery orange-yellow color and a distinctive pompom shapethat make them stand out in any garden or backyard. The leaves and flowers of marigold can be made into herbal remedies, which are usually taken to protect the body against bacteria. Marigold receives itsantibacterial properties from its flavonoids and terpenoids, which are effective at killing many different typesof harmful microorganisms (Amy, 2022)

1. **Culinary Herbs:** Culinary herbs are that annual, biennial or perennial plant whose green part, tender root, or ripe seeds have an aromatic flavor and fragrance, due to their volatile oil or to other chemically named substances peculiar to the individual spices. The herbs having a pleasing scent are called sweet since they have been long used in cookery to add their characteristic flavors to soup, stew, dressing, sausage, and salads. They are popularly called culinary (Fidler, 2019). Culinary herbs are herbaceous plants that are used to add flavor and color to all type of meals, probably the mostly used as cooking herbs because of their strong flavors like mint, parsley, basil, bay leaf, lemon grass, oregano.

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2. **Aromatic Herbs:** The name is a reflection of the pleasant odor that many of these herbs contain. Some plants are naturally more aromatic than others. Aromatic herbs contain natural chemical component known as essential oils, which are responsible for their noticeable scents (Ebers&Lund, 2019). These highly volatile compounds are found in the leaves and sometimes stems and are released when the leavesare disturbed. Many aromatic herbs and spices are considered beneficial to health, but what distinguishesthem more than anything else is their high antioxidants content. Antioxidant inhibits free-radicals, those molecules that are produced by the cells due to biochemical reactions which use oxygen to produce energy and by external factors, namely from excessive physical activities such as professional sport and from pollution, drugs such as cigarettes, alcohol and from excessive exposure to ultra violet rays. Aromatic herbs include; garlic, rosemary, thyme, curcumin, cinnamon, ginger, and mix of spices called curry.

General Importance of Herbs and Spices

1. Spices are functional foods; these are foods that have a beneficial effect on certain target functions in the body beyond basic nutritional requirement. Example the seed of black pepper (*p.guineense*) are prescribed for women after childbirth to enhance uterine contraction. It is also used locally in treating rheumatic pain, serves as an anti asthmatic agent, burns fat content in the body, the oil distilled from the seed is use in perfumery and for making soap. The leaves are used to regulate menstrual cycle, also an ingredient in remedy for female infertility. The root and fruits areincorporated in remedy for sexually transmitted diseases, especially gonorrhea and syphilis (Iwu, 2018)
2. The antioxidant properties of herbs and spices prevent chronic diseases such as cancer, arthritis and cardiovascular diseases (Dini, 2015). These appear to be through the direction of their constituent Photochemicals particularly Polyphenols. It also serves as food preservatives against oxidative degradation and improves the stability of products.
3. Spices are used to dye food products because they are an excellent source of natural color pigments and safe for human consumption. Example is cardamom and coriander which are well-known for their flavor.
4. Fragrant herbs, such as peppermint, cloves, and turmeric, they give the food a pleasing scent and enhance the flavor (Dini, 2015).
5. Certain cough syrups contain ginger and cloves. They are recognized for their expectorant properties, which help mucus thin and expel from the lungs.
6. Traditional medical practitioners offer antipyretic herbs such as black pepper, sandalwood, and safflower to decrease fever and the heat produced by the disease (Fidler, 2019).
7. Some herbaceous plants are used to neutralize the stomach's acid production. Marshmallow roots and leaf is an example. They function as antacids. These herbs help to keep the healthy stomach acid required for optimal digestion(Christine, 2014)
8. Many herbs are utilized as blood purifiers to help transform or improve a long-term condition by removing metabolic poisons. 'Blood cleansers' is another name for them. Certain herbs boost a person's immunity, lowering the risk of illnesses like fever (Dorn, 2017)
9. Plant medicines were reported to be used by Indian sages to treat poisons from animals and snake bites (fiddler, 2019)
10. Many herbs and spices contain antioxidants. According to Joe (2023), antioxidants from spices suchas curcumin (turmeric), cloves (eugenol) and red pepper (capsaicin) where experimentally shown to control oxidative stress in cell due to their antioxidant properties. Polyphenol from ginger and turmeric have also been shown to display radicals scavenging properties.
11. Many herbs and spices contain antimicrobial properties. Herbal antimicrobials are natural products that are as beneficial as mild antimicrobials. The active ingredients of these natural products may have antibacterial and anti-infective properties. Herbal antimicrobials may either interfere with the bacteria's ability to grow or multiply or directly kill them. Examples of Plants and herbs (oregano, garlic, parsley, sage, coriander, rosemary, and lemongrass), spices (cinnamon, clove), oils (citral) or

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organic compounds (vanillin) have been used alone for their antimicrobial and antioxidant propertiesor in combination with other techniques for food preservation.

Description and Health Benefits of the Selected Herbs and Spices

In addition to adding flavor and nutrients to recipes, herbs and spices contain a variety of compounds that may help reduce inflammation, improve symptoms of certain medical conditions, and protect against the development of chronic diseases. Here are some selected herbs and spices for better health.

1. **Ginger:** This is one of the most commonly consumed dietary condiments in the world, ginger is highin gingerol, a substance with potent anti-inflammatory and antioxidant properties. Ginger is generally considered to be safe for human consumption. The scientific name is *Zingeberofficinale*. The health benefit of ginger include its ability to relieve indigestion, improve immunity, relieve nausea and stomach upset, healthier skin, aid in weight loss, prevent cardiovascular diseases and improves brain function(Christine,2014).

2. **Garlic:**This is a plant in the onion family that's grown for its distinctive taste and health benefits. It contains sulfur compounds, which are believed to be responsible for some of those health benefits. The scientific name is *Allium sativum*. The health benefit of garlic is that it is highly nutritious but hasvery few calories. Garlic can help protect against illness, including the common cold, the active compound in garlic can reduce blood pressure, garlic improves cholesterol levels, which may lower the risk of heart disease, garlic contains antioxidants that may help prevent Alzheimer's disease and dementia, eating garlic may help detoxify heavy metal in the body and may improve bone health (Richter, 2022).

3. **Cloves;** is the common name for the herb *Eugenia caryphyllata*, belonging to the myrtaceae family. A range of bioactive compounds including some potent antioxidants and antimicrobial are present in cloves, which are the dried flower buds of the cloves tree. Cloves are great sources of beta carotene, which help gives them their rich brown color. The carotene family of pigment is an important antioxidant and provitamins. Carotene pigment can convert into vitamin A, an important nutrient for keeping your eyes healthy. The scientific name of cloves is *syzygiumaromaticum*. Health benefits of cloves includes reduced inflammation, fewer free radicals, reduce ulcer, improved liver function (Agbogidi, 2019).

4. **Black pepper;** scientifically called *piper guineen*, black pepper is a flowering vine that is cultivated for its fruit. This fruit is dried and used intensively as spice and seasoning in both western and eastern cuisines. Black pepper also possesses antibacterial, antioxidant, immune-boosting and fever reducing properties. The scientific name is *piper guineen*. Health benefits of black pepper include; improve digestive health ,prevents cancer, promotes weight loss, relieves cold and cough, fight infection, has antioxidant benefits, enhance brain health, improves fertility in men, helps quit smoking, helps treat diabetes, fights wrinkles, exfoliates the skin, helps treat dandruff and revitalized hair (Henrietta,2017).

5. **Turmeric;** sometimes called curcumin, is one of the most popular spices used today for cooking and health benefits. Laboratory studies have shown that turmeric has some anti-inflammatory, antioxidant, antiviral, and antiparasitic benefits. Research shows that turmeric is most effective for its anti-inflammatory and antioxidant properties (Iwu, 2020). As a chain breaking antioxidant and anti-inflammatory spice, turmeric improves oxidative stress, which is ability to scavenge toxic free radicalsin the body. Free radicals are tissue damaging molecules with an uneven number of electrons. With itshigh antioxidant content, turmeric can work to reduce the risk of free radicals forming and reducing the effect of stress on the body. The scientific name of turmeric is *curcuma longa*. Health benefits of turmeric include: Reduces arthritis symptoms, boosts immune function, helps reduce cardiovascular

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complications, helps prevent and treat cancer, helps manage irritable bowel syndrome(IBS), prevents Alzheimer's disease, protects against liver damage, gallstone and manage liver conditions, helps prevent and manage diabetes, helps to treat and manage health conditions and also helps with weightloss.

6. **Nutmeg;** (*myristica fragrant* of the family myristicaceae) is a plant which bears seeds, the seeds are ground in to powder and commonly refer to as nutmeg. Indonesia produces the majority of the world's nutmeg. The spice flavors many dishes, both savory and sweet, in cuisine across the globe. The Scientific name of nutmeg is *myristica*. Health benefits of nutmeg include: dental health, effective against diarrhea, reduces bad cholesterol, protects against cancer, regulates blood pressure, protect the liver, oral health and improves digestion (Agbogidi, 2019).

7. **Aleo-vera:** This is a popular medicinal plant with antioxidant and anti-bacterial properties. Aleo-verais a thick, and short – stemmed plant that stores water in its leaves. Health benefits of aleo-vera: It contains healthful plant compounds, it has anti- oxidant and anti- bacterial properties, it may be usefulfor reducing dental plaque, accelerates wound healing, prevents wrinkles, it reduces constipation and lowers blood sugar (Joe, 2018).

8. **Rosemary:** this is an herb commonly used in savory cooking. Rosemary is a key ingredient in many pasta sauces and pizza recipes. The perennial woody herb also has a long history of being used for medicinal and health benefits. Rosemary is a rich source of antioxidant and anti-inflammatory compounds which helps to boost the immune system and improve blood circulation. The Scientific name of rosemary is *salvia rosmarinus*. Health benefit of rosemary: Neurological protection, prevents brain aging, enhances memory and concentration and also improves digestion (Dini, 2015).

9. **Thyme :**(*thymus vulgaris*) is an herb with a distinct smell. The flowers, leaves and oil are commonly used to flavor foods and are also used as medicine. Thyme is very well known for its medicinal benefits. The leaves, flowers and oil of thyme have been used to treat various diseases and ailments. Thyme contains antiseptic properties which makes it a very effective remedy against colds, coughs and other respiratory diseases. Thyme also possesses antibacterial properties and is often used in facewashes and anti-acne creams. Thyme contains an extract that can help lower blood pressure. Thyme is also rich in vitamin K. iron and calcium, which is essential for maintaining healthy bones. Thyme contains chemicals that might help treat bacterial and fungal infections. Health benefits of thyme: Fighting acne, lowering blood pressure, helping to alleviate cough, boost immunity, contains disinfecting agents, repelling pests, aromatherapy, boosting mood, culinary uses, preventing bacteria and infections, help to treat yeast infection, help treat some certain types of cancer (Joe, 2018).

10. **Bay leaf:** also called *laurel leaf*, leaf of the sweet bay tree (laurusnobilis), a popular spice used in pickling and marinating and to flavor stews, stuffing fish and meat. Bay leaf is delicately fragrant but has a bitter taste. They contain approximately 2percent of essential oil, which a principal component of cineole. Health benefits of bay leaf include: Improving insulin resistance, alleviating urinary tract symptoms and menstrual cramps, fighting cancer, strengthening the immune system against infections, reduces inflammation and regulating blood sugar (Henrietta, 2017).

Implications of Herbs and Spices for Home Economics Education

The implications of herbs and spices to Home Economics education include the following:

1. The use of natural herbs and spices should be emphasized in the food and nutrition curriculum at all educational levels. This will be a roadmap to sustainable family health.

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2. The sales of herbs and spices can be an entrepreneur endeavor which Home Economics students may be encouraged to engage in. Fresh herb can be sold in local retail market and provide useful additional income for individuals and the family.
3. The understanding of the usage of natural herbs and spices as food preservatives, food items will be a dynamic contribution to ongoing discourse about sustainable food consumption among Home Economics educators and students.

Conclusion

Spices and herbs are plant derived substances that add flavor to any dish. It is difficult to distinguish betweenthe two. Herbs and spices make flavorful additions to meals, also powerhouses for essential nutrients that greatly benefit the body, some of the health effects attributed to natural herbs and spices include antioxidant, anti-microbial, anti-inflammatory together with photochemical effects, People may experience some health improvements from incorporating herbs and spices into their diet, but should not depend upon them solely for full treatment of conditions. Other health issues can be avoided in the future by using natural food additives (herbs and spices) derived from plants and other natural sources. Also, Home Economics students and educators stand to benefit immensely from the inclusion of theoretical and practical learning content onherbs and spices into the instructional process.

Recommendations

1. Parents and guardians should be more concerned about family health by totally replacing artificial food seasonings with natural herbs and spices.
2. Home Economics instructors should imbibe the use of natural herbs and spices into the practical food demonstration classes. This will encourage the students to imbibe the same safe and efficient practice.
3. Government at all levels should encourage by creating orientations and informing people about the health benefits and effect of synthetic seasonings.

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DIFFERENTIAL ITEM FUNCTIONING ON STUDENTS PERFORMANCE IN SOCIOLOGYOF EDUCATION SCHOOL EXAMINATION ITEMS

[1]Eniola Abioye ADEYEMO [2]Imoh Godwin UDOFIA,
College of Specialised and Counselling Education, Lagos
State University of Education Oto/Ijanikin, Epe Campus
Lagos State
e-mail: udofiamofe19@gmail.com

Abstract

The study investigated Differential Item Functioning on Students Performance in Sociology of Education Test Items in tertiary Institutions in Lagos State. Two hypotheses were formulated to guide in this study. Descriptive research Design was used for this study. A sample of 1,434 students was sampled for this study through purposive sampling technique. Gender and College (Location) were the two criteria in which the samples were grouped. A 60-items Teacher Made Multiple Choice Examination Items on Sociology of Education was used to generate data as content and face validity was ascertained by two experts in educational measurement and Evaluation, University of Benin. With Cronbach alpha reliability form, r=0.879, meaning internal reliability was met. The data was analysed using excel and SPSS Version 24 packages tested at 0.05 level of significance. The study revealed that items in Sociology of Education Multiple Choice test items do not significantly function differently by gender and college (location)respectively. Among others the study recommended that test experts should employ the use of Item Response Theory when developing a valid, reliable and usable test.

Keywords: Sociology of Education, IRT, DIF, Performance, Skills, Values

Introduction

Sociology of education makes contributions to the understanding of an important institution present in every society. Sociologists have also identified educational differences, inequality, poor performances, involvement in vices and corruption as possible activities that are found in societies and families where competition is prevalent. It should be noted that professional hierarchies and models of social mobility are surprisingly similar in all industrial societies". As education and participation in society expand, the effect of social background weakens slightly, but this weakening can be different for students in different fields ofstudy in higher institution thereby bringing about a differential in schooling activities and possible involvement in sensitive fraudulent acts in the school system (Oyeyemi, 2019).

With the emergence and springing up of different public-private tertiary institutions in the country to meet the yearnings of the teeming youths with respect to addressing admission capacities into tertiary institutions,there is the need to also educate these youths on how to live and interact effectively when finally admitted to study. One of the ways to educating these students is exposing them to sociology of education. The courseremains one of the compulsory an important course taught at the undergraduate level in all tertiary institutionin Nigeria. The National University Commission, NUC, designed this course to be taught to new students especially in their first year due to their envisaged interaction with other students in a larger group. Sociologyof education seeks to address and manage how humans interact in a group and living a conflict free life irrespective of one's different background. Hypothetically, Sociology of education is the study of how public institutions and individuals experiences affect education and its outcome. It is mostly concerned with the public schooling systems of modern industrial societies including the expansion of higher, further adult and continuing education (Spade, 2014).

In education students' success is established through test or examination. A good test consists of items or setof items presented to an individual or set of individuals to whom they are expected to respond under specific

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conditions with the intent to determine the extent to which such trait is present or absent in the respondents (Somwung, Samphan and Tan (2018). A test is supposed to measure examinees ability or other traits irrespective of certain factors like gender, geographical locality, social status and others. A test with differential functioning items distorts the meaning of test results and the decision that is based on it for some groups.

Systems of educational assessment and accountability have been in existence for centuries. However, the intent of such assessment has changed considerably in the past 30 to 40 years. Early accountability systems held students or applicants for admission accountable for their learning through the use of graded examinations. In the early years of the 20th century, the testing of students served another function as a diagnostic tool to inform teachers of student deficiencies that were in need of remediation or enhanced instruction. While these earlier roles for accountability persist, new purposes emerged during the last few decades of the 20th century; these coincide with significant changes in economic and political relations among nations. Testing in its current usage frequently serves as an indicator of the quality of the educational system and its professional practitioners. Test score outcomes are used to judge whether to close schools and replace personnel at the school level, and to judge the adequacy of a national workforce.

In the context of test, Differential Item Functioning occurs when people from different groups with same ability have systematically different responses to specific test items. DIF is concerned with ability of test takers. Madu (2012) see DIF as a collection of statistical methods that gives indication of items that are functioning differently for different groups of students. In a classroom test where Sociology of Education items were administered and boys display a higher likelihood of answering correctly items than their female counterpart with the same ability level because the content in the questions are biased against females, one can conclude that the items exhibit DIF and should be considered for either modification or removal from the data set. One of the qualities of a good test is that it should not be biased to testees in any way or form.DIFoccurs when individuals at the same level on the traits or constructs have being assessed but from different sub-population that have unequal probabilities of attaining a given score on the item.

In determining DIF of a test, gender, location, nature of school, socio economic status among other classified groups are often investigated by test experts. Ogbebor and Onuka (2013) investigated that items are biased using DIF approach in relation to location. The findings showed that out of 60 items in NECO examinations,10 items were biased in relation to school type and 8 items in relation to school location. In a similar study conducted by Adedoyin (2010), he observed that there exists a significant difference in the performance of students from rural and urban schools with respect to their academic achievement.It wentfurther to conclude that students from urban schools were more superior when compared to their rural counterparts. An investigation into DIF of Tests conducted by WAEC and NECO examination bodies in Nigeria was carriedout by Obinne & Umobong (2013). Suprisingly, their findings revealed that there was no difference in the DIF of items from the two examination bodies, meaning both examination items are close substitutes.

The existence of bias is an issue to be addressed because tests are used as a gatekeeper for educational opportunities and it is very important that test items are fair for every examinee of the same ability level. Researchers in gender bias have been carried out across different countries. Siamisangand (2012) carried out an analysis of gender biased DIF in 2007 TIMSS examination among students from Botswana, Singapore and USA. Through the analysis it was discovered that there were very few mathematics and science items which functioned significantly different for male and female students from these three countries. In Madu (2012) analysis of Gender-Related DIF in Mathematics Multiple Choice Test Items, it was revealed that male and female students functioned differently in 39 items and no DIF in 11 items. Adeosun(2013) carried out a study on DIF in 2012 Unified Tertiary Matriculation Examination (UTME) Mathematics with respect to gender and location. The outcome showed that items in Mathematics test administered by JAMB functioned differentially between male and female examinee in favour of male students.

No doubt from the above summation one can allude that many empirical studies have been executed on Standardised tests and this is so because of the large population involved in taking such a test and validation

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process needs to be determined before such a test can be administered to the heterogenous population, meanwhile little or nothing have been done on teacher made test with respect to DIF (Udofia, et al. 2020). In tertiary institutions where Sociology of Education, a compulsory course taken at the faculty level have been conditioned to be presented in Multiple choice format, there is also the need to determine the DIF levelof the items. Constructing a good Sociology of Education test (Teacher Made Test) requires expertise and skills owing that Sociology of Education comprises of Sociological concepts and principles in line with educational paradigms. *Values, globalization, acculturation, ICT, behaviourism (Deviant) and Psycho- socioness, communal living, religion and other sociological constructs are veritable areas where issues of education can be addressed* (Oyeyemi, Adeyemo and Udofia, 2019).Sociologists are always out to address challenges that are designed to Thwart academic achievement in classroom that is why it very important to determine DIF of the items constructed for examination in our tertiary institutions.

Statement of Problem

During classroom interaction and teaching, Sociology of Education course always seems innovative, interactive and comes with lots of revelation due to the contextual nature of the course, however, during examination exercise students performance in same course keep dwindling and the institution keeps recording annual increase in the failure rate which is often characterised with why these students always indulge in examination malpractices in our tertiary institutions. If this malady is not swiftly nipped in the bud, there is every tendency that poor academic performance will persist for so long in our ivory towers. Scholars have identified that several sociologists have done series of tasks on standardised items but little orno study have been conducted on Teacher Made Test, hence the importance to note how good the test items constructed, preciseness, difficulty index, specific or objective enough, relevant, discriminatory among others. Hence the study was out to investigate determination of DIF on students' performance in Multiple Choice Sociology of Education test items in Lagos State Tertiary Institutions.

Objectives

- To investigate if Sociology of Education Multiple Choice Test items Function Differently with respect to gender.
- To identify how Sociology of Education Multiple Choice Test items Function Differently with respect to College (location)

Hypotheses

- Items in Sociology of Education Multiple Choice Test do not significantly function differentially between male and female students.
- Items in Sociology of Education Multiple Choice Test do not significantly function differentially by College (location)

Methodology

Descriptive research design was used in this study. The population comprised of 3,250 Undergraduate students in tertiary institutions of Lagos State. A target population of 100 level undergraduate students offering education courses in the institution was captured for this work. A sample of 1,434 respondents was selected for this work. Male students were classified into focal group and female reference group; Studentsfrom College of Specialised and Counselling Psychology were classified into focal group and those in College of was used to selected respondents suited for this research. The instrument used for data collectionis a 60-item Objective Multiple Choice Sociology of Education Test. This instrument was developed and designed by a team of three academics teaching the course across the two colleges. With the aid of test blue print, the items were well developed. The instrument was validated by the Head of Department and other Sociologists. After removal and modification of unwanted items, a clean copy was obtained and both content and face validity was ensured. A reliability index of 0.879 was obtained through the use of Cronbach Alpha,a reliability type. The formula for calculating the area index of 2PL model by Raju (1988) was used in

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conjunction with Microsoft excel and SPSS version 24 packages to estimate the item difficulty and discrimination for each item. With this it was used to determine items that flagged DIF using Chi-square statistics at 0.05 level of significance.

Testing of Hypothesis

Hypothesis One: Item in Sociology of Education Multiple Choice Test do not significantly function differentially by gender

Table 1: Chi-square Summary of DIF functioning by gender

Gender	Items favoured due to DIF	Df	Chi-square	Sig.
Male	19(21)	1	0.482	0.769
Female	23(21)			
Total	40			

Table 1 shows a chi-square value of 0.482 and p-value of 0.769, testing at an alpha level of 0.05. Since the p-value is greater than the alpha level of 0.05, the null hypothesis is therefore retained and the conclusion isthat items in Sociology of Education Multiple Choice test items do not significantly function differently bygender.

Hypothesis Two: Item in Sociology of Education Multiple Choice Test do not significantly function differentially by college (location)

Table 1: Chi-square Summary of DIF functioning by gender

Gender	Items favoured due to DIF	Df	Chi-square	Sig.
COSPED	15(18.5)	1	1.512	0.743
COHED	22(18.5)			
Total	37			

- COSPED.....College of Specialized and Primary Education.
- COHED.....College of Humanities Education

Table 2 shows a chi-square value of 1.512 and p-value of 0.743, testing at an alpha level of 0.05. Since the p-value is greater than the alpha level of 0.05, the null hypothesis is therefore retained and the conclusion isthat items in Sociology of Education Multiple Choice testdo not significantly function differently between students in COSPED and COHED..

Discussion of Findings

Hypothesis one revealed that items in Multiple Choice Sociology of Education test items do not significantly function differentially by gender. The outcome of this work is in consonance with that of Siamisang and Nenty (2012) who disclosed that only four mathematics items and four science items flagged DIF between male and female. Although the DIF detected did not significantly function differently among boys and girls respectively. Here it was disclosed that gender was never a contributory condition to performance rather emotional state of the individual, maturity and motivation were identified as drivers that had the possibilityof indicating differential Item Functioning.

Hypothesis two shows that items in Sociology of Education Multiple Choice test do not significantly function differently between students in COSPED and COHED. This study reaffirmed the findings of Obinne, Nworgu and Umobong (2013) who disclosed that there is no significant difference in the DIF of items from WAEC and NECO examination bodies in terms of location of the examinees. It goes to affirm

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that students in different colleges sited in different locations has nothing to do with their ability level. The ability to perform well in the test may be attributed to readiness to study, teaching methodology of the teacher and even examination phobia which often arises during exposure to examination condition.

'Conclusion

The dynamic that surrounds standardized test differ from that of teacher made test. As a principle of necessity, teacher made test can also have some attributes of standardized test when the structured items arefurther pilot tested and validated in order to determine the psychometric properties of such a test. From the study it can be concluded that:

- Teacher made Multiple Choice Sociology of Education Test items do not functionally differ by gender.
- Teacher made Multiple Choice Sociology of Education Test items do not functionally differ by college (location).

Recommendations

Before DIF can be determined on a test, item analysis should have been undertaken. The study among others recommended that:

- Only students who are emotional stable, matured and intrinsically motivated should be encouragedto advance to tertiary institutions.
- Test experts should employ the use of Item Response Theory when developing a valid, reliable and usable test.
- Further studies should be undertaken to condition other test practitioners to determine DIF on other teacher made tests in tertiary institutions.

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PSYCHO-SOCIAL VARIABLES AND MOTIVATION AS PREDICTORS OF STUDENTS' PERFORMANCE IN G&C EXAMINATION (A CASE OF LAGOS STATE COLLEGE OF EDUCATION STUDENTS)

Christie Bola ELEGBEDE
University of Education, Epe Campus,
Lagos Department of Counselling Psychology Education, Lagos State.

Abstract
This study investigated Psycho-social variables and Motivation as Predictors of Students' Performance in Guidance and Counselling Examination. Survey type of research design using correlational approach. This approach was used in this study since it affords the opportunity to study the population by selecting and studying sample in other to discover the relative incidence, distribution and interrelations of sociological and psychological variables. Tertiary institution students formed population of the study while 300 level degree students in the Department of Guidance and Counselling in Faculty of Education, Olabisi OnabanjoUniversity, OOU formed the target population. A sample of 120 degree students were selected through the use of simple random sampling technique. Questionnaire consisting of 15 items on 4-point scale titled, "Psycho-social variables and Motivation as Predictors of Students' Performance in Guidance and Counselling Examination" QPVMPSPGC and 2021/2022 Second Semester Guidance and Counselling examination result on EGC 302 (Group Dynamics) a compulsory departmental course was used to generatetheir academic performance in this work. The instruments were validated as content and construct validity was assured. Reliability index value r of 0.893 and 0.808 were obtained using Split-half reliability method. Sourced data was analysed using correlation matrix and correlation analysis tested at 0.05 significant level.The study revealed that self–efficacy, attitude, student-lecturer interaction and motivation are good predictors of students' achievement especially at the tertiary level. It then concluded that Psycho-social factors and motivation are core predictors of students' academic performance. in Guidance and Counselling.

Keywords: Psycho-social, Predictors, Motivation, Guidance and Counselling, Performance

Introduction

Professional counsellors in Nigeria's tertiary institution are faced with diverse degrees of challenges which students encounter prominent among them include cultism, examination malpractice, low self esteem, peer group pressure, emotional instability, phobia for the unexpected, demotivation, poor socio-economic background, poor nutrition among others may which if not well managed may likely affect students performance negatively. Hacieminoglu (2015) alluded that Counsellors have most times classified these factors as psycho-social factors. The use of Psycho-social variable is relative depending on the condition and prevalent study to be undertaken. Psycho-social variables are conditions that comprise of a range of factors relating to an individual's psychological state and social environment which potentially have either positive or negative consequences for health and behavioural outcomes. Psycho-social variables comprises of psychological risk factors, social and psychological resources. According to Singh-Manoux (2003), psycho-social variables can be categorised into two groups of psychological tributes like hostility, depression, hopelessness among others which exists at the individual level and are likely to be the process of socialization; the second category is more structural in nature and work conditioned; On the paradigm of teaching and learning, psycho-social variable include self esteem, emotional state of being, interaction level, attitude, disposition, behaviour, self discipline, self efficacy(Ali, Wan-Munira and Nobaya, 2017).

To justify psycho-social variables, interaction between teacher and student play an important factor in performance. Extent of interaction plays a very significant role in the measurement of productivity and performance. The level of interaction is a reciprocal process, once a teacher and student interacts during a classroom situation, their thoughts, feelings and behaviour begin to influence each other which would result

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in behavioural changes. Interaction of teacher's with students in higher learning is considered an important factor at improving student's performance because its' an aspect that consist of communication processes where students exchange information of the course contents and socio-emotional information that help student's a lot and in turn contribute to their academic performance positively. Following interaction process, teachers listening skills, communication and professionalism becomes enhanced significantly in an effort to know the world of students, which can be envisaged in students' academic performance. A study conductedby Fan (2012), established that there exists a significant and positive relationship between teacher students interaction and student academic performance.

Wubbels, Hayman & Grints (2013) in their study found that teachers who exhibited more leadership, friendly and understanding behavior in their interaction with students' enhanced student's academic performance positively, while teachers who showed more uncertainty, dissatisfied and admonishing behaviours in their interaction with students affect academic performance negatively. Similarly, Fraser et al., (2010) suggested that, lecturers from management department displayed positive interaction to their student's in terms of leadership, helping/friendly and understanding behaviours that produce positive academic performance than their counterpart computer science department.

Meanwhile attitude of learners is another psycho-social variable captured in this work. Attitude a psychological construct can be said to be the emotional and mental entities that propel an individual to take any action towards an object or subject (Perloff, 2016). Attitude can also be seen as the way the mind is disposed of, feels, or conditioned towards an individual or object (Khan and Ali 2012). Attitude refers to the disposition to categorize objects and events, react to them with assessment consistency. Attitude consists of one's information, reverence, emotions, incitement, and self-esteem designing an individual's outlook on a certain discipline. Students exhibit a certain attitude towards a course by reacting according to their understanding rather than to its actual state. Students' attitude to a course of discipline is one's disposition towards the study which can be a positive or negative feeling about the specified course. Meanwhile Marcela and Mala (2016) revealed that learner's attitudes toward school, course or lecturer were a determinant factor that predicts their academic achievement. By extension a positive attitude gives rise to positive results whilea negative attitude turns out a negative result. In a study conducted by Hacieminoglu (2015) on Students' Attitude toward Science, the findings showed that students who had a more positive attitude towards sciencehad higher achievement scores. Students 'attitude towards a given discipline determines the extent of concentration to be accorded to the course, and when positive, it most times leads to positive academic performance as against a disposition to negative attitude.

Although self-efficacy another psycho-social variable is multidimensional in nature, meaning that it is domain specific or context dependent. This means that high sense of efficacy in a particular domain may notnecessarily translate into having similar level in another domain. Even within the same domain, there may be different levels of self-efficacy beliefs occurring in various contexts. Meera (2015) see self-efficacy as beliefs in one's capabilities to organise and execute the courses of action required to produce given achievements. Self-efficacy can be used to determine whether a task will be initiated, the amount of effort that would be expended and the level of persistence to complete the task when faced with obstacles and aversive experiences. Once a person has acquired a high level of self-efficacy belief, he will become motivated to invest more effort in his life. In this paper the researcher decided to determine the degree of prediction of self-efficacy to academic performance of students in Guidance and Counselling courses. Given academic setting, studies have shown that there is a positive relationship between self-efficacy and academic performance of students. These studies noted that regardless of age, gender, domains, disciplines and countries, a student with higher sense of self-efficacy will most times achieve better academic performance.Louise and Mistele (2011) reported that although there were differences in level of self-efficacy by gender in young adolescents taking mathematics and science, self-efficacy was still found to be a good predictor of the achievement scores. Meanwhile Amil (2000) studied self-efficacy and self-regulated abilities of students taking economics at 'A' level and found that there was a positive significant correlation between self-efficacyand self regulated learning outcome in classrooms. Kurbanoglu and Akim (2010) claimed that learners with

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high levels of self-efficacy attribute their failures to lower attempts rather than lower ability, while those with low self-efficacy attribute their failure to their low abilities. Therefore, self-efficacy can influence the choice of tasks and perseverance while doing them. In other words, students with low self-efficacy are morelikely to be afraid of doing their tasks, avoiding, postponing, and give them up soon. Self-efficacy beliefs lead to the individuals' excellent performance through increasing commitment, endeavor and perseverance.

Moreso, in a realistic condition, students' performance is also influenced by the interference of motivation. Motivation is a fluid concept often used by psychologists and counsellors to mean a condition or state of acting or behaving in a given manner or way. It is that drive that conditions organisms to behave or act in a certain way. Makinde (2020) sees motivation from the perspective of intrinsic and extrinsic form. The role of intrinsic and extrinsic motivations facilitates people to achieve stated specific goals. He noted that meetingthree psychological needs (competence, autonomy and relatedness) of people promotes intrinsic motivation, self-regulation, and mental health, whereas when they are not met, could result to decreased motivation andwell-being. Makinde (2023) stated that certain antecedents such as the feeling of autonomy, competence, and relatedness/connection influence students' learning experiences which consequently affect their progress and academic performance. As such, the potential of these antecedents to effectively enhance student learning skills has been emphasized to show that when students learn different skills and gain mastery of tasks needed for specific goals, they would likely take actions that will lead them to achieve theirgoals. It was revealed that addressing students' need for autonomy, competence, and relatedness is likely toimprove student engagement, course satisfaction and improve academic performance in an online educational system. Thus, students' social context, skills for a specific task and their ability to direct their action to complete the task has direct influence on learners' academic performance. Students with high intrinsic motivation sustain for longer time their participation in academic activities to achieve required learning objectives more than those with low intrinsic motivation. On the other hand, extrinsically motivated individuals perform activities because of the external rewards that they will gain from completing the activities. Studies of Areepattamannil, Freeman and Klinger (2011) & Vansteenkiste, et al. (2004) revealed that intrinsic motivation affects learning experience and academic performance of students. They were of the view that students with high intrinsic motivation have the tendency to sustain for long time their participation in academic activities to achieve required learning objectives more than those with low intrinsicmotivation.

Statement of Problem

Students who find themselves studying Educational Guidance and Counselling in our citadel of knowledge often times feel dejected and inferior to students from other faculties and disciplines. This could be associated to the fact that Faculty of Education is often regarded as the faulty for the low classed students who missed out on choiced disciplines. Due to the course given to them, they most times begin to feel inferior to their counterparts in other faculties they naturally develop poor interaction with their teachers, attitudinalproblem, low self esteem, low self-efficacy, demotivation among others. These variables are most times influenced by social, economic, psychological and even certain dynamic conditions that are attributed to factors outside the academic system but would unavoidably take its turn on the academic environment. Lately it has been observed that students' performance in institutions have taken a downward trend perhaps owed to various conditions and surprisingly students in faculty of Education are always the great recipient of these menace. Despite intervention by academics through timely attendance to classes and continuous exposure of students to various e-contents for them to learn at their own time and frame, it becomes evidentthat teachers (lecturers) factors are insignificant contributors but students related. It is envisaged that failure to manage the surge in poor academic performance of students' may possibly lead to under achievement inthe long-run. Hence the researcher is poised to investigate how self efficacy, students' attitude, student- teacher interaction and motivational predict students' performance in Guidance and Counselling courses.

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Objective of the study

- Determine how lecturers–students interaction, self-efficacy and attitude predict students'Performance in Guidance and Counselling Examination.
- Justify how motivation predicts students' Performance in Guidance and Counselling Examination.

Hypotheses

$H0_1$: Lecturer-student interaction, self-efficacy and attitude do not significantly predict students'Performance in Guidance and Counselling Examination

$H0_2$: Student motivation do not significantly predict their performance in Guidance and Counselling Examination

Significance of this study

The outcome of this work would be beneficial to stakeholders in both academics and other works of life. Prominent among them include, Guidance and Counselling practitioners, researchers, students, government among others.

- Guidance and Counselling practitioners would find this work useful as it would expose them to the role played by psycho-social variables like teacher-student interaction, self-efficacy, attitude and motivation as predictors of students' performance.
- Students too would also find the outcome of this work useful as it would lead to knowledge acquisition and expansion through schema.
- To the Researchers, this study would aid to update literatures on contemporary issues surrounding psycho-social variables and Motivation as Predictors of Students' Performance in G&C Examination.

Methodology

The researcher used survey research design using correlational approach. This design type is one whereby it gives the opportunity to study large and small populations (universe) by selecting and studying samples chosen from the population in other to discover the relative incidence, distribution and interrelations of sociological and psychological variables; The researcher identified the composition of tertiary institution students as its population, while the target population was the use of 2021/2022 session 300 degree students. Using purposive sampling, one hundred and twenty (120) students were selected based on their willingness and acceptance to participate in the study. The samples were selected through the use of simple random sampling technique, a technique type that affords every participant an equal opportunity to be captured for the study.Two instruments were used to generate data for this work. The first instrument was a self designedtitled, "Questionnaire on Psycho-social variables and Motivation as Predictors of Students' Performance inGuidance and Counselling Examination" QPVMPSPGC. This Questionnaire instrument was divided into two sections A and B. Section A generated items on students bio-data while Section B generated statement items from Psycho-social variables and motivation as predictors of students performance in G&C. 15 items was self-constructed on 4-Likert scale type of SA,A,D and SD respectively. The second instrument was theraw score of their 2021/2022 Second Semester Guidance and Counselling examination result. EGC 302 (Group Dynamics) one of the departmental course that students dread the most was designed in objective format. This tool was a 60 item Objective test (Teacher made) on a 4-option format of A, B, C and D was administered to derive students' performance in the department of Guidance and Counselling. Other coursesin the department were not used because they were either tilted towards psychology, special education and even test and non-test techniques. It should be noted that this instrument is suitable because it remains the only true source that would bring about data on students performance. The instrument was validated by 3 academics in the department of Guidance and Counselling of Olabisi Onabanjo University and they claimedthe instrument meets content and construct validity after removal and modification of items. However, the GCE 302 examination items were validated by external moderators.The reliability of self-designed Questionnaire and Examination Questions was determined on 15 students not part of this work through split-half reliability method. r- value of 0.893 and 0.808 was obtained showing positively high correlation

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showing the instruments are reliable and suitable for use. The researcher analysed the data generated for thiswork using correlation matrix and correlation analysis tested at 0.05 significant level

Results

$H0_1$: Lecturer-student interaction, self-efficacy and attitude do not significantly predict students' Performance in Guidance and Counselling Examination

Table 1: Correlation matrix of the Variables

Variables	Analysis	Student-Learner interaction	Self-efficacy	Attitude	Performance
Student-Lecturer interaction	Pearson Corr. Sig.(2-tailed) N	1	0.057 0.145 0.342	**0.231** 0.001 0.342	**0.224(*)** 0.673 0.324
Self-efficacy	Pearson Corr. Sig.(2-tailed) N		1	0.163 0.761 0.324	**0.481(**)** 0.369 0.324
Attitude	Pearson Corr. Sig.(2-tailed) N			1	**0.731(***)** 0.003 0.324
Performance	Pearson Corr. Sig.(2-tailed) N				1

**Correlation is significant at 0.05 (2-tailed)

Table 1 reveal positive significant relationship between students attitude and their performance in Guidanceand Counselling examination (r=0.731, p<0.05) which can be interpreted that the higher the positive attitude of students the better their academic performance; there exists a positive relationship between students - learner interaction and their performance in Guidance and Counselling examination. (r= 0.224, p<0.05) which can be interpreted that the more student-lecturer interaction exists, the better and improved academicachievement for the students; there exists a positive relationship between students self-efficacy and academic performance (r=0.481, p<0.05) which can be interpreted that the more building of self-efficacy the more improvement in students academic performance in Guidance and Counselling.

Table 2: Estimate of the relative Contributions of the Predictor Variables to students performance in G&C

Source	Dependent Variable: Performance in G&C Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	8.624[a]	5	1.725	2.851	.017
Intercept	33.399	1	33.399	55.201	.000
Socialization	3.123	1	3.123	5.162	.024
Chronological	4.869	1	4.869	8.047	.005
Interaction S-L	.433	1	.433	.716	.039
Attitude	.278	1	.278	.459	.040
Self-efficacy	.003	1	.003	.692	.009
Error	117.376	117	1.003		
Total	1808.000	120			
Corrected Total	116.000	119			

R Squared= 0.472 (Adjusted R Squared = 0.289)

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From the table 2 above it shows that of the following psycho-social variables, Interaction relationship between student-lecturer, students' attitude and self-efficacy are good predictors of students' academic performance in Guidance and Counselling Examination in tertiary institutions. (Interaction of student- lecturer: $F_{(1,120)}$= 0.713, p=0.039, partial eta=0.090; Students' attitude $F_{(1,120)}$= 0.459, p=0.040, partial eta=0.122; Self-efficacy $F_{(1,120)}$= 0.692, p=0.09, partial eta=0.160; This implies that interaction between student-lecturer,Attitude and self-efficacy accounted for 9%, 12.2%, 16%which amounted to 37.2% for thevariance in this work while 62.8% can be accounted for by variables outside this study.

$H0_2$: Students motivation do not significantly predict students' Performance

Table 3: Correlation showing relationship between motivation and Students Performance

Variable	Variable	N	X	SD	DF	P	P-cal.	P-tab.	Decision
	Motivation	120	2.452	0.74					
Students	Performance	120	1.951	0.45	118	0.05	0.874	0.195	**Reject $H0_1$**
	Total	**120**							

Source: Research work, (2023)

From table 3 above it shows the mean and standard deviation values of 2.452 and 0.74 for motivation is higher than that of students' performance with 1.951 and 0.45 respectively. The correlation r-cal. value of 0.674 was obtained with r-tab value as 0.195; The correlation r-value depicts a positively strong relationship between students' motivation and their performance. By extension, the null hypothesis is not retained whilethe alternative which states that there is a significant relationship between motivation and students' academic performance is retained.

Discussion of Findings

For hypothesis one, it reveals that learner-student interaction, self-efficacy and attitude are significant predictors of students' performance; From table 2, it was discovered that self-efficacy, students' attitude and interaction between student- lecturer in this order predicted significantly to academic performance of students. These variables directly predict students' performance in the department of Guidance and Counselling. This result conforms to studies conducted by Aderogba and Michael (2020) claimed that teacher-student relationship is one germane predictor of students' academic performance. Through this relationship the students develop listening skills and communication a value expected to navigate them to an improved academic performance; Marcela and Mala (2016) revealed that learner's attitudes toward schools, course or lecturer was also another predictor factor that facilitates students' academic performancse. They were of the notion that students who develop a positive attitude to learning would certainly have a positive response with respect to their academic performance; Kurbanoglu and Akim (2010) claimed that learners with high levels of self-efficacy attribute their failures to lower attempts rather than lower ability, while those with low self-efficacy attribute their failure to their low abilities. Therefore, self-efficacy can influence the choice of tasks and perseverance while doing them. In other words, students with low self- efficacy are more likely to be afraid of doing their tasks, avoiding, postponing, and give them up soon. Self- efficacy beliefs lead to the individuals' excellent performance through increasing commitment, endeavor and perseverance.

From hypothesis two above it shows that motivation plays a very significant role in the improvement of students' performance. Motivation remains one of the predictive variables that can predict students' performance in tertiary institution. This result is in agreement with studies of Areepattamannil, et al. (2011) & Vansteenkiste, et al. (2004) who revealed that intrinsic motivation affects learning experience and academic performance of students. They were of the view that students with high intrinsic motivation havethe tendency to sustain for long time their participation in academic activities to achieve required learning

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objectives more than those with low intrinsic motivation. Motivation as a construct item drives individuals to engage in activity that promotes their psychomotor, affective and cognitive domains. Academic performance of students is better enhanced when they are intrinsically motivated to learn and engage in productive academic activities over time.

Conclusion

From this work it is very obvious that psycho-social factors of lecturer-student relationship, self-efficacy, students' attitude and motivation are predictors of students' academic performance in Guidance and Counselling. The researcher concluded among others that:

- Psycho-social factors of lecturer-student relationship, self-efficacy, and student attitude are core predictors of their academic performance in Guidance and Counselling.
- A good psychological variable have a very high predictive contributor to students' academic performance Motivation in Guidance and Counselling.
- Teachers/lecturers role plays a significant relationship with academic performance of students in tertiary institutions.

Recommendations

The study investigated Psycho-social variables and Motivation as Predictors of Students' Performance in Guidance and Counselling. Among others the study then recommended that:

- Other psycho-social and psychological factors should be considered in subsequent studies.
- Psycho-social variables and motivation as correlates of students' performance in Public Senior Secondary School in Lagos.
- Self-efficacy and discipline as determinants of students learning in public secondary schools in Lagos state.

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ASSESSMENT OF THE RELATONSHIP BETWEEN MENOPAUSEAND OSTEOPOROSIS AMONG WOMEN

[1] Mabel Ekpedotse ULOKO [2] Isoken IHENSEKHIEN

[1] Federal College of Education (Tech), Asaba
+2348139131051
ulokomabel@gmail.com
[2]Department of Vocational and Technical Education, Faculty of Education
University of Benin, Benin City
isokenihenseken@uniben.edu
+2348023401288

Abstract

This paper assessed the relationship between menopause and osteoporosis among women. Menopause is the permanent cessation of menstruation and ovulation due to ovarian failure. Osteoporosis is a bone disease that develops when bone mineral density and bone mass decreases, or when the quality or structureof bone changes. Method adopted for this study was a comprehensive review of related literature. The reviewprovided insights into the relationship between menopause and osteoporosis among women. The findings seem to suggest that Menopausal hormonal changes can impact bone health, potentially influencing the development or progression of osteoporosis. The authors concluded by recommending that women going through menopause should increase vitamin D and calcium levels intake, as well as engaging in weight- bearing exercises like walking, jogging, or resistance training, as this can help improve bone density and reduce the risk of osteoporosis.

Keywords: Menopause, Osteoporosis, Women

Introduction

Menopause entails any of the changes or symptoms women of a certain age experience before or after they completely stop menstruating. It marks the end of a woman's reproductive life and the menstruation cycle. Technically, menopause starts when a woman's menstruations have ceased for 12 months straight, as her ovaries no longer produce two main sex hormones — progesterone and estrogen, (Okeke, Anyaehie and Ezenyeaku, 2013). Some of the most common symptoms women experience during this intense period include irritability, sleep disturbances, night sweats, chills, hot flashes, and erratic periods (Huang, Goodship, Webber, *et al.* 2023).

One of the complications of menopause is that it significantly speeds up bone loss and increases the risk of osteoporosis. Women should be aware of a connection between menopause and osteoporosis. In this write-up we shall examine the connection between the two, (Bartl, Frisch, Springer-Verlag, and Berlin Heidelberg, 2009).

Caggiari, Leali, Mosele, Puddu, Badessi and Doria, (2016) stated that osteoporosis is by far the most common metabolic bone disease and is characterized by low bone mass with microarchitectural alteration of bone structure, leading to reduced bone strength, which predisposes to an increased fracture risk. The authors further opined that the definition of osteoporosis is based on densitometric measurement of bone mass in the spine or hip and not on clinical criteria. The World Health Organization (2020) defines osteoporosis as a bone mineral density (BMD) 2.5 or more standard deviations (SDs) below that of a youngadult at any site (T score), whereas osteopenia is defined when BMD is >1 SD and <2.5 SD lower than the young- adult mean end. This paper shall attempt to critically examine the relationship between menopause

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and osteoporosis, but before discussing such interrelationships, it will be expedient to discuss in detail the pathophysiology of the aforementioned health challenges.

Menopause

Menopause is one point in a continuum of life stages for women and marks the end of their reproductive years. After menopause, a woman cannot become pregnant, except in rare cases when specialized fertility treatments are used. Most women experience menopause between the ages of 45 and 55 years as a natural part of biological ageing. Menopause is caused by the loss of ovarian follicular function and a decline in circulating blood oestrogen levels, (Ceylan and Özerdoğan, 2015).

The menopausal transition can be gradual, usually beginning with changes in the menstrual cycle. 'Perimenopause' refers to the period from when these signs are first observed and ends one year after the final menstrual period. Faubion, KuhleL, Shuster and Rocca, (2015) suggested that perimenopause can lastseveral years and can affect physical, emotional, mental and social well-being. Okeke, Anyaehie and Ezenyeaku in 2013 stated that a variety of non-hormonal and hormonal interventions can help alleviate perimenopausal symptoms and that menopause can be a consequence of surgical or medical procedures.

For most women, menopause is marked by the end of monthly menstruation (also known as a menstrual period or 'period') due to loss of ovarian follicular function. This means that the ovaries stop releasing eggsfor fertilisation. The regularity and length of the menstrual cycle varies across a woman's reproductive life span, but the age at which natural menopause occurs is generally between 45 and 55 years for women worldwide, (Faubion, Kuhle, Shuster, Rocca, 2015). Natural menopause is deemed to have occurred after 12 consecutive months without menstruation for which there is no other obvious physiological or pathological cause and in the absence of clinical intervention. Some women experience menopause earlier (before 40 years of age). This 'premature menopause' according to Garnero, Sornay-Rendu, Duboeuf, and Delmas (1994), may be because of certain chromosomal abnormalities, autoimmune disorders, or other unknown causes. The authors further stated that menopause can also be induced as a consequence of surgical procedures that involve removal of both ovaries and medical interventions that cause cessation of ovarian function (for example radiation therapy or chemotherapy).

Changes Associated with Menopause

The hormonal changes associated with menopause can affect physical, emotional, mental, and social well-being. The symptoms experienced during and following the menopausal transition vary substantially from person to person. Some have few if any symptoms. For others, symptoms can be severe and affect daily activities and quality of life. Some can experience symptoms for several years, (Caggiari, Leali, Mosele, Puddu, Badessi and Doria, 2016).

Symptoms associated with menopause:

Okeke, Anyaehieand Ezenyeaku, (2013) identified hot flushes and night sweats as symptoms associated with menopause. Hot flushes refer to a sudden feeling of heat in the face, neck and chest, often accompanied by flushing of the skin, perspiration (sweating), palpitations, and acute feelings of physical discomfort which can last several minutes. Changes in the regularity and flow of the menstrual cycle culminating in cessation of menstruation; vaginal dryness, pain during sexual intercourse and incontinence; difficulty sleeping/insomnia; and changes in mood, depression, and/or anxiety.

Menopause can also result in the weakening of the pelvic support structures, increasing the risk of pelvic organ prolapse. Loss of bone density at menopause is a significant contributor to higher rates of osteoporosis and fractures, (Faubion, Kuhle, Shuster, and Rocca, 2015). There are a variety of non-hormonal and hormonal interventions that can help alleviate symptoms of menopause. Harlow, (2012) asserted that pregnancy is still possible during perimenopause and suggested that contraception should be recommendedto avoid unintended pregnancy, until after 12 consecutive months without menstruation. Pregnancy after

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menopause is unlikely without fertility treatment that involves the use of donor eggs or previously frozen embryos.

Treatment

Lewiecki, (2008) opined that menopause requires no medical treatment and that treatments should rather focus on relieving signs and symptoms and preventing or managing chronic conditions that may occur with aging. Treatments, according to him, may include:

Hormone therapy: Estrogen therapy is the most effective treatment option for relieving menopausal hot flashes. Depending on the person's personal and family medical history, the doctor may recommend estrogenin the lowest dose and the shortest time frame needed to provide symptom relief.

Vaginal estrogen: To relieve vaginal dryness, estrogen can be administered directly to the vagina using a vaginal cream, tablet or ring. This treatment releases just a small amount of estrogen, which is absorbed bythe vaginal tissues. It can help relieve vaginal dryness, discomfort with intercourse and some urinary symptoms, (Lewiecki, 2008).

Low-dose antidepressants: Certain antidepressants related to the class of drugs called selective serotonin reuptake inhibitors (SSRIs) may decrease menopausal hot flashes. Clonidine, a pill or patch typically used to treat high blood pressure, might provide some relief from hot flashes. A low-dose antidepressant for management of hot flashes may be useful for women who cannot take estrogen for health reasons or for women who need an antidepressant for a mood disorder, (Nelson, Haney, and Humphrey, et al, 2005).

Osteoporosis

The word 'osteoporosis' means 'porous bone.' It is a disease that weakens bones, and if an individual has it,the person is at a greater risk for sudden and unexpected bone fractures, (Nelson, Helfand, Woolf and Allan,2002). Osteoporosis means that an individual has less bone mass and strength. The disease often develops without any symptoms or pain, and it is usually not discovered until the weakened bones cause painful fractures. Most of these are fractures of the hip, wrist and spine.

Who gets osteoporosis?

Surveys seem to suggest that about 200 million people are estimated to have osteoporosis throughout the world, (Nelson, and Helfand, 2002). Although osteoporosis occurs in both men and women, women are four times more likely to develop the disease than men. After age 50, one in two women and one in four men will have an osteoporosis-related fracture in their lifetimes. Another 30% have low bone density that puts them at risk of developing osteoporosis. This condition is called osteopenia, (Nelson, Helfand, Woolf and Allan, 2002).

Lewiecki, (2008) stated that osteoporosis is responsible for more than two million fractures each year, and that this number continues to grow. There are steps to take to prevent osteoporosis from ever occurring. Treatments can also slow down the rate of bone loss, if osteoporosis has been diagnosed.

What causes osteoporosis?

Researchers, (Sandhu, and Hampson, 2011) understand how osteoporosis develops even without knowing the exact cause of why it develops. Bones are made of living, growing tissue. The inside of healthy bone looks like a sponge. This area is called *trabecular bone.* An outer shell of dense bone wraps around the spongy bone. This hard shell is called *cortical bone*.

When osteoporosis occurs, the "holes" in the "sponge" grow larger and more numerous, which weakens the inside of the bone. Bones support the body and protect vital organs. Bones also store calcium and other minerals. When the body needs calcium, it breaks down and rebuilds bone. This process, called bone

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remodelling, supplies the body with needed calcium while keeping the bones strong, (Ceylan and Özerdoğan, 2015).

Up until about age 30, someone normally builds more bone than can be lost. After age 35, bone breakdown occurs faster than bone build up, which causes a gradual loss of bone mass. If the individual has osteoporosis,the person loses bone mass at a greater rate. After menopause, the rate of bone breakdown occurs even more quickly.

Symptoms and Causes

Sandhu and Hampson, (2011) affirmed that usually, there are no symptoms of osteoporosis and that is whyit is sometimes called a silent disease. However, the authors advised that one should watch out for the following things:

- Loss of height (getting shorter by an inch or more).
- Change in posture (stooping or bending forward).
- Shortness of breath (smaller lung capacity due to compressed disks).
- Bone fractures.
- Pain in the lower back.

Who is at risk for developing osteoporosis?

There are many risk factors that increase one's chances of developing osteoporosis, with two of the most significant being gender and age. Everyone's risk for osteoporosis fractures increases with age**.** However, women over the age of 50 or postmenopausal women have the greatest risk of developing osteoporosis. Women undergo rapid bone loss in the first 10 years after entering menopause, because menopause slows the production of estrogen, a hormone that protects against excessive bone loss, (Sornay-Rendu, Munoz, Duboeuf and Delmas, 2005). Surprisingly, men over the age of 50 are more likely to have an osteoporosis- induced bone break than to get prostate cancer. About 80,000 men per year are expected to break a hip, andmen are more likely than women to die in the year after a hip fracture, (Styrkarsdottir, Halldorsson and Gretarsdottir, 2009).

An individual's risk of developing osteoporosis is also linked to ethnicity, (Wu, Xu and Lin, 2019). Caucasian and Asian women are more likely to develop osteoporosis. However, African-American and Hispanic women are still at risk. In fact, African-American women are more likely than white women to die after a hip fracture. Bartl, Frisch and Springer-Verlag, (2009), identified bone structure and body weight as another factor responsible for osteoporosis. Petite and thin people, according to them, have a greater risk of developing osteoporosis because they have less bone to lose than people with more body weight and larger frames. Additionally, family history also plays a part in osteoporosis risk. If individual's parents or grandparents have had any signs of osteoporosis, such as a fractured hip after a minor fall, the person may have a greater risk of developing the disease.

Finally, some medical conditions and medications according to Bonjour, Chevalley, Ferrari and Rizzoli, (2009) increase someone's risk. If a person has or had any of the following conditions, some of which are related to irregular hormone levels, the individual might consider earlier screening for osteoporosis.

- Overactive thyroid, parathyroid, or adrenal glands.
- History of bariatric (weight loss) surgery or organ transplant.
- Hormone treatment for breast or prostate cancer or a history of missed periods.
- Celiac disease or inflammatory bowel disease.
- Blood diseases such as multiple myeloma.

Some medications cause side effects that may damage bone and lead to osteoporosis, (Ciurlia, Leali and Doria, 2017). These include steroids, treatments for breast cancer, and medications for treating seizures. You should speak with your healthcare provider or pharmacist about the effect of your medications on bones. It may seem as though every risk factor is related to something that is out of your control, but that's not true.

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You do have control over some of the risk factors for osteoporosis. You can discuss medication issues withyour healthcare provider. Research findings, (Greendale, Sowers and Han, 2012) have shown that:

- **Eating habits:** You are more likely to develop osteoporosis if your body doesn't have enough calcium and vitamin D. Although eating disorders like bulimia or anorexia are risk factors, they can be treated.
- **Lifestyle:** People who lead sedentary (inactive) lifestyles have a higher risk of osteoporosis.
- **Tobacco use:** Smoking increases the risk of fractures.
- **Alcohol use:** Having two drinks a day (or more) increases the risk of osteoporosis.

Management and Treatment

Depending on individual needs, doctors may recommend medication to prevent or treat osteoporosis. Several medications are available that help reduce bone loss and risk of fractures. There are several classes of medications used to treat osteoporosis. Your healthcare provider will work with you to find the best fit. It isnot really possible to say there is one best medication to treat osteoporosis. The 'best' treatment is the one that is best for you. Treatments for established osteoporosis may include exercise, vitamin and mineral supplements, and medications. Exercise and supplementation are often suggested to help you prevent osteoporosis. Weight-bearing, resistance and balance exercises are all important, (Langdahl and Andersen, 2018).

Prevention

Your diet and lifestyle are two important risk factors you can control to prevent osteoporosis, (Leali, Solla, Maestretti, Balsano and Doria, (2016). Replacing lost estrogen with hormone therapy also provides a strong defence against osteoporosis in postmenopausal women.

Diet: To maintain strong, healthy bones, you need a diet rich in calcium throughout your life, like milk, salmon with bones, sardines, kale, broccoli, calcium-fortified juices and breads, dried figs, and calcium supplements. It is best to try to get the calcium from food and drink. For those who need supplements, remember that the body can only absorb 500 mg of calcium at a time. You should take your calcium supplements in divided doses, since anything more than 500 mg will not be absorbed, (Sandhu and Hampson, 2011).

Lifestyle: Maintaining a healthy lifestyle can reduce the degree of bone loss. Begin a regular exercise program. Exercises that make your muscles work against gravity (such as walking, jogging, aerobics, and weightlifting) are best for strengthening bones, (Lewiecki, 2008).

Relationship Between Menopause and Osteoporosis

Menopause significantly speeds bone loss and increases the risk of osteoporosis. It is estimated that, on average, women lose up to 10 per cent of their bone mass in the first five years after menopause. Research, , (Sandhu and Hampson, 2011), indicates that up to 20% of bone loss can happen during these stages and approximately 1 in 10 women over the age of 60 are affected by osteoporosis worldwide. Also studies, (Lewiecki, 2008), have shown that one in two postmenopausal women will have osteoporosis, and most will suffer a fracture during their lifetime. Fractures (broken bones) cause pain, decreased mobility, and function. Fractures are associated with decreased quality of life and increased mortality. Similarly, early menopause is also identified as a risk factor for osteoporosis, (Sapre and Thakur, 2014; Okeke, Anyaehie and Ezenyeaku, 2013).

Kanis, Melton, Christiansen, Johnston and Khaltaev, (1994), have pointed out that post-menopausal womenare susceptible to primary osteoporosis since osteoporosis is closely related to estrogen deficiency. According to the authors, during the menopausal transition period, the drop of estrogen leads to more bone resorption than formation, resulting in osteoporosis. The major health threat of osteoporosis is osteoporoticfractures.

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Estrogen has been shown to influence osteocytes, as well as other cells such as osteoblasts and osteoclasts, (Greendale, Sowers and Han, 2012). Low estrogen levels affect how these cells function, making them produce too little new bone and not properly maintain bone structure.

Styrkarsdottir and Halldorsson, (2009) opined that experts do not understand exactly how estrogen affects bone, but they believe that the complex relationship between the two involves the following:
The immune system: Scientists think that estrogen affects bone homeostasis by regulating the immune system.

Effects on bone cells: Estrogen affects bone cells, including osteocytes, osteoblasts, and osteoclasts.

Oxidative stress: An imbalance between free radicals and antioxidants can cause oxidative stress.

Sema3A protein: There may be a relationship between estrogen and the sema3A protein in osteocytes. As people age, their levels of estrogen and sema3A deplete, which leaves the bones unable to maintain their structure.

Estradiol, one of three estrogen hormones naturally produced in the body is also worthy of mention. The effects of estradiol are clearly seen in women experiencing menopause. During this process, women naturally have lower levels of estradiol, as the ovaries no longer produce it, causing the menstrual cycles to stop. This change often causes mood swings, vaginal dryness, hot flashes, and night sweats - the symptoms commonly associated with menopause. Over time, lower estradiol levels can lead to osteoporosis.

Menopausal women are also at a higher risk of osteoporosis because they often do not get enough mineralsto maintain healthy bones, (Sandhu and Hampson, 2011). If you don't get enough calcium, your body takes calcium from your bones to support important functions, leaving bones weak and vulnerable to fractures. You also need adequate vitamin D to absorb calcium. Without vitamin D, you can take all the calcium you please but it won't get absorbed.

In summary, it has been demonstrated that as women enter menopause, their estrogen and progesterone levels begin to fall. Estrogen acts as a natural protector and defender of bone strength. The lack of estrogen contributes to the development of osteoporosis commonly found among post-menopausal women.

Conclusion

This paper x-rayed two major health conditions especially predominant among women, namely menopause and osteoporosis. Menopause was defined as the permanent cessation of menstruation and ovulation due to ovarian failure. "Spontaneous" menopause was shown to occur after 12 months of amenorrhea as ovarian hormone secretion diminishes, on average around the age of 51 years. Osteoporosis on the other hand was identified as a bone disease that develops when bone mineral density and bone mass decreases, or when the quality or structure of bone changes. This can lead to a decrease in bone strength that can increase the risk of fractures (broken bones).

Finally, it was established through the review of relevant literature that there was a connection or interrelationship between these two health conditions. One health condition (menopause) was found to favour the onset of the other (osteoporosis), or exacerbate its pathophysiology.

Recommendations

Dealing with the interrelationship between menopause, and osteoporosis requires a comprehensive approach that addresses the specific needs of each condition. The following recommendations are made, but it is important to note that these recommendations are general in nature, and individualized medical advice shouldbe sought from healthcare professionals to address specific concerns and conditions:

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1. Avoid high-impact exercises. Activities such as jumping, running or jogging can lead to fractures in weakened bones.
2. Avoid bending and twisting. In people who have osteoporosis, bending forward at the waist and twisting at the waist can increase the risk for broken bones in the spine.
3. Dietary changes, increasing vitamin D and calcium levels. Adequate calcium and vitamin D intake is crucial for maintaining bone health.
4. Engaging in weight-bearing exercises like walking, jogging, or resistance training can help improve bone density and reduce the risk of osteoporosis.
5. Limiting or stopping smoking and alcohol consumption.

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USE OF TECHNOLOGY IN FOSTERING BUSINESS EDUCATION LEADERSHIP

[1]Judith Osarumen AISOMWAN [2]Victor.I. IGBINEDION Department of Vocational and Technical Education, Faculty of Education,University Of Benin, Benin City.
Peterjudith45@gmail.com
+2348156670803
vicidion@gmail.com
+2348056014291

Abstract
This seminar presentation explores the use of technology in business education leadership, examining its impact on teaching and learning practices. This study investigates how technology integration enhance the effectiveness of business education leadership and contribute to improved outcomes for students and organizational success. Through a comprehensive literature reviewed, the study examined the theoretical foundations and conceptual frameworks that underpin the use of technology in business education leadership. It explores the benefits of incorporating technology tools and platforms in the classroom, such as online learning management systems, virtual collaboration tools, and multimedia resources. The results demonstrated that when used strategically and effectively, technology can transform traditional teaching methods, enhance student engagement, and promote active learning. It enables program leaders like head of departments, academic staff and supportive staff to create dynamic and interactive learning environments that foster critical thinking, problem-solving skills, and collaboration. Furthermore, the study explores the role of technology in preparing students for the demands of the modern business landscape. This paper concludes that business education leaders should harness technology to achieve the optimum objective of developing students who are well-equipped for success in the business field. it was also recommended that leaders should emphasize the importance of technology integration by highlighting its significance in preparing students for the real business world.

Keywords: Technology, Business Education, leadership

Introduction:
The incorporation of technology in business education leadership has undoubtedly revolutionized the field, paving the way for unprecedented opportunities and advancements. With the rapid advancements in technology, the traditional methods of imparting knowledge and developing leadership skills have been augmented by innovative tools and platforms. This is because technology is a fast changing field, as technology evolve it is important that leaders are comfortable and competent using today's software tools, it is very important they have the ability to learn and discriminatingly use new technology as they become available. Identifying the appropriate role of technology in the industry's core curriculum requires a dynamic, long-term plan with feedback and an ongoing evaluation process. There is a need for knowledge of new technology tools for both students and business education leaders. This infusion of technology has not only enhanced the learning experience but has also equipped future leaders with the necessary skills to thrive in the dynamic and competitive business landscape. Through online platforms and virtual classrooms, aspiringleaders can connect with experts and peers from around the world, fostering a diverse and enriching learning environment. This exposure to different perspectives and cultures not only broadens their horizons but also equips them with the cross-cultural competencies needed to lead in a globalized economy.

According to National University Commission, Core Curriculum Minimum Academic Standards (NUC, CCMAS) (2022), business education is an essential reference point for understanding the scope and objectives of business education in Nigeria. The NUC CCMAS (2022) defines business education as a

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specialized profession designed to provide students with knowledge, skills and competence leading to employability and advancement in office occupation, pedagogical skills in teaching business subjects at different levels of educational system as well as self employment or an employer of labour. It aims to equip students with a solid foundation in business principles, techniques, and practices, enabling them to contributeto the growth and development of the economy. According to the NUC CCMAS, business education covers a wide range of disciplines, including but not limited to accounting, finance, management, marketing, economics, entrepreneurship, and information systems. The objectives of business education set forth by the NUC CCMAS (2022) include:

- Knowledge Acquisition: Business education aims to provide students with a solid foundation of knowledge in various business disciplines such as accounting, finance, management, marketing, economics, entrepreneurship, and information systems.
- Skill Development: Business education aims to develop students' practical skills in areas relevant to the business world. This includes critical thinking, problem-solving, communication, teamwork, leadership, and decision-making skills.
- Entrepreneurship and Innovation: Business education recognizes the importance of fostering an entrepreneurial mindset and promoting innovation. This objective supports the goal of fostering economic growth and job creation in Nigeria.
- Ethical and Professional Conduct: Business education emphasizes the importance of ethical behavior and professionalism in the business world. This objective aims to shape students into responsible business professionals who can contribute positively to society and uphold ethical standards in their decision-making and interactions.
- Industry Relevance: Business education seeks to ensure that the curriculum is relevant and responsiveto the needs of the business industry. This objective promotes the employability of graduates and theirability to meet the evolving demands and challenges of the business world.
- Continuous Improvement: Business education recognizes the need for continuous curriculum review and improvement. This objective ensures that business education remains dynamic, relevant, and responsive to the changing needs of the business environment.

To be able to pursue the objectives of business education in tertiary institutions, there is need for effective leadership. This is because effective leadership gives expression to the objectives of business education.

Leadership is a complex and multifaceted concept that has been extensively studied and debated in the field of business and management. Numerous theories have emerged over the years to explain the nature of leadership and its impact on organizational success. However, In the 1980s, the Transformational Leadership Theory gained prominence. According to this theory, transformational leaders inspire and motivate their followers to go beyond their self-interests and work towards the collective goals of the organization (Bass & Riggio, 2006). Transformational leaders exhibit charismatic qualities, provide intellectual stimulation, and foster individualized consideration for their followers. In addition, a transformational leader is a model admired by subordinates, they encourage and inspire their subordinates to innovate and develop new ways to grow and improve the path for future success. This theory has been widely recognized for its positive impact on employee motivation, job satisfaction, and organizational performance.

Leadership in Business Education

Business education leadership can be defined as the art and science of guiding and inspiring individuals within a business education program to work collaboratively towards achieving organizational objectives. It involves the effective utilization of strategic vision, strong communication skills, and the ability to foster a positive and innovative learning environment. Remarkable business education leadership encompasses the Head of Department (HOD), course advisers, academic staff, and supportive staff working together in a cohesive manner, utilizing their expertise and resources to provide students with an exceptional education that equips them with the skills, knowledge, and mindset necessary to succeed in the dynamic and competitive business world. Academic staff members are instrumental in delivering high-quality education

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to students. Effective leadership supports academic staff by providing resources, professional development opportunities, and a supportive work environment (Johnson & Brown, 2019). By nurturing academic excellence, leadership enables academic staff to design and implement remarkable teaching methods that prepare students to face real-world challenges. Supportive staff, including administrative personnel, play a crucial role in creating a conducive learning environment. Leadership should recognize and empower supportive staff by fostering effective communication and collaboration (Anderson & Garcia, 2020). By interconnecting academic and supportive staff, leadership ensures that administrative processes support the remarkable development of students.

To help students excel in the business world, leadership must emphasize the integration of theoretical knowledge with practical skills. Effective leadership promotes industry engagement by establishing partnerships, internships, and guest lectures (Smith, 2018).

Technology in Business Education Leadership

Technology, in its broadest sense, refers to the application of scientific knowledge, skills, and tools to solve problems, improve processes, and enhance human capabilities. It encompasses a wide range of artifacts, systems, and techniques that have been developed over time to fulfill various needs and desires of individuals and societies. The term "technology" derives from the Greek words "techne" meaning art or craft, and "logia" meaning the study of or knowledge. It can be traced back to the early human civilizations, where simple tools such as stone axes and spears were crafted for hunting and survival (Smith, 2019). Since then,technology has evolved tremendously, encompassing a wide array of fields, from information technology to biotechnology, and from transportation to communication. One of the key aspects of technology is its role in transforming and improving various industries and sectors.

In the fast-paced and competitive business world, technology plays a crucial role in business education leadership, enabling students to not only survive but thrive in the business world. Through the integration of technology, business education leaders, foster digital literacy, establish industry partnerships, and prioritize continuous professional development. By working hand-in-hand, these leaders create an ecosystem where students acquire the necessary skills, knowledge, and adaptability to excel in the dynamic and competitive business environment. Through their remarkable efforts, business education leaders contribute to the growth and innovation of the business community and pave the way for students' success in the business world.

Business education leaders such as the head of department of the business education program actively foster relationships with industry partners to provide students with valuable experiential learning opportunities. Through technology-enabled internships, virtual guest lectures, and industry-sponsored projects, students gain practical exposure to the business world (Brown & Smith, 2019). These collaborations bridge the gap between academia and industry, ensuring that students possess the practical skills and industry insights necessary to succeed in the dynamic business environment.

Technology equips business education leaders with tools to enhance communication, facilitate data-driven decision-making, and foster collaboration among staff members. Communication platforms and project management tools enable leaders to efficiently convey goals, expectations, and objectives to their teams (Brown & Smith, 2019). By utilizing these technologies, leaders can provide timely feedback, offer professional development opportunities, and manage performance evaluations effectively. Learning analytics tools integrated within LMS provide valuable insights into student performance, engagement levels, and learning outcomes (Jones & Harris, 2017). Leaders can leverage this data to identify areas for improvement, adapt curricula, and implement evidence-based strategies to enhance student success. By incorporating virtual simulations, gamification, and multimedia resources into the curriculum, students can actively explore and apply theoretical concepts (Huang, Albert, max, Jiawen, Anita, Natercia, John & Jingwei 2020). Here are some key tools that business education leaders can utilize:

1. Learning Management Systems (LMS): LMS platforms such as Blackboard, Canvas, or Moodle provide a centralized space for course materials, online discussions, assessments, and grading.

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Educators can create engaging online learning environments, track student progress, and foster collaboration among students.

2. Virtual classrooms: Tools like Zoom, Microsoft Teams, or Adobe Connect enable synchronous online teaching and learning. These platforms offer features such as video conferencing, screen sharing, and interactive whiteboards, allowing educators to deliver lectures, facilitate discussions, and engage students in real-time.
3. Data analytics and learning analytics tools: Platforms such as Tableau or Moodle Learning Analytics provide valuable insights into student performance and engagement.
4. Collaboration and communication tools: Tools like Google Workspace (formerly G Suite), Microsoft 365, or Slack facilitate effective communication and collaboration among students and educators. These platforms offer features like document sharing, real-time editing, video conferencing, and instant messaging, fostering teamwork and knowledge sharing.
5. Online assessment and feedback tools: Tools like Turnitin, ExamSoft, or Grade Scope streamline the assessment process. These platforms enable educators to create and administer online assessments, provide timely feedback, and ensure academic integrity.
6. Social media and online community platforms: Platforms like LinkedIn, Twitter, or discussion forums within LMSs can facilitate networking, professional development, and knowledge sharing among students, educators, and industry professionals.

By effectively utilizing these technological tools, business education leaders can create dynamic and engaging learning experiences, track student progress, analyze data for informed decision-making, foster collaboration and communication, and provide effective assessment and feedback mechanisms. This integration of technology enhances the overall quality and effectiveness of business education.

The Use of Technology in achieving Business Education Objectives

In the realm of business education, technology has emerged as a powerful tool for education leaders, including heads of departments (HODs), academic staff, lecturers, technicians, and supportive staff, to achieve their objectives. Education leaders, including HODs, academic staff, lecturers, technicians, and supportive staff, play a crucial role in harnessing technology to achieve business education objectives. Through the remarkable use of technology, they enhance learning experiences, promote student engagement and interaction, and foster the attainment of business education objectives.

Education leaders employ technology to create and deliver digital content that enriches learning experiences. They utilize multimedia resources, interactive simulations, and virtual learning environments to engage students in a dynamic and interactive manner (Smith, 2018). By incorporating technology-driven educational tools, leaders enable students to explore complex business concepts, apply theoretical knowledge to practical scenarios, and develop critical thinking skills essential for success in the business world. They leverage learning management systems, online discussion forums, and video conferencing tools to facilitate collaboration, foster active learning, and provide flexibility for students skill development. By integrating technology into traditional classroom settings, leaders create a blended learning environment that will prepare students to effectively navigate the complexities of business environments.

Education leaders encourage students to collaborate and interact with peers and instructors through technology-mediated platforms. They facilitate virtual group projects, online discussions, and video conferencing sessions to foster a sense of community and promote active participation (Brown & Smith, 2019). Through these collaborative initiatives, leaders enhance students' communication skills, teamwork abilities, and exposure to different perspectives, preparing them for the collaborative nature of the business world. Education leaders harness technology to tailor educational experiences to individual student needs. They utilize adaptive learning platforms, personalized learning management systems, and intelligent tutoring systems to provide customized learning pathways for students (Jones, 2017).

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Education leaders prioritize their own continuous professional development in utilizing technology effectively. They engage in training programs, attend conferences, and participate in online courses to enhance their technological competencies and stay abreast of emerging trends. By continuously expanding their knowledge and skills, leaders model lifelong learning and inspire their colleagues and students to embrace technology as a catalyst for growth and success.

Conclusion

The use of technology in business education leadership plays a pivotal role in preparing students to thrive inthe dynamic and evolving business world. Business education leaders, comprising heads of departments, course advisers, academic staff, and supportive staff, harness technology to achieve the optimum objective of developing students who are well-equipped for success in the business field. By leveraging technology, these leaders enhance the learning experience among students. Through the integration of innovative tools and digital platforms, business education leaders enable students to develop critical thinking, problem- solving, and digital literacy skills that are essential for their professional growth.

Recommendations

The following recommendations were made;

1. The Head of the Department should champion the use of technology in business education leadershipby highlighting its significance in preparing students for the real business world. This can be done through regular discussions and workshops with academic staff, course advisers, and lecturers to raise awareness about the benefits and potential of technology.
2. Lecturers should leverage technology to create interactive and engaging learning experiences.
3. Technicians should play a crucial role in providing technical support and training to both faculty and students.

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PROPER POST HARVEST HANDLING OF FRUITS IN MINIMIZINGBEFORE THE TABLE

[1]Helen Erekawhevwhe IMONIORO [2]Lucy. E OSHIO
Department of Vocational and Technical Education, Faculty of Education
University of Benin, Benin City
helenimonioro2@gmail.com
08054780333
oshio4christ@gmail.com08024063786

Abstract

Time of harvest, methods of harvest, equipments and tools used in harvesting contribute to the wholesomeness of harvested fruits. This research work examined proper post harvest handling of fruits in minimizing losses before the table. Post harvest is a stage of crop production immediately after harvest, sorting, cleaning, grading, preservation, transporting, packing, processing and marketing. The implication revealed that farmers, marketers as well as consumers will benefit from the new technology of handling of fruits, such as packing house-operation, pre-cooling, post harvest treatment. Therefore, non application of this modern technology in the process of post harvest handling by illiterate farmers, marketers as well as consumers have brought about huge losses of food. Thus, the adoption and use of modern technologies as well method of harvesting have proved to be efficient in the preservation of post harvest handling of fruit. It is recommended that farmers should employ modern harvesting method; improvement is the enhancement made ob the post -harvest handling methods to reduce post harvest loses of fruits.

Key words: Fruits, Post-harvest Handling, Losses and Prevention

Introduction

Fruit is a food that we eat and are important source of vitamins and minerals, fibres which are very importantin protecting the body and also help in fighting against nutritional diseases. Fruit is food that can be eaten and it is a sweet fleshy product of a plant or a tree that contains seeds. Also, fruits are seed bearing structure that develops from ovary of a plant. Pabon and Litt (2011) stated that fruits are mature ripened ovaries of a flowering plant. Example of fruits are papaya, (pawpaw), mango, oranges, apricot, beetroot, pineapple, guava, pineapple, among others. The Encyclopaedia Britannica (2023) stated that some fruits are called technical fruits because these types of fruits can be eaten as fruits and vegetables. Examples of technical fruits are pumpkin, cucumber, tomatoes, beans, peanuts, corn grain, and almond among other fruits in this category of fruits. These fruits are consumed by a majority of people. Other categories of fruits found in the study area includes; Grapes, Pineapples, Avocado, Apple, Mangoes, Strawberries, Pawpaw, Water-melon, Oranges, Banana, Guava, Coco-nut among other healthy fruits such as Tomatoes, Cucumber, and Cherries.Fresh Fruits are generally high fibre, water, vitamin c. Regular consumption of fruits is generally associatedwith reduction of several diseases and functional declined with ageing.

Post harvest handling is a stage of crop production immediately after harvest, including cleaning, sorting, packing, grading, reservation, processing, marketing, preservation, transporting. Therefore, post harvest handling of fruit is the final stage in the process of producing high quality fresh fruits. Being able to maintaina level of freshness from the field to the table of consumption. Post-harvest is done immediately after harvesting crops, which increase the shelf life and maintain its quality Agrifarm (2020). The instant the cropis removed from the ground, or separated from its parent plant, it begins to deteriorate. Postharvest treatment largely determine final quality. The most important goal of post harvest handling are keeping the product cool, to avoid moisture losses and slow down on desirable chemical changes, and avoiding physical damage

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such as bruising, to delay spoilage. Sanitation is also an important factor, to reduce possibility of pathogen that could be carried by fresh produce for example as residual from contaminated washing water.
Postharvest processing usually continues in a packing house. This can be in simple shade, providing shade and running water, or a large scale, sophisticated mechanized facility with conveyor belts, automate sorting and packing section, walk in cooler and the like. In mechanized harvesting, processing may actually begin as part of the actual harvest process with inintial cleaning, sorting performed by the harvesting machinery (Simson and Straus 2010).

All fresh horticultural crops are high water contents and are subjected to removal of mature desiccation (Wilting, shrivelling) and the mechanical injuring. Onyedinefu (2023) estimated that 20%-30% of fresh horticultural produce are lost after harvest and these losses are considered as economic waste. The researcher assumed that among the fruits that is often loss is the tomatoes as can be seen in the illustrated figure 1 below

Fig 1*: Fresh and Damaged Tomatoes*
Source: Onyedinefu (2023)

Due to huge losses of fruits in the time of harvest, the overall output of the fruit is reduced which affects the product availability throughout the year and this is leading to food scarcity in most part of the states. Ogundele Femi (2022) linked the losses caused by the difficulty in handling post-harvest with food shortage. The author also observed that where there are no facilities for storage of harvest produce, farmers and consumers alike suffer economically.

Post Harvest Management of Fruits/Treatment
Postharvest management of fruits is carried out to preserve a substantial amount of fruits for future usage.
Strategies employed in ensuring that a greater portion of the fruit are preserved involved postharvest activities such as;

1. cleaning
2. washing
3. selection
4. grading
5. disinfection
6. drying
7. Storage.

These eliminate undesirable elements and improve product appearance, as well as ensuring that the product complies with established quality standards for fresh and processed products. Postharvest practices include the management and control of variables such as temperature and relative humidity, the selection and use of

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packaging, and the application of such supplementary treatments as fungicides. According to Omorogbe (2021) the aim of postharvest management is to maximize the proportion that will be available for consumption. The researcher found that about 5% to 25% of fruits could be wasted without effective postharvest management of fruit produced annually. Thus, managing postharvest of fruits will increase its availability for consumers. Musa (2020) found that the goal of postharvest management is to ensure that the fruit is kept fresh all season. This made possible by preservation and processing and packaging techniques.

Agricultural produce are often treated with agricultural chemicals after they are harvested. This practice is known as 'post-harvest chemical treatment'. The objective of post-harvest chemical treatments is to address pest and disease problems that may arise during the transport and storage of a commodity. Mitch Denton (2022) found that post-harvest treatment and handling of fruits and vegetables is a critical step in ensuring that the produce arrives at its destination in the best possible condition. There are many things to consider when treating and handling fresh produce, from the temperature to the packaging.

After harvest, fresh produce needs to be handled with care to maintain freshness, nutrient content, taste and quality. Fruit is fragile and perishable, so poor storage postharvest can result in losses. The field of postharvest practices addresses issues of handling, sorting, grading, washing, storing, transportation, and temperature control for crops after harvest. Post-harvest treatment is important in preventing fresh produce losses, maintaining quality, preserving nutrient content, and earning higher market prices.

(A) Packinghouse Operations

It is important to minimize mechanical damage by avoiding drops, rough handling and bruises during thedifferent steps of park operation. Secondly, the pack house operations are to be carried out in shaded area. Shade can be created using locally available materials like, shade cloth woven mats, plastic taps or a canvas sheet hung from temporary poles. Shade alone can reduce air temperature surrounding the produce by 8- 17oC. The packing house operation includes the following steps:

i. **Dumping:** The first step of dumping is known as dumping. It is carried out gently by using water or dry dumping can be carried out by immersing the produce in water. The advantage ofdumping is that it reduces mechanical injury bruising, abrasions on the fruits, since water is gentler on produce. The dry dumping is carried by soft brushes fitted on the sloped ramp or moving conveyor belts it will help in removing dust and dirt on the fruits.

ii. **Pre-sorting:** This process is achieved through the removing of injured, decayed, misshapen fruits. This technical approach will save energy and finance. This is because; culls will not behandled, cooled, select or reduce in large quantity packed or transported. Removing decayingfruits is an important aspect of the packing house operations because it assists the former to limit the spread of infection to other healthy fruits during handling.

iii. **Washing and Cleaning**: Washing with chlorine of 100 milligrams per litre of solution (100ppm = 100mg/litre) is appropriate for use for the control of inoculums (material used forinoculation) substance or vaccines build up during pack-house operations.

iv. **Sizing/Grading:** This is one of the ways packing house operation is carried out. This carriedout manually or by automatic grading grading-lines. Size grading can be carried out subjectively (virtually) with the use of standard size gauges. According to Dhatt and Mahajan(2007)found that round produce units can be easily graded by using sizing rings for sizing/grading.

(B). Pre-Cooling of Horticulture Produce

Pre-cooling of the produce of the produce soon after their harvest is one of the important components of thecooling chain, which ultimately affect the shelf life of the produce. The main purpose of pre-cooling is to immediately remove the field heat from the produce. The pre-cooling could be summarized in the following:

i. Room Cooling: Pre-cooling involves room cooling which is one of the methods that could be employed to achieve the purpose of pre-cooling. Room cooling is adopted because it is cost effective, and it is also found to match with the method of cooling that is, slow cooling operation of the system. The approach

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involves the operator of the room to simply load produce into the cooling room which allow air to circulateon the cartons as well as the sack bins or bulk load. The process allows for force air cooling thereby makingit possible for uniform cooling of the products in the cooling room.

ii. Hydro Cooling: The use of cold water is an old effective cooling method used for quick cooling of a wide range of fruits before packing. For the packed commodities it is less used because of difficulty in the movement of water through the containers and because of high cost involved in water tolerant containers. This method of cooling do not only avoids water loss but may even add water to the commodity. The hydro-cooler are normally of two types consisting of showering and immersion respectively.

iii. Vacuum Cooling: Vacuum cooling takes place by water evaporation from the produce at low air pressure. In this method, air is pumped out from a larger steel chamber in which the produce is loaded from pre-cooling. Removal of air results in the reduction of pressure of the atmosphere around the produce which further lowers the boiling temperature of its water. As the pressure falls, the water boils quickly removing the heat from the produce. Vacuum cooling cost about 1% weight loss mostly water for each 6oC of cooling

v. Package Icing: The term package icing means the direct placement of slush, flaked, or crushed ice over the product in shipment containers. The ice keeps a high relative humidity around the product. According to Dhati and Mahagani (2012) liquid icing distributes the ice throughout the container in order to achieve a better contact with the product. The authors assumed that packaged icing can be used only with water tolerant, non -chilling sensitive products and with water tolerant packages such as waxed fibreboard plastic or wood.

(C). Postharvest Treatment:

i. **Washing with Chlorine Solution:** This treatment can be used in wash water to help control inoculum build up during packing operation. In order to achieve the best result, it advisable to adopt a wash water of between 6.5 and 7.5 ph.

ii. **Ethylene Treatment:** This is a colourless flammable gas found in coal gas or obtained from petroleum and used to ripen fruits or as an anaesthetics. This is a key hormone which coordinates physical and biochemical changes associated with ripening of climacteric fruits. Ethylene gas is commercially used to ripen fruits after they have been picked. Fruits, such as tomato, banana, and pear are harvested just before ripening has started (typically in a hard, green, but mature stage). Ethylene is a gas released by some fruits and vegetables that causes produceto ripen faster. Some fruits and vegetables are more sensitive to ethylene than others.

iii. **Thermal Treatment:** Thermal treatment is any waste treatment technology that involves high temperatures in the processing of the waste feedstock. Commonly this involves the combustionof waste materials. Thermal treatment is a process by which heat is applied to the waste to sanitize it. The primary function of thermal treatment is to convert the waste to a stable and usable end product and reduce the amount that requires final disposal in landfills.

Thermal treatment involves the following procedures:

a. **Hot water treatment:** This method allows the farmer to dip the produce into hot water before marketing or storage. The purpose is to enable the farm produced to be controlled from various postharvest diseases. It will also improve on the peel of the fruits.

b. **Vapour Hot Treatment (VHT):** This treatment has proved very effective in the controlling of infections of fruits and flies in fruit. In order to achieve the goal of this treatment, the farmer would need to stack the boxes in a heating room and the produce are heated and humidified by injection of stream during which time the temperature and exposure are adjusted to kill all stagesof insects such as the eggs, lava, pupa and the adult insects. This type of treatment is appropriate for citrus fruits such as mangoes, papaya and pineapple at 43Oc in saturated air for the period of 8hours and then holding the temperature for further 6hr. This temperature is mandatory for export of mangoes.

c. **Fumigation:** The fumigation of SO_2 is successfully used for controlling postharvest diseasesof grapes. This is achieved by placing the boxes of fruits in a gas tight room and introducing

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the gas from a cylinder to the appropriate concentration. However, special sodium *metabisuiphite* pads are also available which can be packed into individual boxes of a fruit to give a slow release of SC_2. The primary function of treatment is to control the Botrytis *Cinerea*. The SO_2 fumigation is used to prevent discoloration of skin of litchis.

d. **Irradiation:** Irradiation is the process by which an object is exposed to radiation. Ionizing irradiation can be applied to Fresh fruits to control micro organisms and inhibit or prevent cell reproduction and some chemical changes. It can be applied by exposing the produce (fruits) to radiations.

The irradiation is a safe technology for fruit preservation and storage. Hence, it is highly recommendedfor use for modern fruits farmers.

4. **Waxing:** Fruit waxing is a process of coating fruits with an artificial or edible wax to improve their shelf life and texture. By definition, fruit waxing implies to artificial application of a very thin film of wax or oil or other material to the surface of the fruits or vegetables as an addition to or replacement for the natural wax coating. It is carried out during a postharvest handling. It is one of the methods for food/fruits preservation in post-harvesting. Paraffin wax is melted and poured over the product, which creates a barrier from bacteriaand oxygen, and as it cools, it forms a protective seal. According to Dhan and Mahajan (2012), fruits waxing improve the cosmetics earache and appearance and prolong the storage life of fruits and vegetables. Sin Categoría (2020) observed that the wax used in some fruits such as oranges is intended to protect the food and provide a shiny appearance. The author found that Fruits and vegetables, such as oranges, are covered by a layer of natural wax. Its main function is to help resist moisture loss, improve fruit firmness and slow down the natural degradation of food. The fruits, once harvested, are still “alive”, which means that they continue with the ripening process. The waxy coating that forms on the skin protects them. In some cases, waxing is applied to fruits such as citrus in post-harvest treatments to extend the shelf life and preserve themfrom fungi and bacteria. They are coating agents, completely harmless substances.

5. **Fruit Packaging:** Throughout the entire handling system, packaging can be both an aid and a hindranceto obtaining maximum storage life and quality. Packaging of fresh vegetables and fruits is the scientific method of holding the products so, as to prevent it from physical damage, chemical changes and further microbial contamination in addition to display the product in a more appealing manner to the consumer. Packaging must satisfy basic objectives. These are: Contain product and facilitate handling and marketingby standardizing the number of units or weight inside the package; Protect product from injuries (impact, compression, abrasion and wounds) and adverse environmental conditions (temperature, relative humidity) during transport, storage and marketing; Provide information to buyers such as variety, weight number of units, selection or equal grade, producer’s name, country and area of origin.
Frequently included are recipes nutritional values, but codes are or any other relevant information on traceability. In addition a well –designed package needs to be adapted to the conditions or specific treatments required for the product. If hydro-cooling or ice-cooling is required, the package must be tolerant wetting without losing strength. For a product with a high respiratory rate, the packaging should have sufficiently large openings to allow good exchange. When produce dehydrates easily, the packaging should be designedto provide a good barrier against water loss, and the use of semi permeable material makes it possible to generate special atmospheres inside packages. This helps in maintaining produce freshness.

There are three types of packaging. They are as follows:

i. Consumer units or pre-packaging
ii. Transport packaging and
iii. Unit load packaging or pallets.

Fresh fruits are generally packed in bamboo baskets, plastic creates, plastic bags or sacks for transportation,in many developing countries. Often, they are transported in an unpackaged from the farm. After harvest,

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fresh fruits and vegetables are generally transported from the farm to either a packaging house or distribution centre. At the retail levels fresh produce is sold in an unpackaged form, or it is tied in bundles. The type of market handling of fresh produce greatly reduces its shelf life if it is no sold quickly. The application of proper postharvest technologies would however extend postharvest shelf life, retain fresh quality and reduce losses. The following are the benefits of fruits packaging. These are: It provides protection from dust; It reduces microbial contamination from the surrounding environment and from consumer contact; It helps to maintain the freshness of produce; It extends the postharvest shelf life; It increases the sale of fresh produce.**(D). Field Operations**

Most immature fruits are graded on the basis of size and colour. Immature soft-rind squashes, for example, may be harvested at several sizes or stages of development, depending upon market needs. Fruit that is too developed is of interior internal quality and shows undesirable colour change after harvest. This also appliesto other immature fruit vegetables such as cucumbers. The harvest index for mature fruit depends on several characteristics, and proper harvest maturity is the key to adequate shelf life and good quality of the ripened fruit.

Most fruit vegetables are harvested by hand. Some harvest aids may be used, including pickup machines and conveyors. Harvesting at night, when products are the coolest, is common for sweet corn and is gaining in use for rock melon. Products reach their lowest temperature near daybreak. Night harvest may reduce the time and costs of cooling products may result in better and more uniform cooling, and helps maintain productquality.

General Guide to Fruits Packaging

According to Simson and Sraus (2010) there are general guide for fruits packaging: These are as follows: Packaging Materials and Container must be non- toxic but comparable with the specific food/fruits; There must be sanitary protection; Moisture and fat protection; Gas and odour protection; Light protection; Resistance to impact; Transparency; Ease of opening; Pouring features; Ease of disposal; Size, shape, weight limitation; Appearance printability; Low cost; and special features

Film Packing of Postharvest Produce

Film packaging is one of the main processes in post-harvest fruits handling.

Packaging film is a thin plastic layer used to preserve, protect, market and distribute various food items. It provides protection for loss of nutrients, colour, aroma, taste, and maintaining the functional properties of food. Packaging films also help protect food from the harmful effect of microorganisms.

Film packaging consists of multiple film layers used to pack goods. Flexible films are used for soft packaging, and are normally produced by extrusion. Flexible film packs are made up of several layers, whichin turn are made up of different types of polymer. Flexible film is used in the vacuum packaging of food. Packaging films have to be edible for it to be useful for fruit packaging.

Edible films are a thin layer of material coated or wrapped around a food product to act as a barrier to the surrounding environment. In addition, edible films can serve as carriers of natural or chemical antimicrobial agents, antioxidants, enzymes, vitamins or minerals. Edible films and coatings have received considerable attention in recent years because of their alternative potential to minimize or replace the use of certain synthetic films, which could minimize packaging waste and reduce environmental pollution.

Edible coating provides a dried thin layer of edible materials on the surface of food item for controlling the exchanges of moisture, gases, and solutes with the environment. Edible coating technology has been commercially utilized by the produce industry to extend shelf-life of fresh fruits and vegetables. Sufficient barriers to water and O2 and CO2, uniform adhesion on the produce surface, and appealing appearance and other sensory qualities are essential for fresh produce coatings. The study by Yanyun Zhao (2019) found thatthe adoption of this technology is commendable because of its quality assurance and food safety for fruit consumption. Common examples of film packaging as identified by Ahiduzzaman (2021) include bags,

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pouches, shrink films, tubes, sleeves, and carded packaging. Three types of film are generally used, polyethylene terephthalate, polycarbonate, and polypropylene. For some purposes these are comparable, but polypropylene has a lower loss angle, and polycarbonate has a smaller change of capacitance with temperature.

Preparation of Fresh Market Fruits

Preparation includes all unit operations such as sorting, grading, postharvest treatments, pre-cooling, and packaging. Preparation of fruits before marketing, if followed properly, fetches premium price for the producers and better quality for the consumers. Ahmad & Mohammed (2015) advised that in order to reduce postharvest losses to a greater extent and increases marketing period of the fruits it is important that farmers would need to promptly prepare their fruits for the market by ensuring that the fruits are fresh for consumersto purchase. Regardless of the destination, preparation for the fresh market comprises of four basic keys operations. These are:

i. removal of unmarketable materials
ii. sorting by maturity size
iii. grading
iv. packing.

Any working arrangement that will reduce handling will lead to lower cost and reduce quality losses; market preparation is preferably carried out in the field.

Figure 2: Picture of Fresh Fruits
Source: https://bit.ly/2Nxv5NI

Challenges of Handling Fresh Fruits

Satisfying the consumer is the ultimate goal of postharvest handling. In order to understand the challenges in handling of fresh fruits it helps to trace those items in the home back through retail outlets, food service providers, distribution centres, transport, and packing, harvest, and production practices. Robert and Stanley ((2022) examined the difficulty involved in handling fresh fruit during postharvest of fruits. According to the authors, the challenges in handling within a value chain include marketing equitably, handling items in stores, ensuring food safety, developing quality management plans, coping with constrained handling, minimizing physiological stress, and understanding transitions at purchase and harvest.

Movement of Fresh Produce (Fruits)

Gbenga (2022) underscores the importance of postharvest losses of fruits due to circumstances beyond the farmer's control. The authors found some challenging factors affecting the health-related characteristics of the fruits that are eaten. The movement of fresh produce is considered as one the main challenges facing fresh fruits handling. Clarifruit (2023) identified three factors caused by movements of fresh fruits. These are as follows:

1. **Maintaining Temperature Control:** Managing temperature is one of the most critical challenges associated with the movement of fresh produce. Fresh produce needs to be transported and stored at specific temperatures to ensure quality control, and prevent waste. If produce is stored or transportedat the wrong temperature, it can lead to premature ripening, rotting, and the loss of flavour and nutritional value.

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2. **Considering Shelf Life of Fruits:** Fresh fruits are not clothes and books, they have a relatively short shelf-life, and the quicker they can be transported and delivered, the less waste, and the more optionsfor marketing companies, wholesalers, and retailers. This requires efficient logistics and transportation networks to ensure that produce is delivered to its destination in a timely manner. Anything from poor handling to incorrect packaging can negatively impact shelf life.

3. **Challenges of Shipping Fresh Fruits**
   Fresh fruits pose a number of challenges during transit that makes it much harder to transport than other goods. Fruits have a strict shelf life, and the clocks start ticking as soon as the fruits are harvested. Therefore, an efficient supply chain must be established, so it is very important to employa trusted logistic to help facilitate a smooth and reliable transportation.
   Fresh fruits produce is highly sensitive to temperature fluctuation, and even the slightest increase can accelerate ripening leading to premature spoilage. Therefore, refrigerated trucks known as Reefers or open space trucks with cover roofs must be employed consistently for cool temperature. The fresh fruits must be transported in a special plastic crates of baskets to allow proper ventilation.

Minimization of Losses In Postharvest Handling of Fruits

Loses can be minimized by the following:

i. Physically avoiding the entry of insects and rodents and maintaining the environmental condition to avoid growth of micro organism.
ii. **Accessing finance :** small scale farmer should invest in postharvest facilities and equipments like the packing house or a threshers, help them to reduce losses
iii. **Linking farmers to markets:** farmers are less willing to invest in equipments and activities thatcan reduce their fruits losses, if they cannot make profits. Linking farmers to marketers to buy fruits directly from them. That means a steady stream of buyers while reducing fruits losses.
iv. **Cold Storage:** heat deteriorates fruits when there is a lack of cold chain equipment and infrastructure. Cooling equipments can substantially reduce losses of fresh produce.
v. **Strengthening Transport:** farmer need to extend transport infrastructure to the next mile and can have a bit impact on fruit losses. This can hekp them to access markets or consumers who are in the remote rural area.
vi. **Training farmers:** training them on postharvest handling and storage skill including timing of harvest, crop drying and moisture management.

Conclusion

This study was concerned about providing an update on post -harvest handling of fruits. The necessity for postharvest handling of farm produce such as fruits is premised on the notion that there are huge losses of fruits in the time of harvest and the overall output of the fruit is reduced. Whereas, the management and treatment of postharvest produce when achieved both the farmer and consumer alike would benefit because handling using modern technologies keeps the shelf life of fruit fresh and make the fruit edible through the season. The study found that there are various techniques employed to preserve the freshness of fruits and make them available in the market without the reduction of their life span. Some of the methods for treating postharvest fruit found in study are those of packing house operation, pre-cooling of the produce, package icing, postharvest treatments. The application of each and or all of the listed treatments would go along in ensuring that fruits during postharvest are reserved for future use. Therefore, this study concludes that the knowledge about the update of postharvest handling is very important for farmers and consumers. This is because, the application of the methods especially the available treatments of postharvest of fruit will reduce the economic waste that is encountered yearly by farmers, retain the nutritional value of the fruits and the preservation of the freshness of the fruits for consumers.

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Recommendations

Base on the review of this paper, the following recommendation are made:

1. Farmers should acquire the update information on postharvest handling of fruits. This will enable the farmers to reduce losses associated with waste during post harvesting of fruits.
2. Marketers should use the best practice of postharvest of fruits handling such as pre-cooling, thermal treatment, and irradiation and packing house operation among other methods of preservation.
3. Transporters should use sound vehicles with cooling system and fittings of pallets to protect postharvest fruit while they are being conveyed to their destination. The use of clean and well ventilated vehicles covered at the top for the safety of the fruit must be considered by the transporting company. It is important that transporters should convey the fruits during cool of the day to avoid the scorching of the sun on the fruits. This will Fensure that the shelf life of the produce is preserved for consumer benefits and increase of economic value chains.

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HOME ECONOMICS ENTREPRENEURIAL SKILLS: A VERITABLE TOOL FOR YOUTH EMPOWERMENT

[1] Olayide O ADEBAYO [2]Nkeiruka I. NWABAH
[1]Department of Tourism and Hospitality Management, Bamidele Olumilua University of Education, Science and Technology, Ikere-Ekiti
[2]Department of Vocational and Technical Education, Faculty of Education, University of Benin, Benin City.

Email: motheronline1@yahoo.com ***ORCID ID:*** *0000-0001-8377-9731*

Abstract
This paper was a review of Home Economics entrepreneurial skills: a veritable tool for youth empowerment. The paper presented a brief introduction of the subject matter. It X-rayed what Home Economics education is all about. Various components of Home Economics education such as clothing and textile, Foods and Nutrition and Home management amongst others were critically examined. The study revealed that Nigerian youths have not sufficiently learnt and acquired entrepreneurial skills to allow for self-employment. The Nigerian educational system is expected to rise to the challenge of equipping the youth with the necessary entrepreneurial knowledge, skills, values and attitude for them to live as competent members of the society and contribute meaningfully to nation building. This gave rise to various entrepreneurial skills that can be acquired in various Home Economics components. It further examined Home Economics education, Youth and the roles of Home Economics entrepreneurial skills on youth empowerment.It was concluded that reformation of Home Economics curriculum if considered and properly implemented will go a long way in creating reasonable number of entrepreneurs among our teaming unemployed youth. It recommended that students should be encouraged to have interest inthe skill-based Home Economics Education, hence should be accorded appropriate recognition. Thus, there is need for a change in the mindset of youth to see self-employment as an option and be prepared psychologically and emotionally for it, this will enable them to be more motivated in identifying entrepreneurial opportunities.

Keywords: Home Economics, Entrepreneurial Skills, Youth empowerment

Introduction

A country blessed with abundant human and natural resources such as Nigeria, appears ravaged in poverty. As a result of the economic hardship experienced in the country over the past years, poverty has increased dramatically, with little or no job opportunities for its graduates. There appears to be acute hunger and increased cost of living amongst others. Nationally, 43% of Nigeria(89 million) live below the poverty line, while 25% (53 million) are vulnerable (World Bank, 2020).No doubt, so many youths are on the streets looking for jobs because they are not skilled. These level of poverty therefore becomes worrisome and unacceptable to the general wellbeing of Nigeria citizenry. It becomes highly imperative for youths to embrace skill oriented programmes such as Home Economics education in order to acquire relevant entrepreneurial skills.

Home Economics is a multidisciplinary field that encompasses various aspects of managing and improving the well-being of individuals, families, and communities through practical knowledge

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and skills (Ibrahim 2008). Its primary focus is on the application of knowledge in areas related to home management, family life, nutrition, consumer education, textiles and clothing, and personal finance. The ultimate goal of Home Economics is to enhance the quality of life and promote the overall well-being of individuals and families. The components or specializations of Home Economics education include: Clothing and Textiles, Foods and Nutrition, Home Management, Interior Design, Culinary Arts, Hospitality and Tourism, Health and Wellness, Family and Child Development, among others. The objectives of Home Economics education are closely linked to these specializations. They include: Promoting Healthy Living, Enhancing Life Skills, Sustainable Living, Cultural Appreciation, Empowering Individuals, amongst others. (International Federationfor Home Economics, 2018). Towards the attainment of these objectives, Home Economics graduates need to acquire relevant entrepreneurial skills that will empower and make them to be productive. Unfortunately, Home Economics graduates appear to lack necessary entrepreneurial mindset that will make them saleable and productive in the labour market. This has left many Home Economics graduates in the street insearch of employment opportunities. If a drastic and a proactive measure is not taken, many HomeEconomics may engage in social vices and other negative source of livelihood in order to earn a living. The need to acquire entrepreneurial skills becomes extremely vital.

Entrepreneurial skill in Home Economics include sewing, weaving and textile design in Clothing and Textile; cooking cuisines, Baking and culinary arts in Foods and Nutrition, Hospitality, interior decoration and detergent production in Home Management among others. If youth acquire these skills, they will become entrepreneurs which will lead to youth empowerment Entrepreneurship isthe ability to turn ideas into actions and is a key competence for all, helping young people to be more creative and self-confident in whatever they undertake. Usman (2018) defined entrepreneurship as the process of identifying, developing and bringing a vision to life. Entrepreneurship in Home Economics education involves equipping young individuals with the necessary knowledge, skills, and attitudes to become confident, self-reliant, and active participants in managing their homes and making informed decisions that positively impact their lives and families. If they acquire these skills, it will ultimately lead to youth empowerment. With the richness of Home Economics Education in entrepreneurial skills, many graduates of home economics still roam the streets looking for jobs, one begins to wonder what could have happened.Could this be linked to lack of intent on the part of the students or that they were not properly thought the course that is so loaded for the employability skills?

Youth empowerment refers to the process of providing young people with the tools, knowledge, resources, and opportunities necessary to develop their potential, build their confidence, and actively participate in decision-making and positive social change. It aims to enable young individuals to take control of their lives, exercise their rights, and contribute to their communities and society at large. Youth empowerment in Home Economics education involves equipping young individuals with the necessary knowledge, skills, and attitudes to become confident, self-reliant, and active participants in managing their homes and making informed decisions that positively impact their lives and families. According to Ezeanu (2018), Young people appear to be empowered when acknowledged they have/can create choices in life and are aware of implications of these choices, make an informed decision freely, take action based on that decision and accept responsibility for the consequences of that action. Youth empowerment is an attitudinal, structural, and cultural process whereby young people gain the ability, authority and agency to make decisions and implement change in their own lives and the lives of other people, including youths and adults(Sasaki, 2016). Sasaki (2016) further stated that empowering youth in this context means creating

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and supporting the enabling conditions under which young people can act on their own behalf, andon their own terms, rather than at the direction of others. These enabling conditions include, economic and social base, political will, adequate resources allocation and supportive legal and administrative frameworks, a stable environment of equality, peace and democracy, and access to knowledge, information and skills and a positive value system.

Concept of Home Economics

Historically, the study and practice of Home Economics primarily centered around the efficient management of a household, encompassing tasks such as meal preparation, budgeting, sewing, and child-rearing. While these skills remain fundamental, they have now become the cornerstone of a broader and more encompassing approach. Home Economics has evolved beyond its traditional confines to seamlessly integrate with the entrepreneurial landscape, creating a powerful synergy between household management and business acumen.

Home Economics is an interdisciplinary field of study that focuses on managing and improving the quality of life within the home and family setting. It encompasses a wide range of practical skills, knowledge, and principles related to various aspects of domestic life, including: cooking and nutrition, household management, clothing and textiles, child development and family studies, personal finance, interior design and home decoration, food preservation and safety, health and hygiene etc. The aim of Home Economics is to equip individuals with practical skills andknowledge that enhance their everyday lives, foster healthy family relationships, and promote overall well-being. It is a dynamic field that evolves with societal changes, and its principles are applicable to people of all ages and backgrounds (Taar & Palojoki 2022).

Taar & Palojoki (2022) further stated that teachers believe that Home Economics Education is important for the quality of students' lives, as it helps them develop social skills and knowledge in various areas such as food, textiles, home improvement, economics, consumer education, sustainable consumption, and health. Home Economics education can take place in schools, community centers, or through online resources, helping individuals develop essential life skills to become self-reliant and responsible members of society.

Home Economics Education is vocational and it contributes to development by equipping individuals with reliable occupational skills which lead to self-reliance. Home Economics Education prepares youths and adults for entering into various areas of Home Economics occupation (Iyere & Anenea, 2020). It is skill oriented; it is a vocation of self-reliance and boarder on preparing her recipient for challenges of the home and its environment (Zongoro & Msheliza, 2020). Ibrahim (2008) stated that, Home Economics Education is the greatest investment any nation can make for the development of her economy, political, social and human resources. The author further stated that the objectives of Home Economics are geared towards equipping individuals with saleable skills that will make them self-reliant. It exposes individuals to many occupational skills that can enable them gain employment in the labour market.

Ibrahim (2008) further emphasized that Home Economics Education is the study of all the elementsof family, individual, human development and interpersonal relation. It is a field of study that provides the necessary knowledge for guiding and assisting human beings towards a more self- rewarding and fulfilled life comparable with their society. Home Economics Education is to assistyoung ones and interested adults to take a dynamic step which not only cause them to acquire knowledge but the skills for making them self-reliant. Home Economics Education can be

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effectively used for economic empowerment which if properly taught can help raise the economic status of the individual, the family and the nation (Alabi, 2016).It enhances a nation's standard of living by creating wealth and jobs, encouraging the development of new knowledge and technology which is the goal of every nation in the world. Home Economics Education can therefore be regarded as a tool for entrepreneurial skills among youth.

Home Economics Entrepreneurial Skills

Lemchi (2017) presented a comprehensive catalogue of Home Economics entrepreneurial skills which can be translated to business opportunities. These include:

1. Clothing and Textile skills; such as sewing and textile production which will lead to, Garment construction/manufacturing, tailoring, fabric stores; apparel shops; laundry services; bridal shop; weaving centers; knitting centers; crocheting; costume design; pattern design and production; fashion and design school operations; tie and die designing; batik designing; children/kiddies clothing shops; clothes remodeling.

2. Foods and Nutrition skills: such as cooking and baking which will lead to restaurant, fast food establishments, grocery shops, bakeries; cake designing; infants formula, food manufacturing, catering Services (both indoor and outdoor) jam jellies and fruit juice making, ice cream and yoghurt making nutrition/diet counseling, candies and biscuits manufacture culinary arts, cuisine services

3. Home management/Housing and furniture skills: such as hospitality and interior decoration which will lead to household equipment shops, Gift shops, Crafts shops, Craft production centers, Super markets, Abrasive production, liquid soap production, Interior decoration, Bed sheets/spread and pillow case making and merchandizing, Soap manufacturing, Cream and pomade manufacturing, Rental services e.g. canopies, plates, cups, chairs, etc. for parties, outdoor decoration for parties, funeral house decoration, furniture shops event management.

It is clearly seen from the above that Home Economics offers numerous self-employment /entrepreneurial skills, hence it can be rightly stated that Home Economics Education is a vital toolin diversifying the Nigerian economy if well implemented and knowledge and skills acquired are well utilized especially our youth

Concept of Youth

Youth refers to the time of life when one is young especially the period between childhood and maturity of the early period of existence, growth or development. Youth generally refers to a time of life that is neither childhood nor adulthood but rather somewhere in between. Youth is an alternative word to the scientifically oriented adolescent and the common terms of teen and teenager. According to Jega (2012) Youth can be defined as a special group of people with strong stamina and passion for realizing certain set goals and objectives. The way in which a nation definesits youth is related to the objective conditions and realities that exist on the ground especially historical and contemporary socio-economic and political issues that need to be addressed. That is why nations use different parameters and variables in defining their youth. For the purpose of execution of Nigeria's National Youth Development Policy; the youth comprises all young persons of age 18-35 who are citizens of the Federal Republic of Nigeria. This category represents the mostculture, the most volatile and yet the most vulnerable segment of the population, socio- economically, emotionally and in other respect. Youths share certain characteristic that distinguish

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them from other generations, such characteristics include, impatient for change, zealousness, radicalism, rebellions, curiosity, hard work, ego and ambition. From the foregoing discussion, it is safe to say that, youths are the engine and actual of national development, if their mindsets are channeled in the right direction. In order to raise stable youth that are self-reliant, entrepreneurial skills of veritable tool for empowerment should be taught to them. In a world marked by technological advancements, shifting consumer behaviors, and economic uncertainties, the skills cultivated through Home Economics provide a solid and adaptable foundation. This newfound dimension of Home Economics equips young individuals with a versatile toolkit that extends far beyond the walls of their homes. These skills, now intricately linked with entrepreneurial aptitude, empower the youth to not only navigate the complexities of modern business but to thrive within them.

The Role of Home Economics Skills on Youth Empowerment

Home Economics skills play a crucial role in empowering youth by providing them with practical knowledge and capabilities that contribute to their personal growth, self-reliance, and active participation in society. These skills not only equip young individuals with essential life skills but also foster a sense of responsibility and confidence in managing their homes, pursuing their goals, and making informed decisions. Here are some key ways in which Home Economics skills contribute to youth empowerment:

1. Home Economics equips youth with practical skills such as cooking, meal planning, budgeting, sewing, and household management. These skills are essential for daily living and contribute to their independence and self-sufficiency.
2. Home Economics education teaches youth about budgeting, saving, and responsible spending. Financial literacy empowers them to make informed financial decisions and plan for their future.
3. Home Economics can inspire youth to explore entrepreneurial ventures, such as starting home-based businesses or offering services related to their learned skills. This empowers them to create their own opportunities and potentially contribute to their family's income.
4. Home Economics help youth to learn about nutrition, healthy cooking habits, and food safety. These skills promote healthier lifestyle choices and contribute to their overall well- being.
5. Home Economics emphasizes sustainable practices, such as recycling, energy conservation, and reducing waste. Youth are empowered to make environmentally responsible choices, contributing to a more sustainable future.
6. Home Economics education involves problem-solving activities related to household management, cooking, and other aspects. These activities enhance youth's critical thinking skills, enabling them to tackle challenges effectively.
7. Youth learn time management and organizational skills, helping them balance their academic commitments, household responsibilities, and personal interests efficiently.
8. Home Economics fosters effective communication and collaboration within the family setting. These skills enable youth to express themselves, engage in meaningful conversations, and build strong relationships.

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9. Home Economics education can promote cultural awareness and inclusivity, acknowledging and respecting diverse family traditions and customs.
10. By actively participating in household decision-making and taking on responsibilities, youth develop leadership qualities and a sense of responsibility.
11. Home Economics skills encourage youth to be actively engaged in family and community activities, fostering a sense of belonging and social responsibility.
12. Youth empowerment through Home Economics involves helping young individuals set personal and family goals, empowering them with a sense of purpose and direction.

Challenges facing the acquisition of Entrepreneurial Skills in Home Economics

The acquisition of entrepreneurial skills in Home Economics faces numerous challenges that limit students' ability to fully develop their entrepreneurial potential. These challenges stem from various factors at the individual, institutional, and societal levels. They include:

1. Limited Emphasis on Entrepreneurship in Home Economics Curricula

One of the primary challenges facing the acquisition of entrepreneurial skills in Home Economics education is the limited emphasis on entrepreneurship in the curriculum. Historically, Home Economics has focused on teaching traditional domestic skills, such as cooking, sewing, and household management. While these skills are valuable, they may not fully prepare students to explore entrepreneurial opportunities and pursue innovative ventures. The traditional curriculum may not allocate sufficient time and resources to teach entrepreneurial concepts, business planning, and marketing strategies. As a result, students may graduate without a comprehensive understanding of entrepreneurship and its potential applications in their lives.

2. Teacher Training and Expertise

Effective teaching of entrepreneurial skills requires educators who have specialized knowledge and expertise in entrepreneurship. However, not all Home Economics educators may have received training in teaching entrepreneurship. Without proper guidance and mentorship, students may not receive the necessary support to develop their entrepreneurial capabilities.

3. Gender Stereotypes in Home Economics

Home Economics has historically been associated with gender stereotypes, often portraying it as a female-centric field. This perception can discourage male students from pursuing entrepreneurial interests within home economics. The perpetuation of these stereotypes limits the diversity of perspectives and potential talent that could contribute to entrepreneurial endeavors within the field.

4. Resource Constraints

Limited resources, such as materials, equipment, and funding, can hinder the implementation of hands-on entrepreneurial projects in the Home Economics classroom. Lack of access to modern technology can also limit students' exposure to relevant tools and resources.

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5. Lack of Supportive Environment

The home and school environment may not fully support the development of entrepreneurial skillsin Home Economics education. Negative attitudes towards risk-taking or entrepreneurship can deter students from exploring such opportunities.

6. Parental and Societal Expectations

Parents and society may prioritize more traditional career paths over entrepreneurship, leading students to choose safer options rather than exploring entrepreneurial endeavors. This mindset maybe influenced by the perception that entrepreneurship involves greater risks and uncertainties.

7. Cultural and Traditional Barriers

Cultural norms and values may impact the acceptance and adoption of entrepreneurship, especially within the domestic context. Some cultures may prioritize stability and traditional roles over risk-taking and innovation. Traditional assessment methods may not adequately measure the development of entrepreneurial skills, leading educators to prioritize other academic aspects over entrepreneurial learning.

8. Perceived Risk Aversion

Some students may be risk-averse, avoiding entrepreneurial endeavors due to fear of failure or uncertainty. The prospect of launching a business or pursuing entrepreneurial opportunities may be intimidating for those who are risk-averse. Developing an entrepreneurial mindset and the confidence to take risks can be challenging for some students, particularly if they are not exposed to entrepreneurial concepts early in their education.

9. Lack of Business Networks

Students may not have access to business networks or mentors who can provide guidance and support for their entrepreneurial endeavors. The absence of a supportive network can limit students' exposure to real-world entrepreneurial experiences and opportunities.

10. Institutional Support

Schools and educational institutions may not prioritize or invest in resources to develop entrepreneurial programs or initiatives. Limited support from the institution can hinder the integration of entrepreneurial content into Home Economics education.

11. Lack of Exposure

Some students may not have exposure to real-life entrepreneurial experiences, limiting their understanding of the practical aspects of starting and running a business. The absence of exposure can hinder their ability to connect theoretical knowledge with real-world applications.

Conclusion

The review showed that Nigerian youths have not sufficiently learnt and acquired entrepreneurial skills to allow for self-employment. Hence Nigerian educational system is expected to rise to the challenge of equipping the youth with the necessary entrepreneurial knowledge, skills, values and attitude for them to live as competent members of the society and contribute meaningfully to nation building. Reformation of Home Economics Education curriculum if considered and properly

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implemented will go a long way in creating reasonable number of entrepreneurs among our teaming unemployed youth.

Recommendations

The following recommendations were made:

1. Adequate implementation of a well-articulated skill-oriented curriculum by teachers of Home Economics Education (HEE) will provide solution to the problem of poverty in Nigeria because the youths would have been taught some skills that could be used to createjobs for themselves
2. Students should be encouraged to have interest in the skill-based HEE, hence should be accorded appropriate recognition. There is need for a change in the mindset of youth to see self-employment as an option and be prepared psychologically and emotionally for it. This will enable them to be more motivated in identifying entrepreneurial opportunities.
3. With the recent emphasis on the need for youth self-employment, the Federal Government, through the Federal Ministry of Education in collaboration with the Ministry of Power are equally expected to create an enabling learning environment that will promote entrepreneurship by ensuring constant power supply in the schools and country generally, without this the young upcoming entrepreneurs will become discouraged.
4. Real practical work (and not alternative to practical) in Home Economics Education shouldbe made compulsory for JSS 3 and SSS 3 students as part of the requirements for their graduation. Each student should be encouraged to produce at least one marketable product or service, and such products should be put up for exhibition. This will further create motivation for entrepreneurship
5. Teachers should be supported through continuous professional development and motivationto enable them prepare the youth for success in the competitive global economy.
6. Collaborating with external experts, such as local entrepreneurs or business advisors, can bring real-world insights and experiences to the classroom, enhancing students' learning experience.
7. Sharing stories of successful entrepreneurs who have overcome challenges and setbacks can inspire students and boost their confidence in pursuing entrepreneurial ventures.

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APPLICATION OF BUSINESS EDUCATION SKILLS TO NAVIGATE THE CHALLENGING ECONOMIC ENVIRONMENT IN NIGERIA FOR PERSONAL EMPOWERMENT AND SURVIVAL

[1]Yetunde Moronke OMOTOSO [2]Victor, I. IGBINEDION
[1]Department of Office Technology and Management,The
Federal Polytechnic, Ado-Ekiti, Nigeria
[2]Department of Vocational and Technical Education, University of Benin,
Benin City, Edo State, Nigeria yettybob200@gmail.com(+2348067052852)
vicidion@gmail.com(+2348056014291)

Abstract

The current economic trends in different nations including Nigeria have brought competitive business environment and new demands for business development. This means that graduates of business education programme require not just preparation for white collar jobs but both knowledge and skills for self-employment and self-reliance which are the required impetus for national development. In view of this, application of business education skills needed to navigate the challenging economic environment in Nigeriafor personal empowerment and survival was advocated. This paper, therefore, discusses how business education skills such as accounting, information communication and technology, telecommunication, distributive education, entrepreneurship education and office technology and management skills will help to navigate students' ways out of poverty or unemployment for sustainable personal empowerment and survival. The study, therefore, concluded that Business Education programme offer its recipients, relevant skills which in turn help students to create employment opportunities for themselves to survive in the 21st century workforce. It was recommended among others that, proper investment should be made towards building skills acquisition centres in all institutions offering business education programme so as to link theory to practice, thereby boosting their entrepreneurial skills.

Introduction

The current economic trends in different nations including Nigeria have brought competitive business environment and new demands for business development. In this competitive global economy, no nation can survive without developing a skillful and formidable workforce. This means that graduates of business education programme require not just preparation for white collar jobs but both knowledge and skills for self-employment and self-reliance which are the required impetus for national development. As a result, schools are being challenged to produce students who are knowledge producers, problem solvers and creative thinkers who can apply their skills to enrich their lives and communities. Consequently, it has become imperative for the nation to rethink her educational delivery practices in order to enhance the competitive ability of her teeming graduates. As a step in this direction, Nigeria runs Business education programmes inthe three levels of tertiary institutions.

The National Open University of Nigeria (NOUN, 2018) defined Business education as an aspect of vocational education that equips people with necessary skills and theoretical knowledge needed for performance in business world either for job occupation or self-employment. According to Udo (2017), Business Education is a comprehensive activity-based educational programme that is concerned with the acquisition of practical skills, understandings, attitudes, work habits and competencies that are requisites for success in a chosen business occupation. One of the major objectives of business education is to provide technical competencies to undergraduates to have a successful career as professionals as reflected in the Business Curriculum (Badawia, Reyada, Khamisa, Hamdana, & Alsartawia, 2019). Curriculum content in

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the field of business provides a theoretical framework beneficial for understanding business management and, at the same time, provides undergraduates with the knowledge, skills, and techniques arguably indispensable to start up and manage small businesses effectively (Venter, 2001). To this end, it can be inferred that business education is a facet of educational training that helps the individual to acquire relevantskills needed for living.

Skills for operating a business enterprise are needed for the business to succeed in the competitive market. Skill is the ability to do something well and is usually gained through training or experience. Okoli (2013) defined skills as the economic tools with which entrepreneurs acquire and solve societal problems. Skills are practical activities which make one employable, self-reliant and relevant to the society. Okoli (2013) further stated that entrepreneurs must possess skills that are necessary to enable them start, enhance their own business enterprises and market the products or services. Skills go a long way in helping entrepreneurs become successful. They are activities that will enable an entrepreneur to manage his own enterprise. Ekpenyong (2016) viewed skills as the ability to use one's knowledge effectively and readily in execution of performance; technical expertness, a power or habit of doing any particular thing competently. He opinedthat this definition is stressing that a skill is based on using knowledge expertly; the objective of which is tobring that knowledge to maximum level of competency. Hence, maximum skills acquisition involves that ability to perform any given tasks with ease, competently and expertly without much stress and sweat, one of the important skills in Business Education is practical skills.

Practical skills acquisition is an important aspect of Business Education programme at the various levels ofthe Nigerian education system. In support of this, one of the National Educational Objectives states that the acquisition of appropriate skills, abilities and competencies both mental and physical are important for all Nigerians to live and contribute to the development of their society (Federal Government of Nigeria, FGN, 2014). Consequently, the National Educational Policy document (2014) stated that the Nation's educational activity should be centered on the students, in order for them to acquire maximum skills acquisition for self-development and fulfilment in the labour market.

Unfortunately, due to certain impediments, the level of practical skills acquired by business education students, compared with the demands of the labour market and technological advancement, is nothing to boast about. This explains why most employers of labour in this nation and abroad consider the products ofBusiness Education as half-baked and unusable without further training (Ekpenyong, 2015). As a result of this, many graduates of Business Education are found all over the nation without gainful public employment.Consequently, these graduates too cannot be self-employed because they are not able to put to practice the theoretical knowledge they have acquired in their tertiary institutions over time.

Nigeria faces serious social and economic challenges. Although Nigeria's oil and natural gas revenues are estimated at over $40 billion per year, its human development indicators are among the world's lowest, anda majority of the population suffer from extreme poverty. Despite its oil wealth, Nigeria remains highly underdeveloped. Poor governance has severely limited infrastructure development and the provision of social services, hindering economic development and leaving much of the country mired in poverty. Due todecades of economic mismanagement, political instability, and widespread corruption, the education and social services systems have suffered from lack of funding, industry has idled, refineries are in poor condition, and the sixth-largest oil-producing country in the world suffers periodically from severe fuel shortages. (CRS Report for Congress on Nigeria, 2008)

The question that we must be prepared to answer is how do we navigate our ways out of poverty or unemployment in the country when the state apparatus is already infected with corruption? How can Business Education be a solution to the nation's youth unemployment and poverty is the concern of this paper? Graduates of different tertiary institutions need Business Education skills such as information communication technology, distributive, office technology and management education, communication and

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entrepreneurship education skills to navigate the challenging economic environment in Nigeria for personal empowerment and survival.

Business Education Skills Needed to Navigate the Challenging Economic Environment in Nigeria for Personal Empowerment and Survival

Accounting Skills

In every business establishment, be it government establishment, parastatals, private companies, banks and other financial institutions, the importance of accounting cannot be overemphasized. Umunnah (2016) explained that accounting education is regarded as an area of study needed to equip the youths with knowledge, skills and attitude necessary for efficient financial calculation required for occupational competence, and economic activities of an organization are measured, recorded and communicated to interest parties for analysis and interpretation. This is rooted on the need to keep the records of business transactions. Both Umunnah (2016) and Ahukannah, Ndinechi and Arukwe (2017) were of the opinion that the role of accounting activities in the operation of business enterprise are recording financial data, analyzing financial data, preparation of accounting statements and communicating financial information to employers.

Osuala (2014) believed that book keepers are employed in various business and industries including government agencies. He further stressed that book-keepers perform the following duties, make entries in ledger accounts, use the telephone, make journal entries, use the adding and calculating machine, examining and/or sort business papers, prepare operating and/or financial statements, prepare trial balance, type bills, invoices and statements, balance cash daily, keep inventory records, prepare cheques, reports and payrolls etc. Ahukannah, Ndinechi and Arukwe (2017) are of the opinion that success in accounting occupations requires the following personal traits: accuracy and neatness, confidentiality, attention to details, mathematical ability, skill in using mechanical calculators, organizational and analytical abilities, as well as ability to work under pressure.

The National Board for Technical Education (2011) and Nnamdi Azikiwe University agreed that the syllabus for accounting education to be taught in the university is: financial accounting, auditing, cost accounting, taxation, business law, data processing, advanced financial accounting, advanced costing, financial management, managerial economies and management accounting etc. Apart from the training accounting education graduates got in teaching methodology and practice, they are as well versed in some major accounting courses such as taxation, costing, accounting, business law, business management, data processing, auditing, business communication, financial accounting, bank courses – money and banking, principles of economics etc. Knowledge acquired from the above listed courses will enable these graduates to secure employment in various sectors of the economy, both in private and public organization, also aftereach level of education such as Junior secondary school, Senior secondary school, etc.

In the views of Ahukannah, Ndinechi and Arukwe (2017) the business training received in the junior secondary schools is a good starting point for a career in accounting. They further stressed that one will, however, require additional training in a polytechnic or a university to qualify as an accountant. The training may also be from NCE/B.Sc. business education programmes. Agbogu (2017) believed that opportunities exist for accounting graduates of business education programmes for self-employment as well as employment in certain areas and allied professions. He further posited that the graduates could set up accounting firms and render such services as consultancy, auditing and preparing accurate business records for taxation for private and public enterprises. These graduates could also run accounting schools and prepare students for accounting and allied examination as a part-time jobs. The abovementioned qualifications, courses, competencies and duties performed by these graduates, offer high status jobs/fields of opportunities as viewed by Osuala (2014), Ahukannah, Ndinechi and Arukwe (2017) and Agbogu (2017) According to them, they could be engaged as follows: acting as book-keepers(manual and machine), being accounting officers, serving as bank officers and tellers, working as data entry computer officers, serving as billing

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officers, being accountants (tax, cost, system analysis), acting as loan counselors, serving as auditors (internal and external), credit controllers, working as programmers and system analyst.

Osuala (2015) is of the view that there is a correlation between inadequate record and the business organizations of which this constitute a major problem. Accounting is the systematic recording of financial transactions. It is a service activity, the function of which is identifying, measuring, recording and communicating quantitative information, primarily financial in nature.

Davidson (2012) as cited in Akintola (2015) stated that accounting provides information for three broad purposes or uses, thus:

- Managing decision making
- Managing planning, controlling and internal performance evaluation.
- Financial reporting and external performance evaluation
- The Nigeria Small Business Practitioners Association (NSPA) enumerated the objectives of accounting information and statement to include the following:
- To provide information useful for making decisions
- To yield an accurate and true picture of operating results
- To supply information useful in judging management's ability to utilize enterprise goals
- To provide information useful to investors and evaluating potential cash flows to them in terms of amount, timing and related uncertainty
- To provide users with information for predicting, comparing and evaluating enterprise earning power
- To permit prompt filling of report and tax collecting agencies and
- To reveal all possible employee frauds, wastes, theft and record keeping errors.

Having basic accounting knowledge or skills does not necessary imply that the proprietor (entrepreneur) should be able to appreciate the contributions that accounting information offers in solving both financial problems that may arise from financial statements. He should be able to keep and maintain records of receipts and payments (cash book), income and expenditure and a balance sheet for the business.

Igbo (1995) as quoted by Akpotowoh and Amahi (2006) identified some of the accounting and financial skills required by entrepreneur in business related areas for successful operation of a business enterprise to include:

- Knowledge of accounts
- Knowledge of costing
- Ability to interpret financial statement
- Ability to acquire the skill of preparing financial statements
- Ability to understand payroll and various deductions
- Ability to know gross and net profit
- Ability to know sources of funds
- Ability to know how to obtain loans
- A knowledge of federal, state and local government levies, taxes and regulations
- Acknowledge of factors involved in decision to grant loan by financial houses.

Other accounting skills required

- Ability to process accounts receivable and accounts payable
- Ability to process inventories
- Ability to prepare ledgers and extract the trial balance
- Ability to prepare daily cash reports
- Ability to prepare bank reconciliation statements

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- Ability to keep sales and purchases records
- Ability to keep debtors ledgers
- Ability to prepare final accounts, profit and loss accounts and the balance sheet
- Ability to calculate depreciation
- Ability to avoid unplanned expenditure

Information Communication and Technology Skills

Information Communication Technology (ICTs) are commonly defined as 'a diverse set of technological tools and resources used to communicate, create, disseminate, store and manage information' (Blurton, 2016). These technologies include computers, the internet, broadcasting technologies (Radio and Television), and (Mobile) telephony. Basically ICT is a tool. It can be hardware (such as computers, digitalcameras), software (such excel, discussion forum) or both.

Business education students are not only exposed to courses in education but also to computer knowledge such as how to manipulate the keyboards, how to teach with computers, how to network email services, howto produce documents, how to scan text or photograph into computer and lot more. If these skills are appliedby the students, they can be empowered and also survive in the face of challenging economic environment in Nigeria.

According to Chau (2015)**,** ICT skills are needed to survive the business world. It enhances the production process in organizations as monitoring technologies could be used to reduce the number of supervisors required in the process. In the same view Brynjolfsson and Hitt (2017) confirmed that there is a substantial long-term productivity gain with the use of ICT skills in organizations. The Buhalis, (2016) also noted that the application of ICT skills in businesses causes fundamental changes that can provide powerful strategic and tactical tools for organizations if properly applied and used. This could have great impact in promotingand strengthening SMEs competitiveness. Sakai (2015), stressed that the extensive use of ICT skills can allow micro-enterprises with ideas and technologies to remain small and profitable or generate substantial global sales by exploiting their intellectual property over the internet. Hence, Onugu (2015) affirmed that ICT enables organizations to decrease costs, increase organizational capabilities and also assist to shape inter-organizational coordination. Therefore, the use of ICT can help to lower coordination cost and increase outsourcing in organization.

Organisation for Economic Cooperation and Development OECD (2004) discovered that ICT is able to improve information and knowledge management inside the firm and increase the speed and reliability of transactions for both business-to-business (B2B) and business-to-consumer (B2C) transactions. For abusiness education graduate to become an entrepreneur, there is need for the person to be competent in networking and computer services. The study of Sajuyigbe and Alabi (2017) confirmed that infrastructural,cost of acquisition, lack of finance, skills, management and government support are the main challenges of ICT adoption by SMEs in Nigeria.

Communication Skills

Communication is an activity, skill, and art that incorporates lessons learned across a wide spectrum of human knowledge. Communication is one of the most important tools for an organization in our days to exchange information, build a network and guarantee a smooth running work flow within a firm. According to Ors, (2015), there are three dimensions of communication: formal external, internal and informal communication. Initially, communication was an activity conducted by small number of people using face-to-face modalities. Today, new technologies have emerged due to Globalization and the 21st Century has made it possible for information to be produced, distributed and shared. Organizations demand quickly obtained and accurate information to compete. Therefore, technologies like computer networks, data banks, portable personal computers, wireless communication, satellite communication, e-mail, and the Internet have acquired strategic importance. Ors, (2015)

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Communication skills is an aspect of Business Education that equipped the students with employability skills such as interpersonal communication skills, team working skills, ability to relay information appropriately, listening ability, ability to avoid communication gap, etc. There is no doubt that communication skill possessed by Business education students influences work satisfaction and the quality of work execution (Grunig 2012). Baumgartner (2009) provides a literature analysis to determine if and how internal communication support employee motivation. He sums up the main motivational components which could be linked with communication skill:

- It provides feedback on information needed to survive in challenging economy.
- Communication skill helps to make a decisive contribution to clear targets and goals to be achieved.
- Communication skill helps business education graduate feel that they are recognized members ofthe organization.
- Communication skill leads to meaningful activities: Meaningful activities is important to motivate graduates to deliver higher performances in order to provide solution to economic problem.
- Communication skills enhance work satisfaction: Work or job satisfaction is represented in almostall theories of motivation and achievement.

Distributive Education Skills

This is another skills component of Business Education programme. The word "distribution" has much to do with exchange of goods and services and as such refers to the various hands and agencies through which commodities pass from the manufacturers to the final consumers (Udo, 2012). The curriculum objectives here state that distributive education was designed to give students an overview of the world of business and to enable them to develop a better understanding of the individual's relationship with business and the place of business in a developing economy (Ekpenyong, 2015). The general objectives of education here at the senior secondary school level are to:

- Enable the student to have a broader understandings of the importance of commercial activities,
- Enable the student to cultivate the right attitude to commercial activities,
- Provide useful general notions and commercial skills necessary for those who will immediately enter into the world of work,
- Provide commercial knowledge for personal use and for further education,
- Develop the habit of the wise use of the services offered by commercial institutions (Udo, 2017).

The above objectives lay emphasis on commercial activities, skills and knowledge (Udo, 2017). Therefore commerce was designed to equip the students with the marketable knowledge and skills inherent in commercial education. According to Udo (2017), distributive education is a programme of vocational instruction in marketing, merchandising and related management, which is designed to meet the needs of persons who have entered or preparing to enter a distributive occupation. Udo (2017) defined marketing as getting the right goods and services to the right people at the right place and at the right time, at the right price, with the right communication and promotion. According to Osuala (2014),marketing is considered from a broad based context to mean a total system of interacting business activities designed to plan, price, promote and distribute want-satisfying products and services to present and potential consumers. He added that the main responsibility of any marketing manager is to see that the marketing functions are performed in such a way that the firm makes a profit.

Osuala (2014) further asserted that the marketing manager will need to perform the functions of planning, organizing, staffing, directing and controlling. Osuala further stated that the general objective of distributive education is to prepare students for gainful employment in distribution and marketing. Therefore, the objectives of marketing education should meet the social, vocational and personal needs of the business education students.

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Office Technology and Management Education(OTME) Skills

This is the fourth component of business education skills and competencies inherent in the programme. It was formerly known as secretarial education (Udo, 2017). According to Ekpenyong (2015), a secretary is defined as an executive assistant who possesses a mastery of office skills and who demonstrates the ability to assume responsibility without direct supervision. He/she can exercise initiative and good judgment in decision making. The definition given above describes a special class of secretaries who by virtue of their training, experience and scope of responsibility have become assistants to their bosses. Ekpenyong (1995) describes secretarial work as involving the following activities:

- General Office Work – relieving executives and other company officials of minor executive and clerical duties.
- Taking down dictation from the boss using shorthand
- Making appointments for the executive and reminding him or her of them, that is, the appointments.
- Interviewing people coming into the office, and directing to other workers those who do not needto see the chief executive.
- Handling personal and important mails, writing routine correspondence on his/her own initiatives.
- Making and answering telephone calls.
- Supervising other clerical workers.
- Keeping personnel records of events in the offices.

According to Ekpenyong (1995), the secretarial profession is remarkable for its appeal to men and women who have obtained post-secondary education. This is so because the secretary often works with important people and the remuneration is always very attractive. However, the secretarial profession provides a challenging job after graduation from institutions of higher learning because of changes in business technology. He further said that even with the advanced technology now in use in the developed countries like UK, USA, China, Japan and Australia, there is yet to be found a good substitute for the secretary.

The present day secretaries are exposed to the use of information and communication technology (ICT) in their day-to-day training and working lives. According to Lucey (2017) ,information technology is the acquisition, processing, storage and dissemination of vocal, pictorial, textual and numerical information by a micro-electronics based combination of computing and telecommunication. The National Policy on Information Technology (2015) described information technology as the bedrock for national survival and development in a rapidly changing global environment. Additionally, ICT can be defined as recording and use of information and communication by electronic means. It is not just the use of computers in business. For example, machines can be used to transmit documents overseas and information technology has a variety of applications. The present-day secretarial students are trained in the various applications of information and communication technology. This is because information technology has greatly changed the business environment and the teaching and learning methods in office technology and management education programmes (OTME). Consequently, the Nigerian workers and students require a sound knowledge of ICTif they must do well in their business careers.

Entrepreneurship Education Skills

This is another skill component of business education programme. According to Telsang (2017), the word “entrepreneur” has its origin in the French Language “Entrepreneur” which means to undertake or organize.An entrepreneur is one who organizes, manages and assumes the risk of an enterprise. An entrepreneur visualizes a business opportunity, takes bold steps to establish the undertaking, co-ordinates various factorsof production and gives a start to the business (Telsang, 2017).According to Lemo (2017), entrepreneurial skills acquisition is the training that provides experience and skills that are suitable for entrepreneurial endeavours. Entrepreneurial skills acquisition therefore trains business education graduates with entrepreneurial knowledge, competence and skills needed for self-reliant (Pakpa 2016).

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In line with the above definitions, Osemeke (2012) defined entrepreneurship as the process of creating something new with value by devoting the necessary time and effort. Ndumanya (2012) however described entrepreneurial skill acquisition as a specialized training given to student or trainees to acquire skills, ideas and managerial abilities and capabilities for self-employment than being employed for pay. Entrepreneurs are the owners of businesses who contribute the capital and bear all the risks of the business. Entrepreneurship refers to a process of doing new things or doing things that are already being done in a newway (Telsang, 2017). It can also be described as a creative and innovative response to the environment. It constitutes the circle of activities starting from the conception of the investment opportunity to successfullytransforming the activity into viable business reality. These skills are inherent in the business education programme of schools, colleges and the universities. In fact, the Nigerian workers and students should learn to acquire the entrepreneurship skills so that they will help them in planting business ventures of their own choice at designated places in their community. This will go a long way to make them self-reliant and self- sufficient.

Conclusion

This paper has been able to establish that, Business Education programme offer its recipients relevant skills such as accounting, information communication and technology, communication, distributive education, entrepreneurship education and office technology and management skills. The students in turn can use these acquired skills to create employment opportunities for themselves such that, students can decide to open a business centre even while in school. This to a very large extent, can help to navigate or mitigate the challenging economic environment particularly in the pandemic era which consequently enhance personal empowerment and survival.

Recommendations

The following recommendations are made in the study.

1. Proper investment should be made towards building skills acquisition centres in all institutions offering business education programme so as to link theory to practice, thereby boosting their entrepreneurial skills.
2. Business Education students should acquire and cultivate keen interest in the skills and competencies inherent in the Business Education programmes.
3. Regulatory agencies for business education programme should ensure these skills are been taught such that, it will be practically demonstrated and impacted to the learner.
4. As Business Education equips the recipients with firm-specific, industry-specific and general skills and competencies, this paper therefore appeals to all Business Education students to make sure they acquire maximum and sufficient skills and competencies that will help them to live and contribute to sustainable development in Nigeria.

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STRESS MANAGEMENT STRATEGIES AND BUSINESS EDUCATORS' JOB PERFORMANCEIN COLLEGES OF EDUCATION IN EDO AND DELTA STATES.

[1]Henrietta A. OLUMESE [2]Cynthia Isoken EDOMWANDE
[1]Department of Vocational and Technical Education, Faculty of Education,University of Benin. Edo State, Nigeria.
08056365434 hettyolumese@gmail.com
[2]Training and Research Department National Institute for Educational Planning and Administration (NIEPA)
Ondo State, Nigeria.
08034691195 isokenegbe@*gmail.com*

Abstract
The study investigated stress management strategies and business educators' job performance in colleges of education in Edo and Delta State. Three research questions were raised to guide the study, while three null hypotheses were formulated and tested at 0.05 level of significance. The study adopted a correlationalsurvey research design. The population of the study comprised one hundred and eight (108) business educators in colleges of education in Edo and Delta states. The entire population was used as sample for the study, hence census. The instrument for the data collection for the study was a questionnaire titled "stress management strategies and business educators' job performance questionnaire", and it was validated by three experts. To determine the reliability of the instrument, Cronbach alpha statistics was used which yielded a coefficient of 0.86. The research instrument was administered to the respondents by the researcherwith the help of three research assistants and was retrieved immediately. The data collected were sorted, coded and analyzed using Pearson Product Moment Correlation Coefficient (PPMC). The study revealed that time management practices, support system and continuous professional development contribute immensely in enhancing the job performance of business educators in colleges of education in Edo and Delta states. Consequent upon these finding, it was recommended, among others that time management practicesbe adopted by business educators; and support mechanisms be established for business educator such as mentoring, coaching and wellness programmes, aimed at addressing stressors and promoting overall wellbeing should be established and strengthened by the institutions.

Keywords: **Stress Management Strategies, Time Management Practices, Support Networks,Continuous Professional Development, Business Educators**

Introduction

Business education is a branch of education which teaches the skills and operations of the business industry with the main objective of preparing competent, skilled and dynamic business educators, office administrators, managers, businessmen and women who will compete effectively in the world of work. The Nigerian Universities Commission (NUC) (2022) defined business education as a specialized profession designed to provide students with knowledge, skills and competence leading to employability and advancement in office occupations, pedagogical skills in teaching business subjects at different levels of the educational system as well as self-employment or being an employer of labour. As an aspect of vocational education and training, Business Education is designed to fill the gap between knowledge and practice by exposing students to General Education as well as specialized areas in Accounting, Entrepreneurship, Marketing and Office Management.

The objectives of Business Education as outlined by NUC (2022) are to: provide opportunity for practical job preparation or vocational studies in order to make students render effective and efficient services in office, distributive and service occupations; prepare students, based on interest and aptitudes needed to enter into a business occupation, advance and profit in it; provide opportunities for students to develop an understanding of business and economic system of the nation so as to enable them to participate actively as producers and consumers of goods and services; develop in students the basic awareness of the contribution

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which business and office employee makes to the nation's economy; develop and improve personal qualities and attitude of students as required in personal and employment situation; serve as a guide for individual student for suitable placement in business and office employment; enable students to have career consciousness and economic understanding of the free enterprise system; prepare student to assume the roleof building a future generation through teaching and knowledge impartation; and prepare students for leadership position in both public and private life. The fulfillment of these objectives largely depends on the role of business educators in their various institutions. Specifically, the realization of the objectives of business education hinges significantly upon the unwavering commitment and expertise of business educators, amidst challenging stressors, in colleges of education. Colleges of education are institutions charged with the responsibility of training, teaching, shaping and producing future teachers, leaders and professionals. These institutions house professionals who are specialized and pedagogically trained and qualified to fulfill the institution's goals; amongst which are business educators. Business educators are specifically saddled with the responsibility of effectivelyequipping students with the requisite knowledge and skills that will enable them to teach business subjects, fit into jobs, pursue careers in the business world and find satisfaction in the labour market. The increasing emphasis on quality education, research, productivity, and the need to adapt to rapidly evolving technological advancements has further intensified the workload and expectations placed on business educators in colleges of education. Due to these diverse job responsibilities, business educators face a myriadof stressors in their professional lives which may consequently affect their job performance.

Job performance is the aggregate of employee behaviors that have some expected value, either positive or negative, for the organization. IIe and Edokpolor (2021) see business educators' job performance as the execution of different job activities contributing to the achievement of the goals of the business education programme. It refers to the extent to which business educators carry out their functions as educators, researchers and community developers to meet the goals of the programme (Ukah & Atah, 2021). Research supports the existence of three broad categories of job performance which are task performance, contextual performance, and counterproductive behaviors (Oleksandr & Stephen, 2005). Task performance refers to the behavior of providing products or services directly related to work. This reflects the quality and quantityof the employee's specific job responsibilities. It includes those work results or behaviors that directly meet the organization's goals. Contextual performance, on the other hand, includes behaviors and efforts that are not directly related to their work, including organizational citizenship behavior and pro-social behavior. Counterproductive behavior, as the name suggests, refers to any type of behavior that can hinder an organization's productivity, including slacking, theft, cheating, sexual harassment, bullying, substance abuse, workplace aggression, or vandalism.

In this paper, the focus will be on task performance while addressing job performance. The jobs or tasks of business educators in colleges of education include curriculum development, curriculum planning, classroom instruction, assessment and evaluation, student guidance, research and scholarship, use of technology, professional development, collaboration with colleagues, mentoring, and educational innovation. Due to the demanding nature of their work, the challenges and pressures they face can be significant, potentially leading to high stress levels that can affect their job performance.

Stress is part of the normal fabric of human existence. Melissa (2023) sees stress as a physical, chemical or emotional factor that causes physical or mental disorders and can cause illness. Stress can be acute or chronicin nature (Akinboye, 2022). Lisa (2020) opined that stress is a common feeling we get when we are under pressure, overwhelmed or unable to cope. Odita (2023) submitted that stress is inevitable in a work environment. At a moderate level of stress in the workplace, it can encourage the mastery of new skills and behaviours, increase motivation, help quick response to challenges, motivate people to push their limits, seek growth opportunities, and develop new skills that can contribute to their career development. However, when stress becomes excessive, people feel that the demands or pressure from the work environment is beyond their ability to cope, thus leading to harmful consequences that can damage a person's physiological, emotional, and cognitive functions and ultimately cause health problems; and reduce efficiency. Stress

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experienced by business educators in colleges of education come from heavy workloads, time constraints, student engagement, pressure to research and publish, assessment and evaluation, time management, interpersonal conflicts, administrative pressure, and pressure to meet performance target set by the institutionand the ever-evolving demands of the educational landscape. Although stress cannot be completely eliminated from the work environment, but can be managed. This is why employees can manage stress through various strategies to increase productivity.

Stress management strategies refer to the use of methods and activities aimed at reducing and coping with stress. Odita (2023) states that stress management strategies are usually various techniques and psychotherapy aimed at managing people's stress to improve their daily functioning. Manjunatha and Renukamurthy cited in Tojue (2023) stated that stress management is highly dependent on individual organizations and the techniques used are not universally standardized.

Sev (2017) World Health Organization (W.H.O.) (2020); Timothy (2020), Brown (2021), Kendra (2022), and Strobel Education (2023) in their various studies suggested a wide range of strategies that have been proven effective for managing stress. They include time management practices, support networks, continuous professional development (CPD), relaxation techniques, meditation techniques, work-life balance initiatives, emotion-focused coping, and problem-focused strategy. For the purpose of this paper, focus will be on Time management practices, support networks and continuous professional development (CPD).

Time management practices involve planning, organizing structuring, prioritizing and allocation of time to different activities, tasks or projects. Time management helps to make the most productive use of the available time. With effective time management practices, educators can create realistic schedules, and allocate time for teaching, research, professional and personal commitments in order to reduce stress, increase efficiency and maintain productivity. Odita (2023) in his study on stress management strategies andemployee performance in manufacturing firms in Edo State found that time management was the most adopted stress management strategy among workers which positively influences their performance.

Support networks refer to a group of people or systems that one can turn to for encouragement, support, and advice. They provide support to the individual to achieve personal and professional goals (Chung & Yoo, 2021). The presence of support networks in educational institutions, which include organizational support, social support, professional and other support networks, can significantly influence educators' stress management and work performance. In their study, Leiter and Maslach (2009) found that a supportive organizational environment, which includes leadership support, workload management, and job resources, are critical to employee job performance. Other studies by Sev (2017) and the World Health Organization (2020) confirmed that strong social support networks, including colleagues, supervisors and mentors, positively influence educators' ability to manage stress and perform their roles well. Building strong professional networks, both within and outside the institution, offers opportunities to collaborate, share experiences and seek advice.

Continuous professional development (CPD) is the deliberate maintenance and development of knowledgeand skills necessary to perform in a professional setting. It may mean strengthening current skills, developingthose skills to a new level that will allow an employee's job to expand or prepare them for potential promotion (Amanda, Barnaby, & Annie, 2023). CPD plays an important role in providing educators with the skills to manage stress and improve job performance. Ingersoll and Strong (2011) emphasized the importance of professional development programmes for educators. Such interventions can help educators improve coping abilities, boost self-efficacy, and improve job performance. Chandra and Sudesh (2022), intheir study on the effect of workplace stress and management techniques on employees' efficiency in the Nigerian banking industry, found that stress programme interventions, training and development programmes have a significant influence on employees' efficiency. Hence the need for continuous professional development.

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The role of educators within the field of business education is pivotal, as they are tasked with shaping and nurturing the minds of future business professionals. Within colleges of education, it is expected that business educators be able to perform their duties effectively, fostering a positive and engaging learning environment for their students. They are expected to possess the necessary knowledge, skills, and expertiseto maximally impart relevant business concepts and nurture the intellectual growth of their students, producing capable and well-prepared graduates ready to excel in the corporate world.

Statement of the Problem

It appears that business educators are not achieving as much, as they are expected to achieve, but faced with significant stress and challenges in their roles, potentially leading to elevated stress levels. It is observed that business educators' job performance has been affected by stress. What is responsible for this is not immediately known. Could it be heavy workloads, time constraints, administrative pressures, student-related issues, and constant need for professional development? If this is allowed to continue, it could lead to diminished teaching quality, poor motivation, and potentially, burnout. This can also impair the overall educational experience of students, thereby compromising the quality of business education within the colleges of education

Purpose of the Study

The main purpose of this study was to investigate stress management strategies and business educators' job performance in colleges of education in Edo and Delta states. The study specifically determined:

1. The relationship between time management practices and business educators' job performance in colleges of education in Edo and Delta State.
2. The relationship between support networks and business educators' job performance in colleges of education in Edo and Delta States.
3. The relationship between continuous professional development and business educators' job performance in colleges of education in Edo and Delta States.

Research Questions

The following research questions guided the study:

1. What is the relationship between time management practices and business educators' job performance in colleges of education in Edo and Delta States?

2. What is the relationship between support networks and business educators' job performance in colleges of education in Edo and Delta States?

3. What is the relationship between continuous professional development and business educators' job performance in colleges of education in Edo and Delta States?

Hypotheses

The following null hypotheses were formulated and tested at 0.05 level of significance:

1. There is no significant relationship between time management practices and the job performance of business educators in colleges of education in Edo and Delta States.

2. There is no significant relationship between support networks and the job performance of business educators in colleges of education in Edo and Delta States.

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3. There is no significant relationship between continuous professional development and the job performance of business educators in colleges of education in Edo and Delta States.

Significance of the Study

The research findings will be of immense benefit to business educators, business education students, government, educational institutions and management of colleges of education.

Business educators will understand the specific factors that contribute to stress, and gain a deeper understanding of their own experiences which will help them identify areas of improvement and take proactive measures to manage stress effectively. With effective stress management strategies at their disposal, business educators are more likely to be engaged, motivated, emotionally and physically available for their students and productive in their teaching roles. This, in turn, can result in improved student outcomes and a more positive learning experience for students in colleges of education in Edo and Delta States. The government and educational institutions management may utilize the findings of this study in the development of supportive policies and guidelines; design of targeted professional development programmes and interventions that promote the mental health and well-being of educators and mitigate stressfactors in educational settings.

Methodology

The study adopted a correlational survey research design. It measures two or more relevant variables and assesses the relationship between or among the variables. It allows for the prediction of future events. The design is suitable for this study, in that it will help to establish the relationship between the independent variable (stress management strategies) and the dependent variable (job performance) that is, how time management practices, support networks and continuous professional development (CPD) are related to job performance of business educators in Edo and Delta States. The population of the study comprised all the one hundred and eight (108) business educators in the five Colleges of education in Edo and Delta states. The population distribution is shown in the Table below:

Table 1: The population distribution of business educators in colleges of education in Edo and Delta states

S/N	Schools	Population of business Educators
1	Federal College of Education Technical, Ekiadolor	9
2	College of Education, Igueben	2
3	Federal College of Education Technical, Asaba	72
4	College of Education, Mosogar	10
5	College of Education, Warri	15
Total		**108**

Source: Office of the Head of Department of the various tertiary institutions, **2023.**

The entire population of 108 business educators was used for the study because the population is small and manageable, hence census.

Instrument of the study

The instrument used for data collection is a structured questionnaire titled Stress Management Strategies andBusiness Educators' Job Performance Questionnaire (SMSBEJPQ). The instrument was segmented into twosections: A and B. Section A contains 23 item statements made up of 3 clusters that measured time management and practices, support networks, and continuous professional development, while Section B contains 9 item statements that measured job performance. Responses to each item were weighed on a modified four-point Likert rating scale; Very High Extent (VHE) 4 points, High Extent (HE) 3 points, LowExtent (LE) 2 points, Very Low Extent (VLE)1 point.

The instrument was validated by three experts. Their opinions, suggestions and corrections were used to produce the final instrument. In order to ensure the reliability of the instrument, a trial test was carried out on fifteen (15) business educators who were not part of the study population. The data generated were

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analyzed and Cronbach alpha statistics was used to determine the internal consistency of the instrument. The reliability coefficient of 0.86 was obtained.

Method of Data Collection

The instrument was administered and data collected by the researchers with the help of three research assistants, who were well-briefed by the researchers, on how to administer and retrieve the completed questionnaire. A total of 108 copies of the questionnaire were administered and retrieved from therespondents within a period of two weeks.

Method of Data Analysis

The data collected were analyzed using SPSS, Pearson Product Moment Correlation Coefficient (PPMC). PPMC was used to test the Hypothesis at 0.05 level of significance. The decision rule for the hypothesis was based on p-value; when the p-value was greater than 0.05 the hypothesis was accepted, and when the p-value was less than 0.05 the hypothesis was rejected.

Presentation of Results

The data analyses for testing the hypotheses were carried out using Pearson Product Moment Correlation Coefficient. The results of the hypotheses are presented in Tables 2-4.

Hypothesis 1

There is no significant relationship between time management practices and business educators' job performance in colleges of education.

Table 2: Pearson r showing the significant relationship between time management practices and business educator's job performance in colleges of education

Variables	N	$\bar{x}$	SD	r	p-value	Decision
Time Management Practices		2.73	0.60			
	108			0.81	0.00	Significant
Business Educators' Job Performance		2.79	0.52			

The analysis in Table 2 showed the significant relationship between time management practices and business educator's job performance in colleges of education in Edo and Delta State. The data analysis indicated that mean of 2.73 and 2.79, as well as standard deviation of 0.60 and 0.52 were obtained for time management practices and business educator' job performance respectively. The Table also showed that the correlation coefficient of 0.81 is positive and high. Since the p-value of .00 is less than 0.05, hence the null hypothesis was rejected. This therefore connotes that there is a significant relationship between time management practices and business educator's job performance in colleges of education in Edo and Delta State.

Hypothesis 2

There is no significant relationship between support networks and business educator's job performance in colleges of education in Edo and Delta States.

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Table 3: Pearson r showing the significant relationship between support system and business educator's job performance in colleges of education

Variables	N	$\bar{x}$	SD	r	p-value	Decision
Support Networks		2.42	0.54			
	108			0.65	0.00	Significant
Business Educators' Job Performance		2.79	0.52			

In response to hypothesis two, Table 2 showed the significant relationship between support networks and business educator's job performance in colleges of education in Edo and Delta States. The data analysis indicated that mean of 2.42 and 2.79, as well as standard deviation of 0.54 and 0.52 were obtained for support networks and business educator' job performance respectively. The Table also showed that the correlation coefficient of 0.65 is positive and high. Since the p-value of 0.00 is less than 0.05, hence the null hypothesis was rejected. To this end, there is a significant relationship between support networks and business educator's job performance in colleges of education in Edo and Delta States.

Hypothesis 3

There is no significant relationship between continuous professional development and business educator's job performance in colleges of education.

Table 4: Pearson r showing the significant relationship between continuous professionaldevelopment and business educator's job satisfaction in colleges of education

Variables	N	$\bar{x}$	SD	r	p-value	Decision
Continuous Professional Development		2.77	0.54			
	108			0.98	0.00	Significant
Business Educators' Job Performance		2.79	0.52			

The data analysis in Table 3 showed the significant relationship between continuous professional development of business educator's job performance in colleges of education in Edo and Delta State. The data analysis indicated that mean of 2.77and 2.79, as well as standard deviation of 0.54 and 0.52 were obtained for continuous professional development and business educator' job performance respectively. The Table also showed that the correlation coefficient of 0.98 is positive and high. Since the p-value of 0.00 is less than 0.05, hence the null hypothesis was rejected. Consequently, there is a significant relationship between continuous professional development and business educator's job performance in colleges of education.

Discussion of Findings

The study investigated stress management strategies and business educators' job performance in colleges of education in Edo and Delta states. The findings from hypothesis one revealed that there is a significant relationship between time management practices and the job performance of business educators in collegesof education in Edo and Delta States, with a correlation coefficient of 0.81 which is positive and high. Engaging in time management practices, reduces the likelihood of feeling overwhelmed by multiple responsibilities, leading to decreased stress levels. As stress decreases, business educators can focus more on delivering high-quality performance. The findings agree with Odita (2023) who submitted that time management was the most adopted stress management strategy among workers which influences their performance positively.

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The findings from hypothesis two depicted that there is a significant relationship between support networksand the job performance of business educators in colleges of education in Edo and Delta States, having a correlation coefficient of 0.65 which is positive and high. This shows that, support networks play a vital rolein enhancing business educators job performance by promoting emotional well-being, reducing burnout, offering diverse perspectives and providing motivation. The findings agree with Sev (2017) and World Health Organization (2020) affirmed that strong social support networks including: colleagues; supervisors; and mentors positively impact educators' ability to manage stress and perform well in their roles.

Hypothesis three findings indicated that there is a significant relationship between Continuous professional development and the job performance of business educators in colleges of education in Edo and Delta states, with a correlation coefficient is 0.98 which is positive and high. Business educator's engagement in continuous learning and skill development, keep them up-to-date with latest teaching methods, technologies and research findings that make them proactive in addressing job related challenges and feel more confident and competent in their roles and enhancing their job performance. The findings agree with Chandra and Sudesh (2022) who revealed that stress programme interventions such as training and development have a significant influence on employees' job efficiency.

Conclusion

Based on the findings, it was concluded that stress management strategies variables such as time management practices, support networks and continuous professional development are fundamental in promoting business educators job performance in colleges of education in Edo and Delta States. In other words, proper time management, access to support networks and continuous participation and involvement in professional development programmes will help business educators manage stress effectively while carrying out their job, thus enhancing their job performance and ultimately improving the quality of education imparted to students.

Recommendations

Based on the findings of the study, the following recommendations were made:

- Institution management should encourage educators to adopt time management practices: they should always prioritize tasks; plan and prepare for the day and week ahead and set specific, measurable, achievable, relevant and time bound (SMART) goals.
- Educational institutions should strengthen and establish more support mechanisms for educators such as mentoring, coaching and wellness programmes aimed at addressing stressors and promotingoverall wellbeing.
- Institution management should invest in professional development programmes for educators as this will empower them with the skills needed to navigate the demands of their roles while maintaining maximum performance. In the same vein, Business educators should invest time in their own professional development, join relevant professional associations and involve in cross-disciplinary connections.

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SKIN BEAUTY ENHANCEMENT THROUGH THE USE OF CONDIMENTS

[1] Patricia Enivie IFEBHOR [2]E. E. UKO-AVIOMOH
[1]Department of Vocational and Technical Education,
Faculty of Education,
Ambrose Alli University, Ekpoma, Edo State
[2] Department of Vocational and Technical Education,
Faculty of Education,
University of Benin, Benin City, Edo State
enivie67@gmail.com, 07034941714
08056650906, aviomoh_uko2002@yahoo.com

Abstract
Condiments are everyday essentials as we make our foods daily without a large group of individuals being without the knowledge of their impact on skin and health. The purpose of this study is to examinethe use of some selected condiments to create the awareness of the impact on skin to ensure skin beautyand health. Therefore, this study examined the nature of the skin and types of skin. In addition, the following condiments were examined. Honey, Turmeric, Lemon, Coconut oil and Egg, stating their impact on the skin in ensuring skin beauty. From the above the following recommendations were made proper and adequate attention should be given to the skin; noting the chemical and nutritional compositions of condiments, they are better in ensuring skincare than other chemical components; andindividuals should as a matter of necessity in order to ensure the longevity of body cells, should imbibethe habit of regular use of condiments.

Keywords: Condiments, Skincare, Skin beauty

Introduction

Human skin is the outer covering of the body and is the largest organ in the integumentary system. It also constitutes the first line of defense. Skin contains many specialized cells and structures. Skin care is a range of practices that support skin integrity, enhances its appearance and relieve skin condition. Such practices include nutrition, avoidance of excessive sun exposure and appropriate use of emollients. Skin care is a routine daily procedure in many settings due to conditions of dryness or moisty nature ofskin to prevent dermatitis and skin injuries. Condiments which are an important part of human history and nutrition had played an important role in the enhancement of skin beauty around the world.

Concept of Skin Beauty

The skin is the interface between humans and their environment. It acts as a means of adjusting to variations in environmental temperatures through elegant controls that regulate micro-circulation, and as an impermeable barrier that allows the body the intake of water without flooding its internal organs, all while prohibiting the intrusion of various xenobiotics (Qassem & Kyriacou, 2019). The outermost layer of the skin, known as the stratum corneum, consists of piled-up layers of flattened corneocytes separated by lipids in the intercellular space. Together, they serve as the primary skin barrier. The skin's functions and dysfunctions, which include many pathological conditions, have huge impact on both thephysical health and self-esteem of a person (Qassem & Kyriacou, 2019). The skin guards the underlyingmuscles, bones, ligaments and internal organs. There are two general types of skin, hairy and glabrous skin (Tabassum & Hamdani, 2014).

Due to its interfaces with the environment, skin plays a key role in protecting (the body) against pathogens (Lillywhite, 2016) and excessive water loss (Benedetti, 2021). Its other functions areinsulation, temperature regulation, sensation, storage and synthesis of vitamin D by action of ultraviolet(UV) and the protection of vitamin B folates, absorption of oxygen and drugs. Severely damaged skin will try to heal by forming scar tissue. This is often discolored and depigmented.

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Beauty is commonly described as a feature of objects that makes them pleasurable to perceive. It is contrasted with ugliness as its negative counterpart. Beauty is the quality of being pleasing, especially to look at, or someone or something that gives great pleasure, especially when looking at it (Ben-Nun, 2016). The experience of beauty involves an interpretation of some entity as being in balance and harmony with nature, which may lead to feelings of attraction and emotional well-being. One difficultyfor understanding beauty is due to the fact that it has both objective and subjective aspects (Martin, 2015). It is seen as a property of things but also depending on the emotional response of the observer. The characterization of a person as beautiful, whether on an individual basis or by community consensus, is often based on some combination of inner beauty, which includes psychological factors such as personality, intelligence, grace, politeness, charisma, integrity, congruence and elegance, and outer beauty (i.e. physical attractiveness) which includes physical attributes which are valued on an aestheticbasis (Ben-Nun, 2016). Beauty can be external or internal or both. External or physical beauty is immediately visible. Internal or inner beauty is not always immediately visible. Ideally both types of beauty are connected and spring from one another. The opposite situation, in which only one exists whilethe other is suppressed at a time (Ben-Nun, 2016).

Endless quests for external beauty are part of medical practice today more than ever before. Skin is the paradigm of this. Skin beauty therefore is a feature of the external outlook of human body that makes them pleasurable to perceive and behold. Skin beauty is the quality of being pleasing, especially to lookat, that gives great pleasure, especially when looking at it the external human body.

Structure and Functions of the Skin

The skin is the largest organ of the body, with a surface area of 1.5-2m^2 and an average weight of 2.7kgin an adult (Voegeli, 2012). Structurally, the skin is made up of three layers – the epidermis, dermis and hypodermis.

a. **Epidermis**: The is the uppermost and thinnest of the layers, and it is typically between 50µm and 100µm thick, and has the important role of providing a barrier against the external environment, as well as preventing excessive loss of water. Epidermis layers has a lipid matrix composed of free fatty acids, cholesterol and ceramides (Dacis (2022).The epidermis is composed of keratinocytes organized in layers, depending on the anatomical position. These layers are the stratum basale, stratum spinosum, stratum granulosum, stratum lucidum and stratum corneum (Voegeli**,** 2012). Justlike the keratinocytes, the epidermis contains other cells, notably melanocytes, which provide pigmentation of skin and hair and protection from ultraviolet radiation; and Langerhans cells, whichare a type of antigen-presenting cell with a role in immunosurveillance (Voegeli**,** 2012). Keratinocytes are formed in the lower layer of the epidermis (Stratum Basale) and gradually migrateto its upper layers. They change in appearance during migration, so that by the time they reach the stratum corneum they are flat, dead, keratinised cells with no nucleus, and are termed corneocytes (Lee, 2020). In healthy skin, a finely controlled balance exists between the production and loss of cells in the epidermis so that it is not noticeable. The integrity of the stratum corneum is also promoted by substances in the corneocytes known as natural moisturizing factor (a complex mixtureof free amino acids, amino acid derivatives and salts, which attract and hold water). This increase inintracellular water helps the corneocytes to retain their turgidity and shape, thus maintaining a coherent barrier. This also helps to maintain the flexibility and elasticity of skin by absorbing waterfrom the atmosphere, which enables the outermost layers of the skin to remain hydrated despite thedrying action of the environment (Kyung-Min Lim, 2021).

b. **Dermis**: This is the second layer of the skin. The dermis forms the main bulk of the skin; and like the epidermis, it varies in thickness across the body from 2-3mm. Yolanda and Pharm (2023) asserted that the dermis is responsible for many of the major functions of the skin, such as perception of the environment, thermo-regulation and immunological defense, as well as enabling the storage of water and providing a cushion against mechanical injury. Structurally, it is composed of a matrix of polysaccharides and proteins, which form a ground substance of macromolecules possessing a

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high capacity for storing water. Within this matrix are two main proteins, collagen and elastin (Brown and Krishnamurthy, 2021). Collagen is the most abundant and forms a three-dimensional network of fibers filled with ground substance that is responsible for the high degree of tensile strength of the dermis. The second type of protein, elastin, also forms an extensive network and provides the skin with its elastic properties. Unlike the epidermis, the dermis contains few cells, most of which are fibroblasts responsible for the production of the constituents of ground substance(Brown and Krishnamurthy, 2021). The other cells found in the dermis highlight the skin'simportant role in defense. Mast cells, macrophages and Langerhans cells promote immunity and protect against infection.

c. **Hypodermis**: Beneath the dermis is the third main layer of the skin – the hypodermis or subcutaneous tissue. It consists mainly of adipose tissue and fibrous connective tissue. The main functions of this layer are the storage of lipids, to provide thermal insulation, and the provision of a protective cushion against mechanical trauma. Scattered throughout the skin are cutaneous appendages (Brandi, 2023). These consist of the eccrine and apocrine glands, sebaceous glands and hair follicles. Eccrine glands are found in most areas of the skin, but are particularly numerous in the palmar and plantar areas of the hands and feet. They are tubular glands, consisting of a basal coiland a duct that leads through the dermis to the epidermis. Their main function is the production of sweat. Apocrine glands are also tubular glands, confined mainly to the axilla and anogenital regions.They are inactive until puberty, when they assume a role in scent production. Sebaceous glands are found as outgrowths of the developing hair follicle and produce sebum. Hair follicles are located inthe dermis and hair shafts project out beyond the surface of the epidermis (Chayanika, 2021).

Although the principal function is to protect the body from the external environment by acting as a barrier, the skin is a complex and dynamic organ with a range of other functions. These include mediation of sensation, thermo-regulation, immune-surveillance, synthesis of vitamin D, excretion of water and salts, and storage of reserves such as water and lipids.

Table I

S/N	Types of Skin	Skin Characteristics
1	Normal skin	The pore size is small. The moisture content is good The skin texture is even. The color is healthy skin has no pigmentation or blemishes. The skin feels warm to touch
2	Dry skin	The pore size is small or tight. The moisture content is poor. The skin texture is coarse. Premature ageing is common; wrinkles can be seen around eyes, nose, mouth and neck. Skin can be sensitive with patches of flaking skin. Freckles and uneven pigmentation can be seen in this skin Type
3	Greasy/oily skin	The pores are enlarged. The moisture content is high. The skin is coarse and thick. Certain disorders like pimple, acne, comedones, milia etc. may appear on oily skin type. The skin is generally having uneven pigmentation.

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4	Combination skin	The pores on T-zone are enlarged while on cheeks they are small to medium. The moisture content is high in the oily area and poor in dry area. There is uneven pigmentation. There may be blemishes on T-zone and broken capillaries on dry area.

Concept of Condiments

The term condiment comes from two Latin words “condimentum”, meaning "spice, seasoning, sauce" and “condire”, meaning "preserve, pickle, season". The term originally described pickled or preserved foods, but its meaning has changed over time to include other small packaged goods such as coffee and tea (*Andrew, 2012)*. The exact definition of the term condiment varies. Some of the definitions from researchers encompasses spices and herbs, including salt and pepper, using the term interchangeably with seasoning. Others restrict the definition to include only "prepared food compound(s), containing one or more spices", which are added to food after the cooking process, such as mustard, ketchup or mint sauce. Cheese may also be considered a condiment where it is used as an ingredient in another food, such as Mozzarella on pizza or cheese in a cheeseburger.

A condiment is a sauce, or preparation that is added to food, typically during cooking, to impart a specific flavor, to enhance the flavor, or to complement the dish. According to the National Institute of Industrial Research Board of Consultants and Engineers (2021), the term condiments applies to such natural plantor vegetable products and mixtures thereof, used in whole or ground form, mainly for imparting flavor, aroma and piquancy to foods and also for seasoning of foods beverages like soups. Condiment is definedas any spice or sauce, such as salt, pepper, or mustard, something used to flavor food, such as mustard, ketchup, salt, or spices and a substance, such as relish, vinegar, or spice, used to flavor or complement (García, 2016). From the above definition, it can be seen that the concept of condiments is wider, sinceit includes spices.

Many diverse condiments exist in various countries, regions and cultures. The list of condiments is innumerable due to the fact that they differ from one country to the other. These include among others Honey, garlic, ginger, Turmeric, bitter leaf, rice flavor, scent leaf, lemon bay leaf, Olive oil, nutmeg, coconut oil, grounded coffee and sugar, avocado, yoghurt, cucumber and oatmeal. however, for the purpose of this study, the use of the following kitchen condiments in enhancing skin beauty shall be discussed: honey, turmeric, coconut oil, lemon and egg.

Kitchen Condiments for Enhancing Skin Beauty

Over the years, numerous studies have contributed to understanding the skin, and provided many tools for diagnostic and treatment purposes. An absolute interdisciplinary approach has been taken to envelopmany disciplines such as analytical sciences, instrumentation, and traditional dermatological and cosmetic sciences (Qassem&Kyriacou, 2019), with the latter playing a major role in assessing the ingredients of personal care products and evaluating their functional efficacy.

There are so many types of kitchen condiments for skin care, depending on the country and continent. But for the purpose of this study, the use of the following kitchen condiments in enhancing skin beautyshall be discussed. These include Honey, Turmeric, Lemon, Coconut oil and Egg.

1. **Honey**. Honey is a thick, sweet fluid produced by bees from plant nectars. Honey is actually a complex mixture of sugar which is in an immediately digestible form (Hadi, Omar & Awadh, 2016). Honey is a natural source of certain nutrients and proteins that can help treat dry skin, eczema, and psoriasis. It may also help prevent and treat wrinkles while restoring the upper layer of the skin, also called the epidermis.

   Chemical Components: It is composed of such chemical elements as glucose, fructose, glucose oxidase, vitamins and phenolic compounds. In its constituents, it is composed of Moisture

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(17.2%), Fructose (38.19%), Glucose (31.28%), Sucrose (1.31%), Disaccharides, calculated as maltose (7.31%), Higher sugars (1.50%), Free acid as gluconic (0.43%), Lactone as gluconolactone (0.14%), Total acid as gluconic (0.57%), Ash (0.17%), and Nitrogen (0.04%) (Hadi et al. 2016). Carbohydrate is the predominant solid (approximately 95% of total solid content) in honey. The main carbohydrates present in honey are glucose and fructose. In additionto glucose and fructose several other sugars have been identified including isomaltose, nigerose, turanose, maltulose; kojibiose; alpha beta-trehalose, gentiobiose, laminaribiose, maltotriose, 1-kestose, panose, isomaltosyl glucose, erlose, isomaltosyltriose, theanderose, centose, isopanose, isomaltosyltetraose and isomaltosylpentaose. Furthermore, there are wide variety of vitamins present in honey such as vitamin B6, thiamin, cyanocobalamin, folic acid, vitamin C, riboflavin, pantothenic acid, ascorbic acid and many more (Ciulu, Solinas, Floris, Panzanelli, Pilo, Piu, Spano &Sanna, 2011). Not only that, there are also several essential mineral contents namely calcium, copper, iron, magnesium, manganese, phosphorus, potassium, sodium and zinc as wellas several different amino acids (Mullen & Thomson 2015) such as proline, phenyalanine and aspartic acid. Honey also contains some components which have antioxidant properties namely chrysin, pinobanksin, vitamin C, catalase and pinocembrin (Mullen & Thomson, 2015). There is a linear relationship between the level of phenolic acid and antioxidant activity. P-coumaric acid was found to be the most dominant phenolic acid in honey thus having the highest antioxidant activity (Socha, Juszczak, Pietrzyk, Galkowska, Fortuna & Witczuk, 2011). The function of antioxidant properties is to slow down the oxidative damage of the cells and tissue in our body.

The skin requires a great amount of care to prevent diseases such as infections, dermatitis or even dehydration. Some chemicals in honey might kill certain bacteria and fungus. Honey have the following uses in skin care:

a. Honey can be used as a moisturizer for the skin. When applied to the skin, honey might serve asa barrier to moisture and keep skin from sticking to wound dressings (Fletcher, 2020). The abilityof honey to act as a moisturizer comes from its natural humectant properties (Eady, Layton & Cove, 2013). Both fructose and glucose can form hydrogen bridges with water, retaining the moisture in the horny skin layer thus providing a hydrating effect to the skin (Burlando & Cornara, 2013). The hydrating effect of honey not only comes from the high content of fructoseand glucose, but it may also be derived from the various amino acids (predominantly proline, but also arginine, alanine, glutamic acid, aspartic acid, lysine, glycine and leucine) and organic acid(largely gluconic acid and, to a certain extent, lactic, citric, succinic, formic, malic, acetic, maleic and oxalic acids) that can augment the effect of glucose and fructose in retaining moisture in thehorny skin layer (Burlando & Cornara, 2013).
b. Honey can be used to treat wounds due to the antibacterial activity conferred by the hydrogen peroxide produced by glucose oxidase in honey. Anti-inflammatory, anti-oxidant, deodorizing and tissue regeneration activities in honey also help in the wound healing process (Hadi et al, 2016).
c. For a skin condition that causes redness on the face (rosacea), applying a topical honey product to the skin might improve symptoms of rosacea (Therapeutic Research Faculty, 2020).
d. Honey treats acne on the skin due to its antibacterial activity, anti-inflammatory action and tissue repair.

2. **Turmeric**: Turmeric is a multipurpose crop valued for its coloring pigment, spicy flavor and medicinal properties. Turmeric is used in cooking for its aroma and color. The flavor, color and preservative properties have increased its global appeal. Turmeric may be the first known cosmeticas it has been traditionally smeared on the skin by women.

Chemical Components: Turmeric has the following chemical composition: Carbohydrates, fats, proteins, fibre, minerals, volatile and non-volatile oils (Mixture of sesquiterpene ketones and alcohols, dsabinene, αphellandrene, cineole, borneol, and zingiberene), moisture, and

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curcuminoids (Curcumin (curcumin I), demethoxycurcumin - (curcumin II), bisdemethoxycurcumin (curcumin III), and cyclocurcumin (curcumin IV) (Gopinath & Karthikeyan, 2017)

a. Turmeric paste is applied on the skin for various skin diseases, burns, bites and eye infections.
b. Turmeric have been used for the treatment of small pox and chicken pox (Trujillo, 2013; Bandyopadhyay, 2014).
c. It is believed to reduce facial hair growth, reduce acne and improve complexion
d. It is being evaluated as an environmentally friendly hair coloring agent (Boga et al, 2013). The yellow color has been utilized in skin care products.
e. Curcumin gel has been reported to improve the appearance of photo damaged skin conditions such as pigmentary changes, solar elastoses, actinic poikiloderma, solar lentigines and actinic keratosis when applied for prolonged period such as six months. Curcumin may be a promising antifungal against Candida.
f. It may also have potential as an antimicrobial, ant parasitic and antiviral agent.
g. The essential oils may have potential in the perfume, cosmetic and soap industry.

3. **Lemon (*citrus Limon*): This is o**ne of the favorite citrus fruits. Lemon, is highly underestimated and its bleaching effect and fragrance is great for a mood lightener. The main raw material of lemon is the fruit, particularly the essential oil and juice obtained from it. The lemon fruit stands out as having well-known nutritional properties, but it is worth remarking that its valuable biological activities are underestimated in modern phyto-therapy and cosmetology (Goetz, 2014).

Chemical Components: The main compounds of essential oil are monoterpenoids, especially citral-pinene, D-limonene, flavonoids (flavonones-eriodictyol, hesperidin, hesperetin, naringin; flavones-apigenin, diosmin; flavonols-quercetin; limocitrin), phenolic acids, coumarins, carboxylic acids, aminoacids, eriocitrin, carboxylic acids, carbohydrates, as well as amino acids, and vitamins (Czech, Zarycka, Yanovych, Zasadna, Grzegorczyk & Klys, 2019)

a. Lemons have a natural bleaching effect on the skin. A teaspoon of sugar and lemon halve rubbed on the knees, elbows and knuckles regularly, can lighten the darkest part of skins. Lemon is a wonderful natural hair conditioner.
b. In a glass of strained tea water, add the juice of 1 lemon and use it as an after shampoo rinse toadd bounce and shine to dull, limp looking hair.
c. Many women suffer from yellowish nail. Rub half a lemon on the nails daily for a week and the pinkish natural color and shine of the skin return (Trikha, 2018).
d. Lemon peel can be grounded and mixed with whole-wheat flour, almond powder to make an effective face and body scrub.
e. Lemon mixed with egg albumin, honey and cucumber, and applied to the skin every day at night can smooth the facial skin and treat acne (Fongnzossie et al, 2017).
f. Lemon mixed with olive oil is used as a natural remedy for the treatment of hair and scalp disorders (Zaid, Hor, Christo, Groom, Health, Mackay & Mueller, 2017).
g. Lemon essential oil shows antibiotic and flavoring properties, and for this reason it is used in formulations of shampoos, toothpaste, disinfectants, topical ointments and other cosmetics (González-Molina, Dominguez- perles, Moreno &Garcia-Viguera, 2010).
h. It is used in anti-aging products, to reduce shallow wrinkles, and as a synergistic antioxidant in combination with vitamin E (Xavier et al, 2016). Scientific studies have shown a significant antioxidant effect of lemon fruit extracts, which is the reason they are recommended for use inanti-ageing cosmetics (Parhiz et al, 2015; Xavier et al, 2016).
i. The use of different carriers for lemon extracts (e.g., hyalurosomes, glycerosomes) in cosmetics production technology contributes to an even greater inhibition of oxidative stress in skin- building structures, including keratinocytes and fibroblasts (Manconi et al, 2016).
j. In addition, vitamin C from lemon is used as an ingredient in specialized dermocosmetics. Its external use increases collagen production, which makes the skin smoother and more tense.

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4. **Coconut Oil:**Coconut oil obtained from the coconut tree (Cocos nucifera), also finds extensive use in tropical and subtropical regions of the world for food and industrial purposes. The coconut oil traditionally produced in West Africa is made by crushing and pressing copra to extract the oils. Coconut (Cocos nucifera) is a plantation plant in the form of a straight stem tree from Palmae's family (Atmanto, 2019).

   Chemical Compositions: Coconut oil is composed of the fatty acids, caprylic acid C -8:0 (8%), capric acid, C-10:0,(7%), lauric acid C- 12:0, (49%), myristic acid C-14:0(8%), palmitic acid C-16:0 (8%), stearic acid C-18:0 (2%), oleic acid C-18:1 (6%) and 2% of C-18:2 linoleic acid (Boateng et al, 2016).
   The benefit of coconut oil on the skin is comparable to that of mineral oil. Fortunately, unlike mineral oil, there is no chance of having any adverse side effects on the skin from the applicationof coconut oil. Coconut oil has been shown to have the potential to protect against not only heart disease but a wide variety of chronic health problems including diabetes and cancer as well as a means to prevent and even treat infectious diseases, however, knowledge about coconut oil has been kept buried in medical journals because of a general prejudice against saturated fats (Fife, 2006).

   a. Coconut oil is an excellent massage oil for the skin as well. It acts as an effective moisturizer onall types of skin, including dry skin. Coconut oil is safe solution for preventing dryness and flaking of skin.
   b. It also delays the appearance of wrinkles and sagging of skin which normally accompany aging. Coconut oil also helps in preventing premature aging and degenerative disease due to its well-known antioxidant properties.
   c. Coconut oil also helps in treating various skin problems including psoriasis, dermatitis, eczema and other skin infection. For that exact reason, coconut oil forms the base ingredients of various body care products like soaps, lotions and creams that are used for skin care.

5. **Egg:** Egg (*Gallus Gallus*) is one of the food items, which fulfils the daily dietary requirement of the human body in balance (Kusum et al, 2018). It is an everyday food item.

   Chemical Components: Egg consists of three main parts: the shell, the egg white and the egg yolk. The shell consists of calcite crystals embedded in a matrix of proteins and polysaccharide complex. Inside the shell the viscous colorless liquid called the egg white accounts for about 58 percent of the total egg weight. Egg is a very good source of protein, fatty acids (Linoleic, oleic acid), Vitamin A, B6, B12, Folate, Amino acid, Iron, calcium, carbohydrate, Phosphorus and Selenium (Stadelman& Newby 2017). The percentage composition of egg white and egg yolk (**Water 88.0%, 48.0%; protein 11.0%, 17.5%; fat 0.2%, 32.5%; mineral 0.8%, 2.0%)** (Yadunandan& Joseph, 2014).
   The use of eggs in skin and hair is very wide. They include:

   a. Fine lines setting around the eyes can be nourished with the white of an egg.
   b. Egg naturally tightens the skin. Mixed with powdered *masoor dal* and milk and applied to the face and scrubbed off, it leaves the skin tightened and toned.
   c. This recipe also helps reduce blemishes.
   d. Eggs are a wonderful hair conditioner. Whip 2 eggs with a teaspoon each of amla, shikakai and reetha powder and apply it to your scalp like a hair pack. Henna mixed with egg also conditions your hair and adds body bounce and shine (Trikha, 2018).
   e. Help soothe areas of skin that were afflicted, egg white mixed with Armenic bole could help restore the fibers (Kasum, Verma, Renu, Jain, & Deepak, 2018).
   f. Prevent skin hyperpigmentation.

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Conclusion

Skin is the largest organ and it is the outermost layer of the human body. For that reason, it requires a great amount of care to prevent diseases such as infections, dermatitis or even dehydration. In addition to prevention of diseases, there is need for its beautification. Beauty is commonly described as a feature of objects that makes them pleasurable to perceive. It is contrasted with ugliness as its negative counterpart. Beauty is the quality of being pleasing, especially to look at, or someone or something that gives great pleasure, especially when looking at it. The experience of beauty involves an interpretation of some entity as being in balance and harmony with nature, which may lead to feelings of attraction and emotional well-being. Many research studies have found that honey, turmeric, lemon, coconut oil and egg, has abundance of uses in protecting and healing the skin as well as the beautification of the skin. This study concluded that the above kitchen condiments can effectively be used in skin beautification.

The skin is a complex organ with multiple functions. The outermost layer of the skin, known as the stratum corneum (SC), consists of piled-up layers of flattened corneocytes separated by lipids in the intercellular space. Together, they serve as the primary skin barrier. The skin's functions and dysfunctions, which include many pathological conditions, have huge impact on both the physical health and self-esteem of a person. Skin care to ensure its beauty is paramount due to its health benefit as well as the self-image of the individual it presents. to achieve skin beauty that may not attract other health hazards, the natural approach is better, hence this study. This is why this paper examined some selected kitchen condiments, their chemical components and created the awareness of their effects in ensuring skin beauty.

Recommendations

Base on this review, the following recommendations are made:

1. As long as the skin is an essential part of the human body, proper and adequate attention should be given to it.
2. Noting the chemical and nutritional compositions of condiments, they are better in ensuring skin care than other chemical components.
3. Individuals should as a matter of necessity in order to ensure longevity of body cells, should imbibe the habit of regular use of kitchen condiments.
4. Honey, turmeric, lemon, coconut oil and egg should be regularly used for skin beautification.

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COOPERATIVE VOCATIONAL EDUCATION MODEL FOR EHANCING EMPLOYABILITY SKILLS OF BUSINESS EDUCATION GRADUATES IN EDO AND OGUN STATES

[1]Bamidele Esther ADEYANJU [2]Victor Imuetinyan IGBINEDION
[1]Department of Vocational and Technical Education University of Benin, Benin City, Edo State, Nigeria,
adeyanju.oluwabamidele@gmail.com (08039248328)
ORCID: https://orcid.org/0009-0009-1503-6755

[2]Department of Vocational and Technical Education University of Benin, Benin City, Edo State, Nigeria,
victor.igbinedion@uniben.edu (08056014291)
ORCID: https://orcid.org/0009-0004-1506-9200

Abstract
The study examined cooperative vocational education as a model for enhancing employability skills of business education graduates in Edo and Ogun States. Five research questions were answered and three hypotheses were tested. The study adopted a descriptive survey research design. The population of the study which comprised 119 business education graduates from the University of Benin, Benin City, Edo State andTai Solarin University of Education, Ijagun, Ogun State was completely used because it was manageable. A structured questionnaire of 35 items was used to collect the data. The instrument was validated and the reliability coefficient of .91 was obtained using Cronbach's alpha formula. The data collected were analyzed using mean ($\bar{x}$) and standard deviation for the research questions and t-test to test the hypothesis. The findings of the study revealed that cooperative vocational education model will enhance the acquisition of core business skills; working with tools and technology skills; dependability and reliability skills; customer focus skills; and decision management skills to a high extent among business education graduates. It was therefore recommended that cooperative vocational education model should be adopted or adapted in business education programme in Nigeria.

Keywords: employability, skills, cooperative vocational education model

Introduction

With the persistent increase in the rate of unemployment in Nigeria, especially among the youthful population, it is imperative for the government to look for means of keeping its youths employed. It is equally essential for graduates to possess employability skills for them to be employable and even become employers of labour (Mainga, Daniel, & Alamil, 2022). The level of development of a nation to an extent depends on the production of a knowledgeable, dynamic, and skilled workforce. The Federal Government of Nigeria (2013) in the National Policy on Education (NPE) emphasized education to be an instrument per excellence for effective national development. As part of the strategy of education that will enhance the acquisition of the skills needed for both national and individual development, vocational and technical education was introduced in Nigeria, of which business education is a subset. According to National University Commission (2022), business education at the university level is defined as a specialised profession that equips students with the knowledge, abilities, and competence necessary to advance in office occupations and become employable. It also includes pedagogical skills for teaching business subjects at various educational levels and the ability to work for oneself or as an employer of labour.

The FGN (2013) indicates that the goals of business education are embedded in vocational and technical education and they are to:

- provide trained manpower in the applied sciences, technology, and business particularly at craft, advanced craft and technical levels;

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- provide the technical knowledge and vocational skills necessary for agriculture, commercial, and economic development;
- give training and impart the necessary skills to individual who shall be self-reliant economically.

The major concern is that these goals have not been fully achieved. There have been complaints by the employers of labour that Nigerian graduates including business education graduates do not possess the required employability skills needed to fit into the various jobs available (Aluko, 2014; Hossain, Manzurul,Mohamme, & Amirus, 2020). There seems to be employability skills gap among business education graduates in Nigeria. This may be traceable to many factors which have led to many other challenges. In a nutshell, there is a disparity between industry needs and vocational institutions' provisions, making the graduates to be perceived as "half-baked" (Pitan & Adedeji, 2012). Apart from funding, institutions and industries need cooperation in several areas. Some of these areas include planning and development of curricula for business education, policy making, development of programme contents, development of specific employability skills expected of the students upon graduation, and supervision of students on work experience programme (Behle, 2020). A planned cooperation between industries and vocational institutions is very important for the smooth running of business education programme in Nigeria and the employabilityof its graduates. This could be achieved through cooperative vocational education.

Cooperative education is a method of instruction that enables students to combine academic classroom instruction (school-based learning component) with occupational instruction through learning on-the-job (work-based learning component) in a career/academic area of choice. A cooperative education plan is to formally integrate students' academic study with productive work experience in cooperating employer organizations (Osinen & Nwoji, 2005). Cooperative education is a partnership among students, educational institutions and employers, with specified responsibilities for each party. The major characteristics of the programme include:

- formal recognition by the school as an educational strategy integrating classroom learning and progressive work experiences, with a constructive academic relationship between teaching faculty and cooperative education faculty or administrators;
- structure for multiple work experiences in formalized sequence with study leading to degree completion of an academic program; and
- work experiences, which include both an appropriate learning environment and productive work; and so on (Pennsylvania Department of Education, 2014, p. 4).

To this end, cooperative education is a method of instruction which can be applied to a variety of educational purposes. Goma (2000) posited that when this cooperative method of instruction is applied to vocational education programme, it is referred to as "Cooperative Vocational Education". Cooperative vocational education programme provides a world of work environment for students to apply and augment classroom skills and knowledge acquired. This can bridge the employability skills gap of business education graduatesas people generally often find it uneasy to relate abstract teachings to real-life situations. Therefore, the teaching and learning process is better when students see theory in operation and also have opportunity to practice what they have learned in the classroom almost immediately with relevant and modern tools and equipment. This also gives the industries opportunity to introduce to the students the necessary skills expected of them upon graduation to make them employable. To enhance employability skills, cooperative vocational education model is needed.

Cooperative vocational education model has an edge over other forms of partnership between educational institutions and industries that already exist in Nigeria. Examples are students Industrial Work Experience Scheme (SIWES), Industrial Training (IT), among others. SIWES and IT for instance expose students to some work experience but this is usually after the whole programme of study in the classroom for the session(s) is over while cooperative vocational education programme exposes students to the world of workand classroom experience concurrently on the chosen field. The students get exposed to the employability skills by observation and application of concrete experience while taking part in the activities of the industry.

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Moreover, SIWES and IT only have duration of few months (usually four months for Polytechnics and Colleges of Education students and six months for University students) for the work experience which is done at a go compared to cooperative vocational education model that has equal time for classroom instruction and workplace instruction.

However, cooperative education model involves students alternating same time in the traditional academic semesters with semesters spent working full-time in their chosen field (Grubb & Villeneuve 1995) and the students complete between three and five semesters prior to graduation which is not so in SIWES and IT programmes. Though the concept of cooperative vocational education model has not received adequate emphasis in the Nigerian educational system, it can be an alternative to the current Students Industrial Work Experience Scheme (SIWES) as SIWES is confronted with some problems. For instance, many students donot take the scheme serious and only a few employers are interested in employing the students not even as 'learning workers' but as 'producing workers'. As a result, little attention is paid to the training value of the scheme to the students (Orikpe, 2013). This has made business education graduates not to still possess the employability skills needed.

Employability Skills

Jackson (2013), National Network of Business and Industry Associations - NNBIA, (2014), and Bassah and Noor (2023) identified some employability skills that are relevant to businesses. These include core business skills, working with tools and technology skills, dependability and reliability skills, customer focus skills, and decision management skills. Core business skills entail basic knowledge in numeracy, technology, and communication. *Numeracy* involves adding, subtracting, multiplying, dividing, and translating practical problems into useful numerical expressions. *Technology* involves using information technology and related applications to convey and retrieve information; navigation and file management; understanding common computer terminologies; internet and e-mail; navigating the internet to find information; and sending and retrieving electronic mail (Ile & Ementa, 2016). Communication entails the ability to listen and relate to other people; and to act upon key information/instructions. It basically involves reading and writing. *Reading*involves the ability to read and comprehend work-related instructions, policies, and governmental regulations. *Writing* involves the ability to prepare written materials using correct wording and communicate thoughts and other written information in a logical, organized, and coherent manner (NNBIA, 2014). Core business skills are needed for employability in this era where there is high level of competition for the few jobs available.

Working with tools and technology skills entail selecting, using and maintaining tools and technology to facilitate work activity; identifying, selecting and using appropriate tools and technological solutions to frequently encountered problems; and carefully considering which tools or technological solutions are appropriate for a given job, and consistently choosing the best tool or technological solution for the problemat hand (NNBIA, 2014). Information and communication technology is embedded in working with tools and technology skills. ICT has to do with the use of modern technology for communication and sending/receiving messages. Ile and Ementa (2016) pointed out that the acquisition of ICT skills involves the ability of an individual to competently and proficiently manipulate technological devices for effective information gathering, organization, processing, and retrieval. When business education graduates possess these skills, they stand out and are sought out in the crowd. It is not enough to learn them in theory without working with them in real job experience.

Dependability and reliability skills form part of the personal skills that an employable person should possess. These skills have to do with displaying responsible behaviours at work; behaving consistently, predictably and reliably; fulfilling obligations, completing assignments and meeting deadlines; following written and verbal directions; complying with organization's rules, policies and procedures; and demonstrating regular and punctual attendance. Personal character is a skill that should be developed on its own and this cannot betaught or learnt in the classroom. It also involves having honesty, integrity and personal ethics (Bloom & Kitagawa, 1999). In cooperative vocational education model, as students engage in productive work

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experiences, mentoring is directly or indirectly taking place. Students have tendency to learn good characters from disciplined people they meet on the job and emulate their way of going about their jobs. Application of cooperative vocational education model has the tendency of enhancing these skills in graduates of business education programme.

Customers focus skills entails the ability to develop good customer orientation for effective operation; abilityto persuade customers and stakeholder as expected; ability to organize customer meetings to improve their buying behaviour; establishment of linkages with other businesses and stakeholders for mutual learning and collaborative undertaking; having genuine regards for customers; recognizing the behavioural style of customers; understanding the basic things which motivate customers. Decision management skills also involves creativity, information management and decision making; identifying and prioritizing the key issues involved to facilitate the decision making process; anticipating the consequences of decisions; involving people appropriately in decisions that may impact them; and quickly responding with a back-up plan if a decision goes amiss (Jackson, 2013; NNBIA, 2014; Bassah & Noor, 2023). It involves the ability to understand a problem by breaking it down into smaller parts, and identifying the key issues, implications and identifying solutions. A business is built on the problems (needs and wants) of customers and without them, there will be no business at all (Ezenwafor & Olaniyi, 2017). Cooperative vocational education can bea link to acquiring these skills. This is well illustrated and supported by Kolb's experiential learning theory.

Kolb's experiential learning theory is one of the most familiar learning theories fit for cooperative education. David Kolb (1984), reviewed in 2014 is a holistic perspective that combines experience, perception, cognition, and behaviour. The theory is called 'experiential learning theory' to emphasize the central role that experience plays in the learning process. The components of the learning cycle and the learning styles propounded in this theory - Concrete Experience (CE), Abstract Conceptualization (AC), Reflective Observation (RO) and Active Experimentation (AE) explain it all. According to Kolb (1984), Concrete experience is what is needed as an outcome of any learning process and not abstract experience. In cooperative vocational education model, abstract conceptualization happens in the classroom, that is, the concepts to be learned are abstractly taught in the classroom. Reflective observation and active experimentation which will eventually lead to concrete experience happen outside the classroom, that is, in the industries (real world of work). At these different levels in the learning cycle, the students exhibit different learning styles (accommodating, diverging, assimilating and converging). Therefore, when cooperative vocational education model is applied to business education, the recipients could gather some real work experiences and employability skills that will make them employable and relevant in the world ofwork and this will give them a chance over those who did not have the experience.

When classroom instruction is connected to work experience through on-the-job training in the industries, corroborated by the students' organizations (VSO) as the students brainstorm and work in teams, it would give room for interaction and team spirit among students. All work together in the same programme with the student-learner at the centre to enhance employability skills of the graduates of the programme. This is illustrated in Fig. 1.

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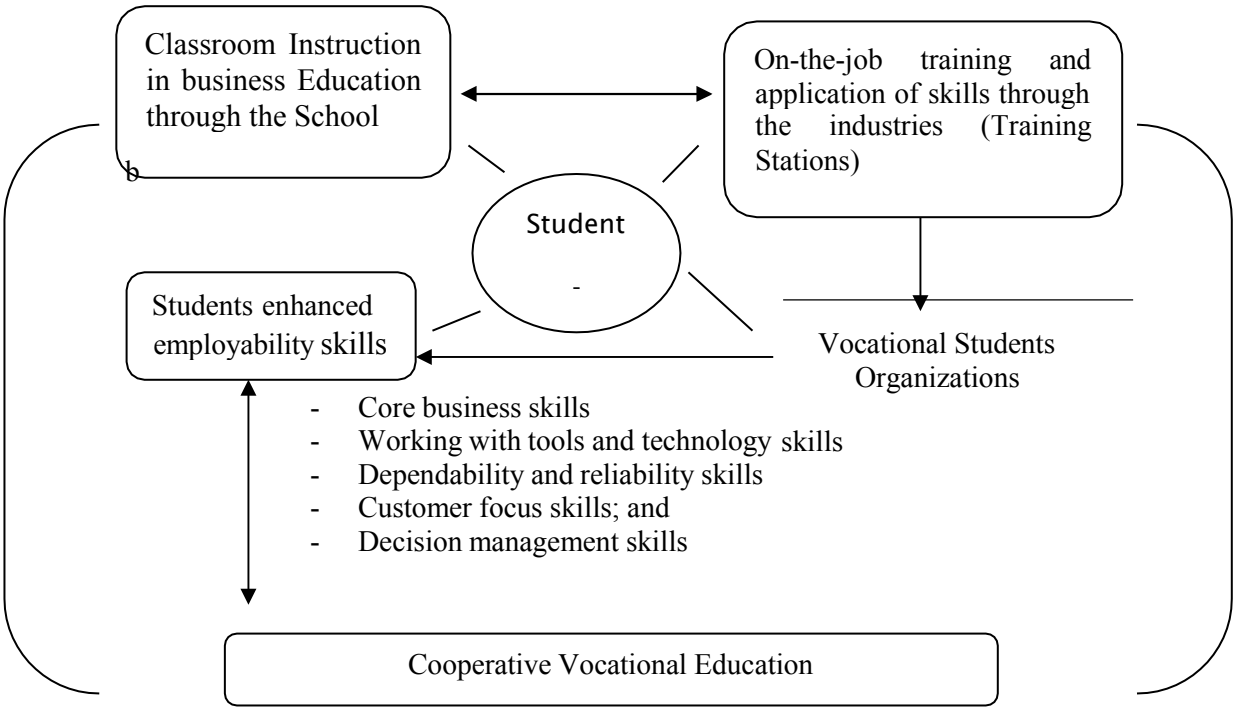

Figure 1: Schema of Cooperative Vocational Education Model and Employability Skills Interrelations (Adapted from Ukoha (2008), Jackson (2013), & NNBIA (2014)

As illustrated in figure 1, cooperative vocational education model for business education programme encompasses the classroom instruction received in the institution (school) corroborated by on-the-job training and application of skills acquired through work experience in the training station (industry), supported by interaction in the vocational students organizations, with the student-learner at the center, leading to the development and enhancement of employability skills in the students which will make them employable upon graduation. Cooperative vocational education model is a learner-centered model relying upon a tripartite partnership between an institution, the student, and an employer.

Therefore, the aforementioned skills cannot be completely learned in the classroom. It is through alliance between the institutions and the industries through cooperative vocational education that the students can acquire them. Jackson and Susan (2019) opined that students should be encouraged to draw on work experiences when articulating achievements and capabilities to enhance employability. The level of employability skills possessed distinguishes an applicant from the crowd. The degree to which a business educator possesses these skills determines his/her relevance in the world of work. The ultimate goal of any vocational and technical institution is skill development (Iyekekpolo, 2016). Achieving this goal in our institutions in the country at the moment is far below actualization. Based on the foregoing, the study soughtto know whether cooperative vocational education model can enhance employability skills of business education graduates in Nigeria, and to what extent.

Research Questions

The following research questions were raised to guide the study:

1. To what extent does cooperative vocational education model enhance the acquisition of core business skills of business education graduates for employability?
2. To what extent does cooperative vocational education model enhance the acquisition of working with tools and technology skills of business education graduates for employability?

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3. To what extent does cooperative vocational education model enhance the acquisition of dependability and reliability skills of business education graduates for employability?
4. To what extent does cooperative vocational education model enhance the acquisition of customer focus skills of business education graduates for employability?
5. To what extent does cooperative vocational education model enhance the acquisition of decision management skills of business education graduates for employability?

Hypotheses

The following hypotheses were tested at 0.05 level of significance:

1. There is no significant difference in the mean responses between male and female business education graduates with regards to using cooperative vocational education model to enhance employability skills.
2. There is no significant difference in the mean responses between business education graduates in federal university and state university with regards to using cooperative vocational education model to enhance employability skills.
3. There is no significant difference in the mean responses between business education lecturers andthe post graduates students with regards to using cooperative vocational education model to enhance employability skills.

Methods

The study employed a descriptive survey design. The population for the study was made up of the whole 25 business education lecturers and 94 business education post-graduate students from the University of Benin, Benin City, Edo State and Tai Solarin University of Education, Ijagun, Ogun State. The lecturers and post-graduate students were used to get business education graduates in their cluster. The entire population of 119 was used for the study since it is manageable, hence, a census. The instrument used for data collection for the study was a structured questionnaire developed by the researchers. The instrument was made up of two sections: A and B. Section A focused on respondents' bio-data which include gender, location, and university ownership while Section B contained thirty-five (35) items to elicit opinions on the subject matter. The items were raised from each of the research questions where the respondents were requested to select the most appropriate options and the breakdown is as follows: RQ1 Items 1-7, RQ2 Items 8 -17, RQ3 Items 18-24, RQ4 Items 25-29, and RQ5 Items 30-35. Responses were on a 4-point rating scale.

The instrument for data collection was validated. The Cronbach's alpha method was used to establish the reliability of the instrument and a co-efficient of .91 was obtained which shows that the instrument is reliable. The data collected was analyzed using mean (x), standard deviation, and t-test statistics. The mean was usedto answer the research questions, while the t-test was used to test the hypotheses at 0.05 level of significance.Any calculated mean ($\bar{x}$) value equal to or greater than 2.50 was regarded as high extent while any calculated mean ($\bar{x}$) value less than 2.50 was regarded as low extent. On the basis of hypotheses, the probability value (p) was used. Where the p-value is less than or equal to 0.05, the null hypothesis was not retained, otherwise,it was retained.

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Results

Research Question One:
To what extent does cooperative vocational education model enhance the acquisition of core business skillsof business education graduates for employability?

Table 1:
Respondents' Mean and Standard Deviation on Cooperative Vocational Education for Acquisition of Core Business Skills for Employability

S/N	Item Statements	Mean	SD	Remark
1	Cooperative vocational education (CVE) model will equip business education graduates (its recipients) with ability to translate practical problems into useful numerical expressions	**3.31**	**.653**	**HE**
2	CVE model will equip its recipients with ability to use information technology (e.g computer, internet, e-mail, etc) to convey and retrieve information	**3.35**	**.595**	**HE**
3	It will enhance ability to use data (including charts, graphs and tables) to support evidence or demonstrate a point	**3.16**	**.686**	**HE**
4	It will enhance ability to read and comprehend work-related instructions, policies and governmental regulations	**3.24**	**.708**	**HE**
5	CVE model will equip its recipients with ability to prepare written materials using correct wording	**3.15**	**.707**	**HE**
6	It will foster the ability to communicate thoughts in a logical, organized and coherent manner employability via CVE	**3.25**	**.673**	**HE**
7	CVE model will equip its recipients with the ability to write in a factual manner in a tone appropriate for target audience	**3.11**	**.761**	**HE**
	Cluster	**3.22**	**.423**	**HE**

Note. HE – high extent

Table 1 shows the result of the extent to which cooperative vocational education model enhances the acquisition of core business skills among business education graduates for employability. The mean responses range from 3.11 to 3.35, while the standard deviation range from .595 to .761. The mean responsesof the seven items of core business skills correspond to high extent. The standard deviation are relatively not wide apart, which implies that the responses are relatively clustered around the mean. The cluster of 3.22 indicates that cooperative vocational education model enhances acquisition of core business skills to a high extent among business education graduates for employability.

Research Question Two:
To what extent does cooperative vocational education model enhance the acquisition of working with tools and technology skills of business education graduates for employability?

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Table 2:
Respondents' Mean and Standard Deviation on Cooperative Vocational Education for Acquisition of Working with Tools and Technology Skills for Employability

S/N	Item Statements	Mean	SD	Remark
8	CVE model will equip its recipients with skills in selecting tools and technology (e.g computer set, mouse, applications, etc) to facilitate work activity	**3.42**	**.623**	**HE**
9	CVE model will enhance ability to identify, select and use appropriate tools and technological solutions to frequently encountered problems	**3.14**	**.702**	**HE**
10	Ability to use and maintain tools and technology to facilitate work activity will be acquired via CVE	**3.25**	**.714**	**HE**
11	It will facilitate the ability to carefully consider which technological solutions are appropriate for a given job	**3.11**	**.745**	**HE**
12	It will enhance the ability to consistently choose the best tool or technological solution for the problem at hand	**3.21**	**.616**	**HE**
13	CVE model will enhance ability to use computer tools (e.g scroll balls, a mouse and dialogue boxes, etc) to work within the computer operating system	**3.24**	**.708**	**HE**
14	CVE model will equip its recipients with the ability to access and switch between applications and files of interest	**3.29**	**.675**	**HE**
15	It will equip its recipients with the ability to adhere to standard conventions for safeguarding privacy and security	**3.16**	**.686**	**HE**
16	CVE model will equip its recipients with the ability to open and configure standard browsers	**3.10**	**.764**	**HE**
17	Ability to use searches, hypertext references and transfer protocols (enter URLs) will be enhanced via CVE model	**3.07**	**.828**	**HE**
	Cluster	**3.20**	**.380**	**HE**

Note. HE – high extent

Table 2 shows the result of the extent to which cooperative vocational education model enhances the acquisition of working with tools and technology skills among business education graduates for employability. The mean responses range from 3.07 to 3.42, while the standard deviation range from .616 to .823. The mean responses of the ten items of working with tools and technology skills correspond to high extent. The standard deviation are relatively not wide apart, which implies that the responses are relatively clustered around the mean. The cluster of 3.20 indicates that cooperative vocational education model will enhance acquisition of working with tools and technology skills to a high extent among business education graduates for employability.

Research Question Three:
To what extent does cooperative vocational education model enhance the acquisition of dependability and reliability skills of business education graduates for employability?

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Table 3:
Respondents' Mean and Standard Deviation on Cooperative Vocational Education for Acquisition of Dependability and Reliability Skills for Employability

S/N	Item Statements	Mean	SD	Remark
18	CVE model will enhance its recipients' ability to behave consistently and reliably at work	**3.39**	**.604**	**HE**
19	Ability to fulfill obligations and complete assignments will be learned through CVE model	**3.11**	**.662**	**HE**
20	Ability to follow written and verbal directions of the organization will be acquired through CVE model	**3.13**	**.710**	**HE**
21	CVE model will enhance its recipients' ability to comply with organization's rules and policies	**3.25**	**.702**	**HE**
22	CVE model will enhance ability to demonstrate regular and punctual attendance at work	**3.21**	**.658**	**HE**
23	Ability to set goals and priorities in work and personal life will be acquired through CVE model	**3.16**	**.699**	**HE**
24	Ability to be accountable for actions taken will be acquired through CVE model	**3.18**	**.719**	**HE**
	Cluster	**3.21**	**.404**	**HE**

Note. HE – high extent

Table 3 shows the result of the extent to which cooperative vocational education model enhances the acquisition of dependability and reliability skills among business education graduates for employability. The mean responses range from 3.11 to 3.39, while the standard deviation range from .604 to .719. The mean responses of the seven items of dependability and reliability skills correspond to high extent. The standard deviation are relatively not wide apart, which implies that the responses are relatively clustered around the mean. The cluster of 3.21 indicates that cooperative vocational education model will enhance acquisition of dependability and reliability skills to a high extent among business education graduates for employability.

Research Question Four:
To what extent does cooperative vocational education model enhance the acquisition of customer-focus skillsof business education graduates for employability?

Table 4:
Respondents' Mean and Standard Deviation on Cooperative Vocational Education for Acquisition of Customer Focus Skills for Employability

S/N	Item Statements	Mean	SD	Remark
25	CVE model will equip its recipients with ability to actively look for ways to identify market demands and meet customers' needs	**3.31**	**.777**	**HE**
26	It will enhance ability to organize customers' meetings to improve their buying behaviour	**3.20**	**.654**	**HE**
27	CVE will enhance ability to provide personalized service with prompt and efficient responses to meet the requests and concern of customers	**3.22**	**.750**	**HE**
28	Ability to be courteous when dealing with internal and external customers will be acquired through CVE model	**3.18**	**.767**	**HE**
29	Ability to add value to customers' satisfaction will be acquired through CVE model	**3.17**	**.690**	**HE**
	Cluster	**3.21**	**.498**	**HE**

Note. HE – high extent

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Table 4 shows the result of the extent to which cooperative vocational education model enhances the acquisition of customer focus skills among business education graduates for employability. The mean responses range from 3.17 to 3.31, while the standard deviation range from .654 to .777. The mean responsesof the five items of customer focus skills correspond to high extent. The standard deviation are relatively notwide apart, which implies that the responses are relatively clustered around the mean. The cluster of 3.21 indicates that cooperative vocational education model will enhance acquisition of customer focus skills to ahigh extent among business education graduates for employability.

Research Question 5:
To what extent does cooperative vocational education model enhance the acquisition of decision management skills of business education graduates for employability?

Table 5:
Respondents' Mean and Standard Deviation on Cooperative Vocational Education for Acquisition of decision Management Skills for Employability

S/N	Item Statements	Mean	SD	Remark
30	Ability to identify key issues involved to facilitate the decision making process will be acquired via CVE model	**3.38**	**.657**	**HE**
31	Ability to prioritize key issues involved to facilitate the decision making process will be acquired via CVE model	**3.22**	**.648**	**HE**
32	CVE model will enhance the ability to anticipate the consequences of decisions in workplace settings	**3.21**	**.631**	**HE**
33	Ability to involve people appropriately in decisions that may impact them will be acquired via CVE model	**3.13**	**.723**	**HE**
34	Ability to quickly respond with a back-up plan if a decision goes amiss will be acquired via CVE model	**3.14**	**.664**	**HE**
35	Ability to evaluate progress about the particular decision will be acquired via CVE model	**3.09**	**.771**	**HE**
	Cluster	**3.19**	**.434**	**HE**

Note. HE – high extent

Table 5 shows the result of the extent to which cooperative vocational education model enhances the acquisition of decision management skills among business education graduates for employability. The mean responses range from 3.09 to 3.38, while the standard deviation range from .631 to .771. The mean responsesof the six items of decision management skills correspond to high extent. The standard deviation are relatively not wide apart, which implies that the responses are relatively clustered around the mean. The cluster of 3.19 indicates that cooperative vocational education model will enhance acquisition of decision management skills to a high extent among business education graduates for employability.

Hypothesis One:
There is no significant difference in the mean responses between male and female business education graduates with regards to using cooperative vocational education model to enhance employability skills.

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Table 6:
The t-test Analysis on Cooperative Vocational Education Model for Employability by Gender

Gender	N	Mean	SD	Df	T	P	Decision
Male	49	3.18	.312				
				112	-.830	.409	Retain
Female	65	3.23	.366				

P>0.05

Table 6 shows the t-test analysis of the extent to which cooperative vocational education model enhances employability skills of business education graduates based on the respondents' gender. The aggregate mean responses for male and female respondents are 3.18 and 3.23 respectively. Correspondently, the aggregate standard deviations are .312 and .366. The t-value of -.830 is not significant when p-value is .409, at .05 level of significant. Thus the null hypothesis is retained. This means that there is no significant difference between male and female business education graduates with regards to using cooperative vocational education model to enhance employability skills.

Hypothesis Two:
There is no significant difference in the mean responses between business education graduates in federal university and state university with regards to using cooperative vocational education model to enhance employability skills.

Table 7
The t-test Analysis on Cooperative Vocational Education for Employability by Ownership of institutions

Ownership	N	Mean	SD	Df	T	P	Decision
Federal	56	3.25	.313				
				112	1.292	.199	Retain
State	57	3.17	.372				

P>0.05

Table 7 shows the t-test analysis of the extent to which cooperative vocational education model enhances employability skills of business education graduates based on ownership of institutions. The aggregate mean responses for respondents in the Federal and State Universities are 3.25 and 3.17 respectively. Correspondently, the aggregate standard deviations are .313 and .372. The t-value of 1.292 is not significant when p-value is .199, at .05 level of significant. Thus the null hypothesis is retained. This means that there is no significant difference between business education graduates in federal university and state university with regards to using cooperative vocational education model to enhance employability skills.

Hypothesis Three:
There is no significant difference in the mean responses between business education lecturers and post-graduates students with regards to using cooperative vocational education model to enhance employability skills.

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Table 8:
The t-test Analysis on Cooperative Vocational Education for Employability by Status

Status	N	Mean	SD	df	T	P	Decision
Lecturers	20	3.26	.313				
				112	.770	.443	Retain
Students	94	3.19	.372				

P>0.05

Table 8 shows the t-test analysis of the extent to which cooperative vocational education model enhances employability skills of business education graduates based on the respondents' status. The aggregate mean responses for lecturers and students are 3.26 and 3.19 respectively. Correspondently, the aggregate standard deviations are .313 and .372. The t-value of .770 is not significant when p-value is .443, at .05 level of significant. Thus the null hypothesis is retained. This means that there is no significant difference between business education lecturers and the business education post graduates students with regards to using cooperative vocational education model to enhance employability skills.

Discussion of Findings

The findings from research question one which sought to determine the extent to which cooperative vocational education model enhances the acquisition of core business skills of business education graduatesfor employability revealed that cooperative vocational education model will enhance the acquisition of core business skills to a high extent. This is in agreement with the findings of Ukoha (2008) who opined that thereis need to foster and maintain close partnership between school and community through cooperative vocational education model to enable the students acquire attitudes, skills and necessary knowledge neededthe for chosen career and employment opportunities. Core business skills are one of these skills which can be acquired in real jobs under actual working conditions. This also concurs with Jackson (2013) who notedcore business skills as one of the employability skills that can be acquired through CVE. There is a clear recognition that quality, relevant, and the most up-to-date learning occurs in the workplace where what is current is being adopted and incorporated into the daily work role. Going by the finding, if business educationprogramme adopts cooperative vocational education as an educational model, the business education students will be prepared for meaningful employment, whether paid employment or self employment. The experience gathered during the classroom instruction at the training station (on-the-job instruction in industries) will enhance the students' development and acquisition of these employability skills.

From research question two which sought to determine the extent to which cooperative vocational education model enhances the acquisition of working with tools and technology skills of business education graduatesfor employability, the findings revealed that cooperative vocational education model will enhance the acquisition of working with tools and technology skills to a high extent. This is in agreement with the findings of Etonyeaku and Ezeji (2013) that cooperative vocational education will result in the production of graduates with skills, attitude and knowledge for self and paid employment in which working with tools and technology skills is one. This also agrees perfectly with the North Carolina Cooperative Education Policies and Procedure Manual (2000) which stated technology skills as one of the skills that can be acquired through CVE. This finding also agrees with NNBIA (2014) which stated that working with tools and technology skills entail selecting, using and maintaining tools and technology to facilitate work activity which can be acquired through CVE. The acquisition of these skills will enable graduates of business education to function effectively in the current highly competitive environment and strong market forces toturn business problems into business opportunities (Bassah & Noor, 2023). This is made possible through CVE model as the students interact with the permanent workers already in the industries using various modern tools and technology in the industries to do some work.

The findings from research question three which sought to determine the extent to which cooperative vocational education model enhances the acquisition of dependability and reliability skills for business

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education graduates' employability revealed that cooperative vocational education model will enhance the acquisition of dependability and reliability skills to a high extent. This is in agreement with the findings of Canale and Duwart (1999) and Bassah and Noor (2023) who asserted that employability skills also involve honesty, integrity and personal ethics. No matter how hard an individual may work or how many brilliant ideas he may display, if he does not possess some personal skills like dependability and reliability skills, his professional life will suffer. This emphasizes the need to acquire these personal skills for employability as revealed by this study.

For research question four which sought to determine the extent to which cooperative vocational education model enhances the acquisition of customer-focus skills for business education graduates' employability, the findings showed that cooperative vocational education model will enhance the acquisition of customer- focus skills to a high extent. A business is built on the problems (needs and wants) of customers and withoutthese, there will be no business at all. This is in agreement with the findings of Ezenwafor and Olaniyi (2017) who revealed that human relation skills, innovative skills, and problem-solving skills were rated as highly needed by business education graduates, and all these skills are embedded in customer focus skills. This alsoconcurs with NNBAI (2014) which revealed that Cooperative vocational education will enhance the acquisition of customer-focus skills.

The findings from research question five which sought to determine the extent to which cooperative vocational education model enhances the acquisition of decision management skills for business education graduates' employability showed that cooperative vocational education model will enhance the acquisition of decision management skills to a high extent. This is in concord with the findings of Etonyeaku and Ezeji(2013) who revealed that cooperative vocational education will result in the production of graduates with skills (of which decision management is part), attitude and knowledge for self and paid employment. Decision management skills involve critical thinking, understanding of the business, team spirit, decisiveness and courage. Also, this agrees perfectly with the NNBAI (2014) which noted decisionmanagement skills as one of the employability skills that can be acquired through CVE. This implies that developing cooperative vocational education model will help business education students during their years of study to gain more practical experience in decision management directly from the industry rather than just from their studies and workshop exercises. This experience will not only help them gain practical and applied experience in the workplace but will also help them obtain jobs in paid or self employment upon graduation.

Based on the hypotheses, hypothesis one revealed that there is no significant difference between male and female business education graduates with regards to using cooperative vocational education model to enhance employability skills. This shows that the responses of business education graduates to the use of cooperative vocational education model to enhance their employability skills is not influenced by gender. This implies that there is no discrepancy between male and female business education graduates in their perception about the ability of cooperative vocational education model to enhance their employability skillsand their decision is not influenced by who they are.
From hypothesis two, the findings revealed that there is no significant difference between business education graduates in federal university and state university with regards to using cooperative vocational education model to enhance employability skills of business education graduates. This shows that the responses of these two sets of business education graduates to the use of cooperative vocational education model to enhance business graduates' employability skills are not influenced by the ownership of the institutions. It is evident therefore from the findings that both state and federal institutions in Edo and Ogun States have the same perception about the efficacy of CVE model in helping the students not just to take classes, but to takeclasses further, integrating their coursework with real-world experiences which will give them opportunity to acquire the relevant employability skills.

The findings of the study with regards to hypothesis three showed that there is no significant difference between business education lecturers and the business education post graduates students in Edo and Ogun

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States, Nigeria with regards to using cooperative vocational education model to enhance employability skills. This shows that the responses to the use of cooperative vocational education model to enhance business education graduates' employability skills is not influenced by status. Both lecturers and students respondedthe same way. This also implies that the lecturers teaching the students and the students they are teaching agree that cooperative vocational education model will enhance the acquisition of various relevant employability skills of graduates of business education to a high extent.

Conclusion

The findings of this study have vividly revealed that cooperative vocational education model will enhance the employability skills of business education graduates in Edo and Ogun states of Nigeria to a high extent. Specifically, cooperative vocational education will enhance the acquisition of core business skills; working with tools and technology skills; dependability and reliability skills; customer focus skills; and decision management skills of business education graduates for employability. Therefore, the advocacy for this modelis worthwhile.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. Cooperative vocational education model should be adopted or adapted as a means of preparing business education students for employment as the programme will expose them to the employability skills needed to be employable or be an employer of labour. The model could be used as either a replacementto SIWES or improvement on SIWES
2. There should be proper synergy between government, educational institutions and industries to make cooperative vocational education model workable in Nigeria for the actualization of the goals and objectives of business education programme.

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EFFECT OF COOPERATIVE LEARNING METHOD ON ACADEMIC ACHIEVEMENT OF FINANCIAL ACCOUNTING STUDENTS IN COLLEGES OF EDUCATION IN EKITI AND ONDO STATES

FUNMILOLA MARY OGUNLEYE
Bamidele Olumilua University of Education, Science and Technology,
Ikere-Ekiti, Ekiti State
Business Education Department Phone
Number 08032756236
ogunleyefunmilolamary@gmail.com

Abstract
The major purpose of this study was to find the effect of cooperative learning method on academic achievement of financial accounting students in Colleges of Education in Ekiti and Ondo States. The research design used for the study was a 2 x 2 x 2 factorial design which consisted two groups of students (control and experimental). The population consisted of 420 (300level) financial accounting students of business education Department in Colleges of Education in Ekiti and Ondo States. No sample selected because the population is not too large for the study, hence census. Three research questions guided the study and two null hypotheses were tested, computed and interpreted using mean and standard deviation were used to answer the research questions, while Analysis of Co-variance (ANCOVA) was used to test the hypotheses at 0.05 level of significance. Financial accounting achievement test (FAAT) was the instrument developed and administered for data collection. The instrument on cooperative learning method and lecturemethod lesson plans were face validated by three lecturers in the Department of Vocational Teacher Education, College of Education, Ikere-Ekiti. The reliability coefficient of the instrument for the study was 0 .97 which was calculated using Cronbach alpha method. The result of the study showed that: Cooperativelearning method contributed significantly to a better understanding of financial accounting students than lecture method, students taught by cooperative learning method performed better than their lecture group counterparts when they solved financial accounting problems, the effect of gender was of no significant to students' achievement in financial accounting, high ability students performed significantly better in financial accounting achievement test than the low ability students. The study concluded that cooperative learning method of teaching proved more effective than the lecture method in students' achievement and therefore recommended that cooperative learning should be used in teaching financial accounting in Colleges of Education.

Keyword: Cooperative learning method, Lecture method, Financial accounting, and academic achievement.

Introduction

Financial accounting is one of the courses offered in Business Education Department in Colleges of Education in Nigeria. American Accounting Association (2012) defined accounting as the process of identifying, measuring and communicating economic information to permit informed judgments and decisions by users of the information. Accounting is concerned with providing both financial and non- financial information that will help decision makers to make good decisions. Accounting provides information for both internal and external users. The aspect of accounting that provides information for internal users is referred to as Management Accounting while, the aspect of accounting that provides information for external users (outside the organization) to help make better decisions and improve the efficiency and effectiveness of existing operation is known as the Financial Accounting.

According to Wild (2013), financial accounting is focused on providing accounting reports and analysis to other areas of the business. Financial accountants are responsible for the creation and issuing of the

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company's financial statements, providing accurate and timely information to management and ensuring thatall regulatory reporting requirements are met. The goal of financial accounting is to consistently provide valuable, accurate and reliable information to management and other stakeholders of a business. Financial accounting statements summarise the business's activities for the year, and are used by shareholders, banks, employee bargaining units, and the general public to evaluate the financial worth of a business organization.

Financial accounting is used my Management to creates a public record of a company's historical financial performance, which allows stockholders and others outside the organization to get a clear picture of a business's financial health. Financial accountants must follow a strict set of accounting principles which enable stakeholders to be assured that the information they are receiving is accurate and objective. The stakeholders can then make predictive assumptions on the present and future of the business entity. Through financial accounting, the information about the reporting entity that is useful to existing and potential investors, lenders and other creditors are provided. Parkinson (2013) stated that the main purpose of financial accounting is to ascertain profit or loss during a specified period and to show financial condition of the business on a particular date and to have control over the firm's property. Such accounting records are required to measure the income of the business and communicate the information so that it may be used by managers, owners and other interested parties. In business education, accounting constitutes the most fundamental and indispensable intellectual skill subject taught starting from the senior secondary schools to tertiary institutions including Colleges of Education (NPE, 2013).
Unfortunately, the result of students' performance in Financial accounting examinations in Colleges of Education in Ekiti State indicated that most of the students perform poorly. This is supported by the statementof the Head of Business Education Department, College of Education, Ikere-Ekiti that the five year financial accounting result summary (2016-2021) in the Department indicates that 35% of the students performed above the average while 65% performed below the average. In the same vein, the five year financial accounting result summary (2009-2013) in the Department of Business Education, Adeyemi College of Education indicates that 42% of all the students who sat for the examination performed above average while 58% performed below the average level . It is evident therefore; from the summary of foregoing results that majority of the students perform poorly in Financial Accounting which may have been caused by the methods adopted by lecturers in instructional delivery.

The search for more effective method of teaching and learning in schools has been intensified over the years.A lot of research evidences have suggested the use of more effective instructional methods as against the traditional or conventional method. For instance, Wolfskil and Hanson (2013) supported the use of guided discovery in teaching accounting courses in tertiary institutions to enhance students' academic achievementin the subject. Teaching methods that emphasize students' involvement and opportunity to communicate, reason and develop self-confidence in solving academic problems are required and should be effectively utilized in schools (Zakaria, Chin & Daud, 2010). Incidentally, the use of conventional or traditional methods is still prevalent in the teaching of Financial Accounting in educational institutions in Nigeria including Ekiti and Ondo states. Information obtained from the preliminary discussions the researcher heldwith the lecturers and heads of departments in the colleges of education in the States show that the instructional delivery method used is the lecture method.

Lecture method remains the most popular method of teaching in schools especially in higher institutions. Adunfe (2014) defined lecture method as a teaching strategy where a pre-packaged instructional content is delivered by the teacher to a large audience with minimal student-teacher interaction. Cantrell (2014) reported, the characteristics of lecture method to include: teacher-centered, teacher-active, learner-passive and content emphasis. Adunfe (2014) also enumerated the following as some of the features of lecture method and they include; Large class-size, wide content of instruction, inadequacy of time, minimal use of chalkboard or white board, low level of interaction. Lecture method is one of the traditional methods used by financial accounting teachers in instructional delivery. It is also used by lecturers in colleges of education especially Business Education Department due to high enrolment of students into the programme. To cover

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large class and large volume of work, without wasting time, this method is mostly preferred by financial accounting lecturers. However, much success may not be recorded by financial accounting lecturers makinguse of lecture method without combining it with other effective and well organized methods such as cooperative learning methods or tutorial. Since lecture method does not create opportunity for teacher- students interaction as well as adequate questioning. It is expected that a well-organized and highly monitored cooperative learning should provide necessary antidotes to the problems resulting from lecture method (Adunfe, 2014).

Cooperative learning is an instruction that involves students working in teams to accomplish a common goal (Johnson & Johnson, 2012). Cooperative learning is an instructional method in which students work togetherin small, heterogeneous groups to complete a problem, project, or other instructional goal, while teachers actas guides or facilitators. This method works to reinforce a student's own learning as well as the learning of his or her fellow group members (Terazini, 2011). Cooperative learning is an approach to group work to maximize learning and satisfaction that result from working on a high-performance team. Cooperative learning method is an instructional method that allows students to work in groups to achieve a common goalunder the guidance of a teacher (Johnson & Johnson, 2012).Cooperative learning helps in the cognitive development of students, behavioural learning and social interdependence of students and enables them to discover and comprehend content of learning through a collaborative effort, (Morgan, 2013). It enables students to accomplish goals which they may not have the opportunity to achieve in an individualistic and competitive learning process. Classroom contents taught using cooperative learning method with heterogeneous teams in an inclusive environment encourages positive student interaction, competition among team members, and individual contribution towards collective goals, (Dyson & Grineski, 2011). According to Johnson and Johnsons in Felder and Brent (2014), cooperative learning is a method of instruction that requires group members to accomplish common goals under the following conditions: positive interdependence, individual accountability, face-to-face primitive interaction, appropriate use of collaborative skills and groups processing. Cooperative learning is an active method of instruction that enhances students learning in several ways to build attitudes and values.

Statement of the Problem

Instructions in Financial accounting in higher institutions are mostly done through traditional lecture method where students play a passive role during instructional process. The students have very little or no interaction among themselves or with the teacher. Research investigation by Ogunbameru and Raymond (2011) indicated that traditional teaching methods adopted by most teachers especially in financial accounting do not cater for the diverse learning interests of most students. The traditional lecture method is often regarded as teacher-centered, teacher-active, learner passive and content emphasis (Cantrell, 2014). This makes the method weak and ineffective for students learning. The weakness and ineffectiveness of the traditional lecture method might contribute to the poor performance of students in financial accounting. The preliminaryinvestigation conducted by the researcher in higher institutions in Ekiti and Ondo showed that most of the students who sat for Financial accounting examinations for the past five years (2009-2014) perform below average. In the two Colleges of Education in Ekiti and Ondo i.e (College of education, Ikere-Ekiti and Adeyemi College of Education, Ondo) over 50% of the students perform below the average. What could be responsible for this abysmal low performance? This study therefore seeks to find out if cooperative learning could change the narrative.

Purpose of the Study

The main purpose of this study is to determine the effect of cooperative learning method on student's academic achievement in Financial accounting in Colleges of Education in Ekiti and Ondo States, Nigeria. The study specifically sought to determine:

(1) the effect of cooperative learning method and lecture method on academic achievement of students taught financial accounting in Colleges of Education in Ekiti and Ondo States.

(2) the effect of gender on academic achievement of students taught Financial accounting using cooperative learning method in Colleges of Education in Ondo and Ekiti.

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(3) the effect of ability level on academic achievement of students taught with cooperative learning method.

Research Questions

The following research questions guided the study:

(1) What is the effect of cooperative learning method and lecture method on academic achievement of students taught financial accounting in Colleges of Education in Ekiti and Ondo States, Nigeria?

(2) What is the effect of gender on academic achievement of students taught financial accounting using cooperative learning method in Colleges of Education in Ondo and Ekiti State?

(3) What is the effect of ability level on academic achievement of students taught financial accounting with cooperative learning method?

Research Hypotheses

The following null hypotheses were formulated for the study and tested at 0.05 level of significance:

(1) There is no significant difference between the mean scores of financial accounting students taught with cooperative learning method and those taught with lecture method.

(2) There is no significant difference between the mean scores of male and female students taught with cooperative learning method.

Methodology

This study employed a 2x2x2 factorial pre-test and post-test control group design. According to Ronald (2011), factorial experiment is an experiment which design consists of two or more independent variables, each with discrete possible values or levels, and which experimental units take on all possible combinationsof these levels. This type of design allows researcher to study the effect of each independent variable on the dependent variable. The design consisted of two instructional groups (cooperative learning group and lecture method group), gender (male and female), and ability level (high and low). Factorial design is considered appropriate for this study because the researcher is interested in investigating additional independent variables apart from the main dependent and independent variables. Fraenkel, Wallen and Hyun,(2012) suggested the use of this design permits investigation of additional independent variables on dependent variable. There was no random assignment of subjects because of the nature of college program;intact classes were used for the study. The design is presented in table1

Table 1: The Factorial Matrix

	Exp-Group(xxxx)		Control Group(xxxx)	
Gender	High(xx)	Low(xx)	High(xx)	Low(xx)
Male	X	X	X	X
Female	X	X	X	X
Total	Xx	Xx	Xx	Xx

The pattern of the research is shown below:

Q1 X1 Q2

Q3 X2 Q4

Where:

Q1: represents pre-test for the experimental group i.e cooperative learning method Q2: represents post-test for the experimental group i.e cooperative learning methodQ3: represents pre-test for lecture method group

Q4: represents post test scores for lecture method group. X1: represents treatment i.e cooperative learning method X2: Lecture Method.

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This study was conducted in Ekiti and Ondo States, Nigeria. Specifically, the study was conducted in the two governments owned Colleges of Education namely: College of Education Ikere-Ekiti (CEI) and Adeyemi College of Education, (ACE). This area was chosen for the study because of the poor performanceof financial accounting in the colleges.

The population for this study consisted of all the 420 final year (300 Level) accounting students of the Department of Business Education, College of Education Ikere-Ekiti, Ekiti State and Adeyemi College of Education, Ondo State in 2020/2021 academic session. The population is made up of 209 final year accounting students in CEI and 211 final year accounting students in ACE. The students were chosen because they major in accounting option in Business Education Department. The account courses offered by the students are in financial accounting. There was no sampling because the population is not too large for the study. The entire population was therefore, studied hence census.
Financial Accounting Achievement Test (FAAT) developed by the researcher was used to collect data for the study and was designed to test students understanding in selected topics in financial accounting. Selecteditems were based on the topics the students were taught as stipulated in the National commission for colleges of education curriculum. The FAAT is made up of questions on topic selected for the experiment. The instructional packages comprised of two major parts: cooperative learning lesson plan (CLLP) and lecture method lesson plan (LMLP). The lecture method lesson plan was used for the control group while the cooperative learning lesson plan was designed for the experimental group

The Financial Accounting Achievement Test (FAAT) as well as the lesson plans was face-validated by three experts from School of Vocational and Technical Education, College of Education, Ikere-Ekiti. Thevalidators were requested to properly scrutinize the instrument in terms of relevance of items, suitability of questions, clarity of statement and accepted test format for Financial accounting. The corrections and suggestions made by the validators were used to produce the final draft of the instrument The internal consistency of the instrument was established using Cronbach's alpha reliability technique. The reliability coefficient is 0.97. The instrument was administered once to 40 financial accounting students in selected colleges of education in Osun State. The Colleges of Education selected were; College of Education Ilarogunand College of Education Ilesha. Twenty students were selected from each institution as control and experimental groups respectively.

The researcher organized a pre-experimental training section for Financial accounting lecturers to highlightthe procedures for the experiment after which pretest was administered to both experimental and control group. The regular financial accounting lecturers then commenced teaching in their respective schools adhering strictly to the procedures explained during pre-experimental training. Cooperative learning methodwas used to teach the experimental group while the conventional lecture method was used to teach the control group. The experiment was carried out during the normal school hours in line with the school timetable. After the treatment, which lasted for four weeks, the post-test was administered to the two groups. The Data collected during the pre-test and post-test for the two groups were analyzed to answer the research questionsand to test the hypotheses.

Method of Data Analysis
The data collected from the two groups were analyzed using Mean and Analysis of Covariance (ANCOVA).The mean was used to answer the research questions while Analysis of Covariance was used totest the hypotheses at 0.05 level of significance. The analysis was computed with the use of Statistical Package for Social Sciences (SPSS) to ensure the accuracy of the analysis. The null hypothesis was accepted when the calculated value of statistics is less than the table value or critical value at 0.05 level of significanceor rejected when the calculated value of statistics is equal to or greater than the table or critical value at 0.05 level of significance.

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Data analysis Research
Question 1
What is the effect of cooperative learning method and lecture method on academic achievement of students taught financial in college of education in Ekiti and Ondo State, Nigeria?
The data collected were analyzed to answer this research question is shown in Table 2

Table 2:
Summary of Pre-test and post-test Achievement mean scores of students taught with cooperative learning method and lecture method

Method	N	Pre- Test X	Post-Test X	Mean gain
Lecture	211	11.28	14.53	3.25
Cooperative	209	11.87	23.25	11.38

The data presented in table 2 indicates that the control group taught financial accounting with lecture methodhad a mean score of 11.28 in the pretest and a mean score of 14.53 in the posttest. The posttest mean gain inthe control group is 3.25. The experimental group taught financial accounting with cooperative learning method had a mean score of 11.87 and a mean score of 23.25 in the posttest. The posttest mean gain score is 11.38 which is higher than the posttest mean gain score in the control group. With these results, the difference in the mean achievement score of students taught financial accounting with cooperative learning method is higher than those student taught with lecture method.

Null Hypothesis 1
H_{O1}: There is no significant difference between the mean scores of financial accounting students taught with cooperative learning method and those taught with lecture method.

Table 3:
Analysis of Covariance (ANCOVA) showing the effect of treatment on student's achievement scores in financial accounting

Source of squares	Sum square	Df	Mean	F-cal	F-tab	Sig.
Covariate	3002.56	1	3002.56	176.71	3.84	.000
Methods	7175.26	1	7175.26	442.29	3.84	.000
Error	7085.33	417	16.99			
Corrected total	18070.18	419				
Total	167985.00	420				

***Significant at Sig of F (p) < 0.05.**

Table 3 reveals that F-cal (442.29) is greater than F-tab (3.84) at 0.05 level of significant. Therefore, the null hypothesis is rejected. With this result, there is a significant difference in the mean achievement scores of students taught financial accounting with cooperative learning method and those taught with lecture method. It means the treatment has a significant effect on students' achievement in financial accounting.

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Research Questions 2
What is the effect of gender on academic achievement of students taught financial accounting using cooperative learning method.
The data collected were analyzed to answer this research question is shown in Table 4.

Table 4:
Summary Pre-test and post-test achievement mean scores of male and female students taught with cooperative learning method

Gender	N	Pre- Test X	Post-Test X	X gain	Difference
Male	108	11.64	23.59	5.33	11.45
Female	101	12.11	28.89	16.78	

Table 4 above shows that the mean gain score of 5.33 for male in the experimental group is lower than the mean gain score of 16.78 for female in the same group. The difference in the mean gain score is 11.45 in favour of female. This result shows that the cooperative learning method used in the experimental group is in favour of female in the learning of financial accounting.

Null Hypothesis 2
$H_{O\,2}$: There is no significant difference between the means scores of male and female students taught with cooperative learning method.

Table 5:
Analysis of covariance (ANCOVA) summary of gender and students achievement taught bycooperative learning method

Source of squares	Sum square	Df	Mean	F-cal	F-tab	Sig.
Covariate	799.13	1	799.13	63.55	3.54	.000
Sex	47.50	1	47.50	3.78	3.84	0.53
Error	2603.10	206	12.58			
Corrected total	3427.73	208				
Total	116969.00	209				

*Significant at 0.05

The null hypothesis is accepted since F-cal (3.78) is less than F-tab (3.84) at 0.05 level of significance. With these results, there is no significant difference in the mean achievement scores of male and female students taught financial accounting with cooperative learning method. It means that gender does not statistically affect the achievement of students in financial accounting.

Research Question 3
What is the effect of ability level on academic achievement of students taught financial accounting with cooperative learning method.
The data collected were analyzed to answer this research question is shown in Table 6.

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Table 6:
Summary of Pre-test and post-test achievement mean scores of high and low ability students taught with Cooperative learning method

Ability	N	Pre- test X	Post-test X	Mean gain	Difference
High	191	12.24	23.79	11.55	1.85
Low	18	7.83	17.56	9.70	

Table 6 above shows the mean gain score of 11.55 for high ability students in the experimental group and mean gain score of 9.70 for low ability students. The difference is 1.85 in favour of high ability students.

Discussion

The findings of this study showed that the effect of cooperative learning method on the achievement test scores of financial accounting students is higher than the effect of lecture method with a difference of 8.13 in favour of experimental group. In the same vein, the analysis of covariance used to test the first hypothesis at 0.05 level of significance, as seen in table 3 indicates F-cal of 442.29 which is greater than F-tab of 3.84, which means that there was statistical significance of cooperative learning method on students' achievement in financial accounting. It can therefore be concluded from the above findings that the use of cooperative learning method is more effective than lecture method because it enhances students' achievement in financial accounting. This finding is supported by Ajaja and Eravwoke (2010).

Zakaria, chin and David (2010) that cooperative learning method improves students achievement than the traditional methods. The reason is that the teaching of financial accounting which requires some calculations is usually done using teacher centered strategies such as lecture method, direct instruction and the use of textbooks for content dissemination. The teacher is only active because his aim is to cover as much ground as possible within the time allocated thereby avoiding much interaction and collaboration among students. It deprived student's active participation in the learning process and opportunity to ask initiative questions that will clear some areas of difficulties. Whereas cooperative learning method is appropriate when the content of instruction is practical or involves calculation. This is because it promotes students interaction and collaboration, positive interdependence, reflective thinking, individual responsibility and accountability and equal opportunities for academic success. Cooperative learning method is an instructional method that emphasizes students' active involvement in learning process and opportunity to communicate reason and develop self confidence to solve academic problem in school most especially in subjects that involve calculation like financial accounting.

The finding of the study revealed that there was no statistical significant difference in the mean achievement scores of male and female students taught financial accounting with cooperative learning method. This is because the analysis of covariance used to test the hypothesis at 0.05 confidence level as seen in Table 5 indicated F-cal of 3.78 which is less than F-tab of 3.84 which means that there was no statistical significance. The result is supported by the findings of Ajaja and Eravwoke (2010) that a non-significant difference exists in the achievement test scores between male and female students in cooperative learning group. Bakare (2012) and Efuwape (2012) also discovered that gender has no significant effect on students' performance .

The finding revealed that there was significant difference in the mean achievement score of high and low ability level students taught with cooperative learning method, this is because the result of analysis of covariance computed in Table 7indicated F-cal of 23.99 which is greater than F-tab of 3.84 at 0.05 level of significance and also there was a significant difference in the mean achievement score of high and low ability level students taught with lecture method. This is because the analysis of covariance used to test the hypothesis at 0.05level of significance as seen in Table 9 indicated F-cal of 18.71 which is greater than F- tab of 3.84 which means that there was statistical significance. This finding was supported by Ajaja and Eravwoke (2010) that a higher significance achievement scores was recorded between students of varying abilities in cooperative learning group. This was also in line with the finding of Adesoji (2012); Okebukola

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(2012); Ireogbu (2010) and Robbert (2012) that some methods such as cooperative learning, guided discovery, and peer learning favour a particular ability level.

Conclusion

The study found that cooperative learning method is more effective in enhancing students' performance in financial accounting. Gender does not significantly affect students' achievement when taught with cooperative learning method.

Recommendations

The following recommendations are made based on the findings, conclusion and implications of the study.

1. The mode of instruction of financial accounting in Colleges of Education should be reviewed to accommodate a functional students oriented activity based instructional strategy such as cooperative learning method. This will enable financial accounting students to be problem solvers, thereby learning improvement in the performance of students in financial accounting examinations.
2. There is urgent need for curriculum planners or developers to critically examine the existing instructional strategies in schools and provide a modified ones to include cooperative learning method, it procedure and strategies as found in this study.
3. Capacity building program such as seminars, workshop and conferences should be organized by educational authorities (ministry of education and national commission for colleges of education), administrators of colleges of education and professional association to train serving business teachers in Colleges of Education on the use, procedure and benefits of cooperative learning method.
4. Teacher training programs in Nigeria should incorporate the teaching and learning of modern method of teaching like cooperative learning method so that student teachers will possess necessary information and procedures for the use of this method. This will enable them to make effective useof cooperative learning method after graduation

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ADAPTATION STRATEGIES OF ARABLE CROP FARMERS TO CLIMATE CHANGE AND VARIABILITY: IMPLICATIONS AND PROSPECTS ON FOOD PRODUCTION IN OVIA NORTH-EAST LOCAL GOVERNMENT AREA OF EDO STATE, NIGERIA

[1]David Nwanna DUMBIRI [2]Ufuoma Success OGHENEKOHWO
Department of Vocational and Technical Education,Faculty of Education
University Of Benin, Benin City.
Email: david.dumbiri@uniben.edu

Abstract

This study examined the adaptation strategies adopted by arable crop farmers for climate change and variability, implications and prospects on food crop production in Ovia North-East Local Government Areaof Edo State, Nigeria. Survey research design was used and the study population was 430 food crop farmers, 207 respondents were selected using the simple random sampling (SRS) technique and questionnaire was administered to them by the researchers. The instrument was validated by one expert from the Department of Vocational and Technical Education, Faculty of Education, and the other from Department of Crop Science, Faculty of Agriculture, University of Benin. The reliability of the instrument was done using Spearman-Brown reliability computation which yielded a co-efficient of 0.78. The data collected was analyzed using frequency count, simple percentage, mean and standard deviation. The findings of this study revealed that there is sufficient knowledge of arable crop farming on climate change and variability in Edo State, the impact of climate change which includes decrease in the production of food crops, changes in planting and harvest time, reduction in crop yield and income of farmers, increase in the rate of disease during the excess rainfall. This study also revealed various adaptation strategies available to arable crop farmers, which are; the use of improved and resistant crop variables, the use of alternatives fallow/tillage practices, the varying planting dates and times. Lastly, this study reveals the implications and prospects of these adaptation strategies to food production in Edo State which includes; continuous food production by arable food farmers, improved nutrients use efficiency of arable crops, reduced green-house gas emission, among others. This study recommended among others that government should make improved and resistantcrop varieties available to arable crop farmers so as to increase their agricultural productivity.

Keywords: Arable Crop, Climate Change, Variability, Food Production and Farmers

Introduction

Arable crops are very important crops as they are the chief sources of dietary food energy for the majority of humans and livestock, especially in the lowland tropics, much of the sub-humid tropics of West Africa and Central Africa. Examples of these arable crops are *Zea mays* (maize), *Triticumaestivum* (wheat), *Oryzasativa* (rice), *Hordeumvulgare* (barley), *Pennisetumglaucum* (millet), *Cajanuscajan* (pigeon pea), *Vignaunguiculata* (cowpea), *Pisumsativum* (green peas), *Sorghum bicolor* (sorghum), *Glycine max* (soybean), *Ipomoea batatas* (sweet potato), *Dioscorea SPP* (yam), *Manihot esculentus* (cassava), *Colocasiaesculenta* (cocoyam). Climate change and variability affect the production of these crops in Sub-Saharan African countries especially Nigeria because agricultural production in these countries is partly or dependenton rain-fed production. The numerous adverse effects of climate change and variabilities have made farmers,agricultural experts, and the government look for favorable adaptation strategies that will ensure the continuity of agricultural activities and food production in the nation.

Climate change according to the Intergovernmental Panel on Climate Change (IPCC, 2007) refers to a change in the state of the climate that can be identified (e.g. using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer. Arable crop production is highly sensitive to climate. It is affected by long-term trends in average rainfall

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and temperature, inter-annual climate variability, shocks during specific phenological stages, and extreme weather events (IPCC, 2012).

In the view of Deuter (2008) who summarized the impacts of climate change on arable crop production as follows; Increased temperatures could reduce crop yields by shortening growing seasons and accelerating grain sterility in crops, shifts in rainfall patterns could disrupt flows in rivers used for irrigation, accelerate erosion and desertification and reduce crop production and livestock yields, damages resulting from an in increase in the intensity or frequency of severe weather events (rainfall, hail, wind and heat stress), changesin time of harvest for some crops and in some locations, changes in suitability and availability of cultivars for present and future production, reduced availability of water and increased cost of irrigation water in most localities and different seasons (dry seasons), greater seasonal variability, heightened pest and diseases incidence, increased emergence of weeds and negative impacts on soils and crops due to extreme temperature, rainfall, erosion and flooding. The major problem of arable crop farmers now is how to adapt food systems and livelihoods to the expected climate change and variability, especially in Sub Sahara Africa where crop production is highly dependent on the intra-seasonal and inter-annual variations in rainfall. It is in this light that arable crop farmers and the government in various countries continue to develop adaptive strategies to curb the challenges and damages of climate change.

Adaptation to climate change refers to actions that reduce the negative impact of climate change while taking advantage of potential new opportunities (Gregory, 2010). This involves adjustments in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts. These adjustments can be done by the arable crop farmers themselves or the government through the implementation of agricultural policies aimed at promoting appropriate and effective adaptation measures. The common strategies to be adopted by farmers are; the use of drought-resistant and improved varieties of crops, crop diversification, changes in cropping pattern and calendar of planting, conserving soil moisture through appropriate tillage methods, improving irrigation efficiency, afforestation, treatment of livestock faeces to reduce methane and increased use of organic manure rather than inorganic fertilizers, especially the nitrogenous ones. These strategies focus on managing risks, reducing vulnerability, enhancing food production and general agricultural productivity, protecting the environment, and ensuring sustainable development under the changing climate.

Statement of the Problem

Most farmers do not know about climate change and variability and how it is a challenge to crop production. This lack of knowledge of the adverse effects of climate change and variability restricts them from looking for ways to improve arable crop production. To a local farmer series of these variations are classified as a bad farming year, improper cultural practices, or the handiwork of the evil world. How can one look for solutions to a problem he has not defined? Different strategies can be adopted by arable crop farmers to curbthe adverse effects of climate change and variability, these include; the use of drought-resistant varieties of crops, crop diversification, changes in cropping pattern and calendar of planting, conserving soil moisture through appropriate tillage methods, improving irrigation efficiency, and afforestation and agro-forestry and these strategies are not available to the local farmer in terms of knowledge and application. Numerous factors influence farmers' choice of these adaptation strategies such as climate change awareness, knowledge of adaptation strategies, finance, manpower, environmental concern, socio-demographic characteristics of a farmer, perceived risks, etc. These factors can affect the success or failure of the adaptation strategies. Whatare the challenges faced by farmers in the application of their chosen strategies? What are the implications and prospects of these adaptation strategies to food production in Edo State?

Purpose of Study

The main purpose of this study is to gather information on the adaptation strategies of arable crop farmersto climate change and variability, its implication, and prospect for food security in Edo State, Nigeria.

The specific purposes of this study are;

- To determine the knowledge of arable crop farmers on climate change and variability in Edo State.

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- To identify the various ways in which climate change and variability affect arable crop production amongst farmers in Edo State.

5. To determine the various adaptation strategies available to arable crop farmers for climate change and variability.
4. To specify the challenges encountered by arable crop farmers in the application of the adaptation strategies to climate change and variability.

- To ascertain the implications and prospects of these adaptation strategies to food security in Edo State.

Research Questions

8. What is the knowledge of arable crop farmers on climate change and variability in Edo State?

- What are the various ways climate change and variability affect arable crop production amongst farmers in Edo State?
- What are the various strategies available to arable crop farmers for adapting to climate change and variability?
- What are the challenges encountered by arable crop farmers in the application of adaptation strategiesto climate change and variability?
- What are the implications and prospects of these adaptation strategies of arable crop farmers to food security in Edo State?

Significance of the Study

The adaptation strategies available to arable crop farmers to climate change and variability will be of benefitto arable crop farmers, livestock farmers, and other agriculturists in making food production easily possible in and off seasons for the growing populace.

- The results of this study are expected to give direction for policymakers in designing appropriate public policies to increase agricultural productivity and mitigate the effects of climate change on food crop production in Nigeria, especially in the Southwestern zone.
- It will provide a useful guide to international and local donor agencies interested in climate change mitigation and adaptation in their provision of grants and funds for environmental and resource management studies.
- The results of this study will also help agricultural planners in the Agricultural Development Programmes (ADPs) and Ministries of Agriculture, Science and Technology; and the Environment in the southwestern region and Nigeria as a whole and those states in the zone with Agro-climatological and Ecological zone study Units in their planning activities and providing useful weather data that will guide in planning public (or planned) adaptations to complement the farm-level (or autonomous) adaptation strategies.
- Farmers are also going to benefit by knowing the adaptation strategies to climate change that are more productive and efficient.

Methodology

Survey research was used in the study, while the study population comprise students in Faculty ofAgriculture, University of Benin, Benin City, Edo State. This population comprised of the 400 level students in the six Departments of Faculty of Agriculture; Departments of Animal Science (ANS), Crop Science (CRS), Soil Science and Land Management (SLM), Agricultural Economics and Extension (AEE), Aquaculture and Fisheries Management (AFM), Forestry and Wildlife Management (FWM). The sample size used for this study is 207 (48.14%) of the total population (430). The size of the sample was reached using confidence level of 95% based on the population as stated by Uzoagulu (2011). The study utilized proportionate stratified random technique in selecting respondents to adequately represent the 400 level students in Faculty of Agriculture. This is to ensure representativeness of the sample relative to the population and guarantees that minor constituents of the population are represented in the sample. Proportionate stratified random sampling technique ensuring representativeness of the sample relative to the

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population (ANS-39, CRS-43, SLM-43, AEE-34, AFM-29, and FWM-19). This gives a total number of (207) 400 level agricultural science students.

Using administered questionnaire formulated for data collection. The questionnaire has two sections (A & B). Section A focused on the demographic or personal data of the respondents such as age, sex, marital status, etc.; while section B contains five (5) research questions. These include: What is your knowledge of arable crop farming on climate change and variability in Edo State? (containing eight research items), Whatare the various ways climate change and variability affects arable crop production amongst farmers in Edo State? (containing six research questions), What are the various adaptation strategies available to arable crop farmers for climate change and variability? (containing eight research questions), What are the Challenges Encountered by Arable Crop Farmers in the Application of the Adaptation Strategies to Climate Change and Variability? (containing eight research items) and What are the Implication and Prospect of these Adaptation Strategies of Arable Crop Farmers to Food Production in Edo State? (containing nine research questions). The options were presented in four point scale ranging from: Strongly agree (SA), Agree (A), Disagree (D)and strongly Disagree (SA) for all the research items. Correspondingly each of those options attracts the following: SA (4), A (3), D (2) and SA (1).

The validity of the Instrument was determined by the researcher adopting expert judgment approach. By this, the instrument was given to experts in the department. This includes my supervisor and other lecturers in the Department of Crop Science (CRS), Faculty of Agriculture, University of Benin. Split half method was used to determine the reliability of the instrument. After the administration of the instrument, Spearman- Brown reliability computation was carried out. A reliability coefficient of 0.78 was generated, indicating that the instrument is highly consistent and reliable. The questionnaire was distributed personally by the researcher to the respondents. She explained the nature and purpose of the study to the respondents and collected the questionnaires immediately after the respondent responded to the questions. Data collected were inputted into the computer and analyzed using frequency count, simple percentage, mean (x) and standard deviation were employed to analyze the data collected from the answered research questions. While the mean was used to determine the degree of responses, the standard deviation was used to determine the extent at which the respondents' responses cluster or deviate around the mean. The mean rating of 2.0 was used for decision point such that only items less than 2.0 was regarded as disagree while mean rating equalsor above 2.0 was regarded as agree.

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Results

Research Question 1: What is your knowledge of arable crop farming on climate change and variability in Edo State?

Table 1: Knowledge of arable crop farming on climate change and variability in Edo State.

SN	ITEMS	SA	A	D	SD	X	Standard Deviation	Decision
1	Are you aware of climate change	153 (76.5%)	34 (17%)	5 (2.5%)	8 (4%)	1.34	0.719	Disagree
2	I became aware of climate change through social media	74 (37%)	93 (46.5)	25 (12.5%)	8 (4%)	1.84	0.794	Disagree
3	I became aware of climate change through fellow farmers	49 (24.5%)	89 (44.5%)	53 (26.5%)	9 (4.5%)	2.11	0.825	Agree
4	I became aware of climate change through television/radio and newspaper/magazine	46 (23%)	81 (40.5%)	69 (34.5%)	4 (2%)	2.16	0.796	Agree
5	Higher and lower temperature is form of climate change	25 (12.5%)	98 (49%)	69 (34.5%)	8 (4%)	2.30	0.737	Agree
6	Increased and decrease temperature is a form of climate change	31 (15.5%)	93 (46.5%)	72 (36%)	4 (2%)	2.25	0.733	Agree
7	Variations in season is a form of climate change	42 (21%)	91 (45.5%)	54 (27%)	13 (6.5%)	2.19	0.841	Agree

From table 1 above, knowledge of arable crop farming on climate change and variability, it shows that mostof the respondent are aware of climate change, most of the respondent are aware of the climate change through the help of the social media, most of them became aware through the fellow farmers in the field, some of them became aware of it through the television programme, through radio and through newspaper they read, the various temperature of higher and lower are as a result of the climate change. The increase and decrease of temperature are from the climate change. The variation in season is a form of climate change.

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Research Question 2: What are the various ways climate change and variability affects arable crop production amongst farmers in Edo State?

Table 2: Ways climate change and variability affects arable crop production amongst farmers in Edo State.

SN	ITEMS	SA	A	D	SD	(X)	Standard Deviation	Decision
1	Leads to variability in agricultural production	93 (46.5%)	77 (38.5%)	30 (15%)		1.69	0.720	Disagree
2	Decreases the production of food crops	16 (8%)	134 (67%)	50 (25%)		2.17	0.550	Agree
3	Causes changes in planting and harvest time, making it difficult for farmers to predict the times	26 (13%)	89 (44.5%)	81 (40.5%)	4 (2%)	2.32	0.720	Agree
4	Reduces crop yield	18 (9%)	85 (42.5%)	89 (55.5%)	8 (4%)	2.44	0.713	Agree
5	Lack of uniformity in natural precipitation (rainfall)	20 (10%)	100 (50%)	63 (31.5%)	17 (8.5%)	2.39	0.781	Agree
6	Increase rate of disease attack during excess rainfall	32 (16%)	71 (35.5%)	76 (38%)	21 (10.5%)	2.43	0.883	Agree

The climate change and variability affects arable crop production amongst farmers in Edo state. Looking atthe table above it shows that the leads to variability in agricultural production affect the arable crop production. The climate change decrease the production of food crops, the climate change causes changes inpanting and harvest time, making it difficult for farmers to predict the times and season. It reduces the cropyield of the farmers, it also increase the rate of disease during the excess rainfall

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Research Question 3: What are the various adaptation strategies available to arable crop farmers for climate change and variability?

Table 3: Adaptation strategies available to arable crop farmers for climate change and Variability

SN	ITEMS	SA	A	D	SD	(X)	Standard Deviation	Decision
1	Use of improved and resistant crop variables	133 (66.5%)	38 (19%)	25 (12.5%)	4 (2%)	1.50	0.789	Disagree
2	Use of alternative fallow/tillage practices	28 (14%)	139 (69.5%)	29 (14.5%)	4 (2%)	2.05	0.604	Agree
3	Varying planting dates and time	16 (8%)	118 (59%)	58 (29%)	8 (4%)	2.29	0.669	Agree
4	Effective irrigation and tillage practices	4 (2%)	92 (46%)	91 (45.5%)	13 (6.5%)	2.57	0.646	Agree
5	Fertilizers and organic manure application	22 (11%)	65 (32.5%)	100 (50%)	13 (6.5%)	2.52	0.776	Agree
6	Discouraging deforestation and encouraging afforestation and regeneration	34 (17%)	57 (28.5%)	96 (48%)	13 (6.5%)	2.44	0.846	Agree
7	Crop diversification	29 (14.5%)	90 (45%)	68 (34%)	13 (6.5%)	2.33	0.802	Agree
8	Discouraging the practice of bush burning	66 (33%)	70 (35%)	47 (23.5%)	17 (8.5%)	2.08	0.951	Agree

The various adaptation strategies available to arable crop farmers are the use of improved and resistant crop variables, the use of alternatives fallow/tillage practices, the varying planting dates and times. But it was notso with some respondent who disagreed about the adaptation strategies, it shows that irrigation and tillage practice is not an adaptation strategies, fertilizers and organic manure application is not an adaptation strategies, deforestation and encouraging afforestation and regeneration is not an adaptation strategies, but totally discouraging the practice of bush burning is an adaptation strategies.

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Research Question 4: What are the challenges encountered by arable crop farmers in the application of the adaptation strategies to climate change and variability?

Table 4: Challenges encountered by arable crop farmers in the application of the Adaptation strategiesto climate change and variability.

SN	ITEMS	SA	A	D	SD	(X)	Standard Deviation	Decision
1	Illiteracy of the food crop farmer	122 (61%)	70 (35%)	4 (2%)	4 (2%)	1.45	0.640	Disagree
2	Lack of inadequate extension programmes directed to meet the climate change adaptation strategies in food crop production	61 (30.5%)	131 (65.5%)	4 (2%)	4 (2%)	1.76	0.589	Disagree
3	Poor access to climate change adaptation strategies information by food crop farmers	37 (18.5%)	123 (61.5%)	31 (15.5%)	9 (4.5%)	2.06	0.720	Agree
4	Government irresponsiveness to climate risk management	33 (16.5%)	113 (56.5%)	45 (22.5%)	9 (4.6%)	2.15	0.742	Agree
5	High cost of improved crop varieties	37 (18.5%)	69 (34.5%)	77 (38.5%)	17 (8.5%)	2.37	0.881	Agree
6	Lack of/ or inadequate access to weather forecast technologies	50 (25%)	51 (25.5%)	74 (37%)	25 (12.5%)	2.37	0.994	Agree
7	Traditional beliefs/practice e.g.some farmers do not use fertilizers in crop production, waiting for first rain etc.	136 (68%)	55 (27.5%)	5 (2.5%)	4 (2%)	1.39	0.639	Disagree
8	High cost of fertilizers and other input	57 (28.5%)	130 (65%)	13 (6.5%)		1.78	0.551	Disagree

Some of the challenges encountered by arable crop farmers in the adaptation strategies to climate

change and variability include, poor information that was given to the crop farmers, limited government irresponsiveness to climate risk management, lack of access to weather forecast technologies, high cost of fertilizer and other input, high cost of improved crop varieties, traditional beliefs, lack of extension programmes directed to meet the climate change adaptation in food crop production.

Research Question 5: What are the implication and prospect of these adaptation strategies of arable crop farmers on food production in Edo State?

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Table 5: Implication and prospect of these adaptation strategies of arable crop Farmerson food production in Edo State

SN	ITEMS	SA	A	D	SD	(X)	Standard Deviation	Decision
1	It ensures continuous food production for arable food farmers	73 (36.5%)	109 (54.5%)	18 (9%)		1.73	0.617	Disagree
2	Improves nutrients use efficiency of arable crops	24 (12%)	119 (59.5%)	47 (23.5%)	10 (5%)	2.22	0.715	Agree
3	Protect the soil from breakdown, thus ensuring good crop yield	33 (16.5%)	85 (42.5%)	77 (38.5%)	5 (2.5%)	2.27	0.762	Agree
4	Reduces green-house gas emissions	34 (17%)	80 (40%)	81 (40.5%)	5 (2.5%)	2.29	0.773	Agree
5	Increase agricultural productivity and development	26 (13%)	83 (41.5%)	86 (43%)	5 (2.5%)	2.35	0.736	Agree
6	Provision of better living conditions for farmers	31 (15.5%)	61 (30.5%)	103 (51.5%)	5 (2.5%)	2.41	0.778	Agree
7	Provision of raw material for industries for the manufacture of foods and other products	30 (15%)	66 (33%)	94 (47%)	10 (5%)	2.42	0.804	Agree
8	Increase the level of income of farmer in rural settlements	30 (15%)	99 (44%)	72 (36%)	10 (5%)	2.31	0.785	Agree
9	Ensures continuous use of agricultural land by arable crop farmers.	24 (12%)	94 (47%)	72 (36%)	10 (5%)	2.34	0.753	Agree

Some of the implication and prospect include it ensures continuous food production for arable food farmers, improves nutrients use efficiency of arable crops, reduces green-house gas emission, increase agricultural productivity and development, provision of better living conditions for farmers, provision of raw materials for industries for the manufacture of food and other products, increase the level of income of farmer in rural settlements, and ensures continuous use of agricultural land by arable crop farmers.

Discussion of Findings

In research question 1, response from the respondents reveals that there is sufficient knowledge of arable crop farming on climate change and variability in Edo State. This is indicated by high mean values ranging from 2.11 to 2.30. This is in consonance with Tunde (2011), the author posited that delayed rainfall accounts for climate variability based on farmers' perception of climate variability on agriculture in Nigeria. In anothervain, Abaje et. al., (2014) reported that impacts of an increase in temperature, high rainfall variability, and high incidence of flood occurrences also account for climate change and variability which is a common knowledge to farmers.

In research question 2, response from the respondents reveals that climate change and variability affects arable crop production amongst farmers in Edo State. This is indicated by high mean values ranging from 2.17 to 2.44. To a significant extent, this finding is in accordance with the study of Abaje et al. (2014) which

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states that climate variability and change causes decline in crop yield due to the impacts of an increase in temperature, high rainfall variability, and high incidence of flood occurrences. Similarly, Ogalleh et al. (2012) reported that local perception and response to the variability and changes in climate reveal that small holder farmers in Nigeria perceived increased incidence of crop disease and livestock diseases as some of the major impacts of climate variability.

There are various adaptation strategies available to arable crop farmers for climate change and variability as seen in research question 3; some of which include: use of improved and resistant crop variables, use of alternative fallow/tillage practices, varying planting dates and time, effective irrigation and tillage practices, fertilizers and organic manure application, discouraging deforestation and encouraging afforestation and regeneration, crop diversification and discouraging the practice of bush burning. This was indicated by high mean values ranging from 2.05 to 2.57. This finding is supported by the study of Hassan and Nhemachena (2008) who reported that some farmers in Africa use agro chemicals and fertilizer application as a means of adapting to the effects of the changed climate. Similarly (but with particular focus on tomato), Tshiala and Olwoch (2010) identified irrigation as an effective strategy that enhances the improvement of tomato yield.

The challenges encountered by arable crop farmers in the application of the adaptation strategies to climate change and variability as revealed in research question 4. This is indicated by high mean values ranging from 2.09 to 2.37. This findings is supported by the study of Deressa et al. (2009) which stated that some challenges and factors faced by farmers in adapting to climate change such as socio-economic factors: education, wealth, status and availability of resources (such as land, credit and water storage adaptation practices of farmers.

In research question 5, response from the respondents reveals that there is implication and prospect of these adaptation strategies of arable crop farmers to food production in Edo State. This is indicated by high mean values ranging from 2.22 to 2.42. Some of the implication and prospect include but not limited to the fact that it ensures continuous food production for arable food farmers, improves nutrients use efficiency of arable crops, reduces green-house gas emission, increase agricultural productivity and development, provision of better living conditions for farmers, provision of raw materials for industries for the manufacture of food and other products, increase the level of income of farmer in rural settlements, and ensures continuous use of agricultural land by arable crop farmers. This is in accordance with the study of Singh et al. (2022) which posits that farmers adaptation strategies identified in this study are useful to mitigate the negative impacts of climate change in the agricultural sector.

Conclusion and Recommendations

In conclusion, arable crops are very important crops as they are the chief sources of dietary food energy forthe majority of humans and livestock, especially in the lowland tropics, much of the sub-humid tropics of West Africa and Central Africa. Climate change and variability affect the production of these crops in Sub-Saharan African countries especially Nigeria because agricultural production in these countries is partly or dependent on rain-fed production. The numerous adverse effects of climate change and variability have made farmers, agricultural experts, and the government to look for favorable adaptation strategies that will ensure the continuity of agricultural activities and food production in the nation.

On recommendation, government should provide improved and resistant crop varieties available to arable crop farmers so as to increase their agricultural productivity; discourage bush burning and deforestation and encourage afforestation and regeneration; executives of farmers' associations should organize workshops that would enlighten and sensitize their members on climate change and the various adaptation strategies to cope with the attendant challenges; farmers should embark on adequate extension programmes directed at meeting the climate change adaptation strategies in food crop production. In addition, government should make fertilizers and improved crop varieties available to arable crop farmers at a subsidized rate.

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UTILISATION OF READING SKILLS FOR CAREER DEVELOPMENT

[1]Abiose E. AKHADEME [2] Victor I. IGBINEDION
[1]Department of Office Technology and Management, Yaba College of Technology, Yaba, Lagos.
Correspondent Author: abiose.akhademe@yabatech.edu.ng +2348036120183

[2]Department of Vocational and Technical Education, University of Benin, Benin City, Edo State.
Email: vicidion@gmail.com +2348056014291

Abstract
The study investigated the utilization of reading skills for the career development of lecturers in polytechnics in South West Nigeria. To guide this study, three research questions were raised and hypothesized. Correlational survey research design was adopted. The population consisted 121 lecturers in public polytechnics. The instrument that was used for data collection was a multiple-choice achievement test and a structured questionnaire. To establish the reliability of the instrument, the Kuder-Richardson formula (20) and Cronbach alpha statistics were used to ascertain the internal consistency with coefficients of 0.72 and 0.76 respectively. The research questions were answered by Pearson Product Moment Correlation Coefficient. Simple Linear Regression was used to test hypothesis 1, while Fisher Z statistics was used to test hypotheses 2 and 3 at 0.05 level of significance. The findings revealed that reading skills have a positive correlation with career development. It was recommended among others that OTM lecturers should develop reading skills to decode, learn more vocabulary, read fluently and comprehend materials for their promotion speed, remuneration growth and recognition in their career development.

Keywords: Reading skills, Decoding, Fluency, Comprehension and Career Development.

Introduction

Reading is an essential lifelong skill that students and lecturers need to develop. According to Al Roomy (2022), reading is a fundamental life skill that is required to think deeply and understand the text. It is the cornerstone for success and the opportunity for personal fulfilment and career growth. Reading is defined as the process of gaining knowledge or meaning from written words, sentences or paragraphs to understand the main idea. It is the ability to comprehend the meaning of words (Muhamad, Azmi, & Hassan, 2020). Effective reading requires using critical eyes to evaluate what is read, which is central to scholarly writing. Good readers turn out to be proficiently well-educated (Abdullahi & Rouyan, 2018; Lai, 2021). An effective reader can evaluate and develop critical reading skills. Reading requires lecturers to develop the skills to read critically and understand a text (Ogunye, 2018).

The correlation between reading skills, academic career development and success has been perceived by researchers (Ennis, 2018, Salameh, Salameh, & Al-Emami, 2019; Ozensoy, 2021). Every healthy individual, including lecturers, engage in career development (Agbetunde, 2017). Career development is the continuing, and formal efforts put in by an individual to advance in one's field or endeavour (Osibanjo, Oyewunmi, & Ojo 2014). Career development is beneficial to everyone including staff and their institutions (Farooq, 2015).Saleem and Amin (2013) looked at the impact of career development and maintained that it helps to build skills for the future, greater responsibilities, enhanced growth and promotion. According to Adeniji and Osibanjo (2012), the level of career development of an individual helps sweeten workers' skills. From the foregoing, one may say that lecturers who utilise reading skills excel in their careers and overcome the difficulties of reading.

For lecturers to attain the desired level of career development, appropriate utilisation of reading skills is of utmost importance. Attama (2013) defined utilization as the process of applying resources and putting them into practical use. The researcher stressed that the utilisation of any resource cum skills differs from

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individual to individual based on their needs. Uhegbu (2007) saw utilisation as appropriately putting into use acquired resources. The researcher reiterated that the utilisation of reading skills means taking advantageof the skills that are available for reading purposes. In this study, utilisation is defined as any form of use that reading skills are put to. Utilisation implies some action of putting reading skills into practical use.

Improving reading skills helps to reduce unnecessary waste of time and enables a reader to be more focused. Deploying reading skills properly has been seen as an avenue to turn students and lecturers into critical readers who overcome textual difficulties (Kim, 2020). Developing critical reading skills enables a reader to establish the soundness of claims. It helps a reader to select relevant materials from scholarly write-ups. Reading skills improve reading abilities, which leads to scholarly works, resulting in career development (Kalayci & Humiston, 2015). The main benefit of acquiring reading skills is to interpret the text correctly (Gilakjani & Sabouri, 2016)**.** According to Al Roomy, (2022), developing reading skills plays a crucial rolein students' ability to read critically for academic success.
Over the years, researchers and international bodies have at one time or another examined the benefits of reading techniques and approaches (University of Leicester, 2009; Keshav 2016; Abidin, 2021). Similarly, Khojah and Thomas (2021) affirmed that using diverse reading techniques have positive relationship with students' career success. Ogunye (2018) identified five reading techniques, which include scanning, skimming, light reading, word-by-word reading and study-type reading. Reading techniques may help OfficeTechnology Management (OTM) lecturers to actively engage in reading and to make effective use of their time when reading.

Consequently, lecturers need to hone the components of reading skills, which include decoding, vocabulary, fluency and comprehension. Decoding implies the transformation of messages into understandable language. Vocabulary means the stock or pool of words that a reader knows and uses. Fluency is the ability to read speedily and accurately and comprehension refers to summarizing the main ideas in a text. From the foregoing, reading skills may help OTM lecturers to make effective use of their time when reading for academic purposes, which may in turn lead to their career development. To find the gap in existing literature,it is hoped that this study will explore the relationship between reading skills and career development, the difference in the relationship between reading skills, ages and years of experience of OTM lecturers in publicpolytechnics in South West Nigeria.

Statement of the Problem
Scholars have observed that reading is fundamental to academic achievement, but it is worrisome that some lectures appear to pay too little attention to reading probably due to laziness and lack of reading culture. It seems they lay less emphasis on reading, paying little interest in reading as they presuppose they already know how to read. They may underestimate the importance of developing reading skills. It seems also they have poor reading comprehension, insufficient vocabulary, language deficiency, poor grammatical expression, concord deficits, limited knowledge of technical terms, low reading confidence and lack of ability to read and comprehend meanings from texts. In addition, it seems most lecturers hardly have time to read because of too much teaching workload and other school responsibilities, which barely give lecturers time to read. What prevents some lecturers from reading? Could this be related to lack of time, inability to decode, poor vocabulary, lack of fluency and comprehension?

Research Questions
The following research questions guided the study:

1. what is the relationship between reading skills and career development of OTM lecturers?
2. what is the difference in the relationship between reading skills and career development of old and young OTM lecturers?
3. what is the difference in the relationship between reading skills and career development of low and high-rank OTM lecturers?

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Hypotheses

The formulated hypotheses were tested at a 0.05 level of significance.

1. there is no significant relationship between reading skills and career development of OTM lecturers;
2. there is no significant difference in the relationship between reading skills and career development ofold and young OTM lecturers;
3. there is no significant difference in the relationship between reading skills and career development of low and high-rank OTM lecturers.

Literature Review

Reading Skills and Career Development

Reading is perceived as the foundation for academic success in school and life in general. Students and lecturers are expected to read different materials that include books, journal articles, research reports and other academic writings. According to Raheem (2015), one needs to know when and how to read, which requires developing reading skills. There is increasing demand for high level reading skills in literature (Artieda, 2017; Endris, 2018; Balan, Katenga, & Simon, 2019; Ihsan, 2019; Najnawati, 2019; Rimi, 2019; Mwangi & Bwire, 2020; Winiharti & Suprato, 2020; Ithriyah & Nurmalia, 2021; Baba & Affendi, 2020; Petrus & Shah, 2020; Ramasamy & Padma, 2020; Hassan, Azmi, Muhamad, & Abdullahi, 2021). Researchindicates that there is a correlation between reading skills and academic performance (Vuong, Hoang, Nguyen, Ho, & Vuong, 2021). Reading skills are most often related to academic achievements and career development. Developing reading skills is an approach to attaining educational goals.

There are different types of reading skills, which include decoding, phonetics, vocabulary, fluency, sentence construction and cohesion, reading comprehension, reasoning and background knowledge, working memory and attention (PlanetSpark, 2021). Other researchers have identified components of reading skills such as decoding, comprehension, questioning, fluency, inferring and summarizing (Wong, 2016; Gao, 2019; Olifiantet al., 2020 & Ribqotul, 2020). From the identified range of reading skills, the current study focused on the following reading skills: decoding, vocabulary, fluency and comprehension skills respectively. Decoding refers to the ability to hear sounds in words and connect them to letters. This is corroborated by (Andrew & Lee, 2023), decoding relies on connecting words and sounds into understandable language. According to Herrity (2023), the skills to decode ease the work of the reader, which hinges on vocabulary level.

Vocabulary skills mean the breadth, depth and flexibility of a reader's understanding of words, which is a key determinant of reading success and career development. Vocabulary helps to decipher meanings from words and phrases (Gordana, 2021). For lecturers to improve their vocabulary, they must read novels, newspapers, magazines, journals, reports and periodicals (Raheem, 2015). Vocabulary experts have linked sound reading ability to reading fluency (Kudo & Bazan, 2009).

Fluency skill is the ability to read smoothly, confidently, speedily and accurately (Nieporent, 2021). When a lecturer reads fluently, it aids quick understanding of texts. Reading fluently comprises precision and speed. Fluency aids a lecturer's ability to understand comprehension. Comprehension skills refer to the summary of the main ideas of a text upon reading and rereading. Kudo and Bazan (2009) defined comprehension skillsas the methods used to extract meaning from a written text. In the same vein, Nowak (2022) defined reading comprehension as the ability to read, think and get an understanding of what has been read. It emphasizes how a lecturer can make sense of a reading passage. One may say decoding is automatic to vocabulary, vocabulary is automatic to fluent reading, and fluent reading is automatic to comprehension. Reading skills may help OTM lecturers in polytechnics to understand, interpret and have a full grasp of read materials for scholarly publications, which may influence promotion speed, remuneration growth and recognition in their career development.

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Existing literature shows pieces of evidence of the positive correlation between developing reading skills and career development. For example, Keshav (2016) carried out a study on how to read a paper at the University of Waterloo Canada. The scholarly work outlined a practical three-pass approach for reading materials, looking at the category of the paper, context, correctness, contributions and clarity of the article. Keshav study revealed that using this approach to do a literature review, helps readers to gain mastery and succeed in their professions.

In another study conducted by Gao (2019), the researcher examined how reading skills affect thinking skills. The conclusion was that reading skills have a positive influence on thinking skills, which leads to the career success among students. Similarly, Ozensoy (2021) carried out a study on the impact of reading skills on students' academic success. The findings of his study revealed that there is a significant relationship between reading skills and academic progress. The work of Karakoc, Ruegg & Gu (2022) on reading requirements of students, revealed that students have to learn to use reading skills to be able to actualise their academic goals.

In the same vein, Hassan et al (2021) examined the impact of reading habits and their correlation with reading achievement in selected Malaysian Secondary Schools. According to the researchers, reading skills influence knowledge acquisition, proficiency in English writing and other academic activities. Their study revealed a positive correlation between reading skills and reading achievement. In line with their study, Petrus and Shah, (2020), and Mwangi & Bwire, (2020) reiterated that learners who read widely are probable to achieve good academic performance.

Al Roomy (2022) investigated the effect of reading skills on reading comprehension. In conclusion, the researcher stressed that academic and life success is tied to good reading skills that impart in every facetof life including career development. The researcher found a correlation between reading skills, as the researcher stressed that students who are good at reading pass their examinations with high scores. From the foregoing, lecturers who are good readers will experience promotion and sometimes recognition in their career development.

Methods

The study examined the utilisation of reading skills for the career development of lecturers in polytechnics in South West Nigeria. Correlational survey research design was used. The population comprised 121 lecturers in ten public polytechnics in South West Nigeria. To collect data, objective questions and a structured questionnaire were utilised. The Kuder-Richardson formula (20) and Cronbach alpha statistics were used to establish the internal consistency with coefficients of 0.72 and 0.76 respectively. Pearson Product Moment Correlation Coefficient was used to answer the research question. Simple Linear Regression was used to test hypothesis 1 while Fisher Z statistics was used to test hypotheses 2 and 3 at 0.05level of significance.

Results

Research Question 1: What is the relationship between reading skills and the career development of OTM lecturers in polytechnics?

Table 1: Pearson's Correlation of reading skills and career development of OTM Lecturers

Variables	N	Pearson's r	Remark
Reading skills and career development			

Key: 0.00 – 0.30 = Low; 0.31 – 0.59 = Moderate; 0.60 – 1.00 = High

The data analysis in Table 1 shows a calculated Pearson's r value of .246, falling between .00 – 0.30 which shows a low positive relationship. Therefore, there exists a low positive relationship between reading skillsand the career development of OTM lecturers in polytechnics.

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Hypothesis 1: There is no significant relationship between reading skills and career developmentof OTM lecturers in polytechnics.

Table 2: Linear regression ANOVA of reading skills on career development of OTM lecturers

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	68.408	1	68.408	7.015	.009[b]
	Residual	1062.989	109	9.752		
	Total	1131.396	110			

a. Dependent variable: career development

b. Predictors: (constant), reading skills

Results from Table 2 depict a calculated F value of 7.015 and a P value of .009. The P value is less than the alpha level, so the null hypothesis which states that there is no significant relationship between reading skills and career development of OTM lecturers in polytechnics is rejected. Thus, there is a significant relationship between reading skills and the career development of OTM lecturers.

Table 3: Regression model summary of reading skills on career development of OTM lecturers

Model	R	R Square	Adjusted R Square	Std error of the Estimate
1	.246[a]	.060	.052	3.12285

a. Predictors: (constant), reading skills

Table 3 shows a calculated R-value of .246 and an R-square value of .060. Therefore, reading skills accountfor 6% of the career development of OTM lecturers in polytechnics.

Hypothesis 2: There is no significant difference in the relationship between reading skills and career development of old and young OTM lecturers in polytechnics.

Table 4: Fishers Z of reading skills and career development by age

Age	N	r	Z'	Z	Z-table
25 - 35 years	29	0.742	0.955		
				1.260	1.96
36 years and above	82	0.541	0.606		

The results in Table 4 indicate a Z value of 1.260 and a table Z value of 1.96. The Z value falls in the acceptance region. Therefore, the null hypothesis, which states that there is no significant difference in the relationship between reading skills and career development of old and young OTM lecturers is retained.

Hypothesis 3: There is no significant difference in the relationship between reading skills and career development of low and high-rank OTM lecturers in polytechnics.

Table 5: Fishers Z of reading skills and career development by rank

Rank	N	r	Z'	Z	Z-table
Junior	69	0.511	0.564		
				-1.491	-1.96
Senior	42	0.677	0.824		

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Table 5 shows a Z value of -1.491 and a table Z value of -1.96. The Z value falls in the acceptance region. Thus, the null hypothesis, which states that there is no significant difference in the relationship between reading skills and career development of low and high-rank OTM lecturers is retained.

Findings

The result of research question one showed that there was a low positive relationship between reading skills and the career development of OTM lecturers in polytechnics. The corresponding hypothesis revealed that reading skills predict the career development of OTM lecturers in polytechnics.

The test of hypothesis two revealed that there was no significant difference in the relationship between the utilisation of research skills and the career development of old and young OTM lecturers in polytechnics.

The test of hypothesis three revealed that there was no significant difference in the relationship between the utilisation of reading skills and career development of low and high-rank OTM lecturers in polytechnics.

Discussion

Answer to research question one reported that there was a positive relationship between reading skills and career development. Likewise, the corresponding hypothesis revealed that reading skills are significant to the career development of OTM lecturers. The findings concur with previous studies on the correlation between reading skills and career success (Gilakjani & Ahmadi, 2011; Vuong et al., 2021; Rahmawati, 2021). These findings revealed that reading skills contribute significantly to career success. This study revealed that decoding, vocabulary development, fluency and comprehension are important skills and the foundation for success among lecturers. However, these findings contradicted the findings of Hermida (2009) who reported that academic staff take reading skills for granted and feel it has no significant correlation with career development.

The test of hypothesis two revealed that there was no significant difference in the relationship between reading skills and career development of old and young OTM lecturers in polytechnics. The findings are in agreement with the findings of Lertputtarak (2008) who argued that age does not affect lecturers' ability to read. On the other hand, Nasser-Abu and Majdob (2017) argued that reading and publishing vary by age. The opinion of the researchers is that younger lecturers read and publish more articles than older ones. It is believed that a lecturer's ability to engage in reading is determined by his or her age. The explanation is that lecturers read better when they are young; it increases during middle age and later declines in old age. Both young and old OTM lecturers would advance in their careers when they appropriately utilise reading skills.It means the age of an OTM lecturers would not automatically guarantee their promotion speed, remuneration growth and recognition in their career development.

The test of hypothesis three revealed that there is no significant difference in the relationship between reading skills and career development of low and high-rank OTM lecturers in polytechnics. The findings of Shin, Jung, and Kim (2014) revealed that rank does not influence career development. On the contrary, the findings of the present study are not in agreement with the findings of Hesli and Lee (2011) who stated that rank is related to and is a significant predictor of a lecturer's career success. In addition, the findings of Rawls (2018)reported that lecturers with higher ranks are more active in reading than their lower-ranked colleagues.

Conclusion

This study investigated the influence of reading skills on the career development of OTM lecturers in polytechnics in South West Nigeria. According to the findings, there exists a significant correlation between reading skills and the career success of lecturers. If lecturers hone reading skills and apply appropriate reading techniques, reading difficulties would be overcome. Thus, reading ability can be facilitated by mastering and applying reading skills. In other words, reading skills dimensions, which include decoding, vocabulary, fluency, and comprehension independently and collectively relate to the promotion speed,

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remuneration growth and recognition in the career development of OTM lecturers in public polytechnics. Additionally, the study explored the correlation between age and rank in the career development of OTM lecturers. This study has contributed to the literature on reading skills, but the findings were limited to lecturers in public polytechnics in South West Nigeria. The results may not be generalized to other parts of the country. Therefore, further studies need to be carried out on the influence of reading skills on lecturers' reading achievements in other geopolitical zones in Nigeria.

Recommendations

Based on findings and conclusion, the following recommendations are made

1. Office Technology and Management lecturers need to develop appropriate reading skills to sift, decode, extract and comprehend read materials for publications that will lead to their promotion speed, remuneration growth and recognition in their career development.
2. Efforts should be made by institutions and the government to enhance lecturers' reading skills by providing online and offline reading materials and a conducive environment for reading

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SOCIAL ENTREPRENEURIAL SELF-EFFICACY AND PERCEIVED SOCIAL SUPPORT AS PREDICTORS OF BUSINESS EDUCATION STUDENTS' SOCIAL ENTREPRENEURIAL INTENTION IN EDO STATE

[1]Kennedy EDIAGBONYA [2]Friday Ekahe ABANYAM, [3]Gideon Daniel ODIBO, [4]Clement Imoyera ULOKO, & [5]Tracey Obehi UGURU
Department of Business Education, Faculty of Education, Ambrose Alli University, Ekpoma, Edo State
*Corresponding Author: ken@aauekpoma.edu.ng
+2347037558574

Abstract

Amidst escalating social challenges and widespread graduate unemployment, the imperative of exploring alternative employment avenues through entrepreneurial endeavors aimed at addressing societal issues becomes indispensable. This study investigates the influence of social entrepreneurial self-efficacy and perceived social support on the intention of business education students in Edo State to engage in social entrepreneurship. The research posed two guiding questions and formulated two corresponding hypotheses, tested at a significance level of 0.05. Employing a correlational survey research design, the study encompassed a population of 382 business education students from the University of Benin and Ambrose Alli University, Ekpoma. The research utilized a questionnaire titled "Social Entrepreneurial Self-Efficacy, Perceived Social Support and Social Entrepreneurial Intention Questionnaire (SEPSSEIQ)", validated by two experts. Reliability analysis, using Cronbach's alpha, yielded a coefficient of 0.81 after administration to 15 business education students at Delta State University, Abraka. Data collected were analyzed through simple linear regression. Results indicated that social entrepreneurial self-efficacy significantly predicts the intention of business education students in Edo State to engage in social entrepreneurship (R^2 = .065, F (1, 242) = 16.826, P < .05, t = 4.102, β = .255). Additionally, perceived social support emerged as a significant predictor of students' social entrepreneurial intention in the state (R^2 = .050, F (1, 242) = 12.863, P < .05, t = 3.586, β = .225). Consequently, the study recommends an emphasis on the practical component of social entrepreneurship education programs to foster greater inclination among individuals towards venturing into business.

Keywords: Business education, social entrepreneurial self-efficacy, social support, social entrepreneurship, and social entrepreneurial intention

Introduction

Social Entrepreneurship (SE) is a novel field that is increasingly gaining attention from researchers and academics with a view to addressing social problems. Before now, entrepreneurship education has been introduced as a compulsory course to be offered by all undergraduates irrespective of their disciplines or specializations (Ediagbonya, 2013; 2022a; 2022b 2022c). The main reason for the introduction of entrepreneurship education was to check the increasing level of unemployment, empowering the learners with the competency needed to create jobs and to reduce the poverty level in the nation (Ediagbonya, 2022a). The teaching of entrepreneurship education fosters social entrepreneurship.

Social entrepreneurship has continued to attract research interest across the globe. The roots of social entrepreneurship lie in the evolution of the private business sector. Though for a long time, the symbiosis of government, business and non-profit organizations addressed the needs, yet inequalities and loopholes still existed, particularly in the under-developed nations (Tiwari, Bhat, & Tikoria, 2017; Ediagbonya, 2022c). Social entrepreneurship is a process that begins with perceived social opportunity, transfers it into an enterprise model, determines and achieves the wealth essential to execute the enterprise, initiates and grows

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the enterprise and yields the future upon goal achievement of the enterprise's goal (Tiwari, Bhat, & Tikoria, 2017). Social entrepreneurship can be the best healer for our society, as it is the first and fore most a practical response to unmet individual and societal needs', as well as it is the simultaneous pursuit of economic, socialand environmental goals by enterprising ventures (Haugh, 2007; Tran, & Korflesch, 2016; Ruiz-Rosa, Gutierrez-Tano, & Garcia-Rodriguez, 2020). Social entrepreneurship entails the utilization of innovation tosolve social problems (Sivathanu, & Bhise, 2013; Ruiz-Rosa, Gutierrez-Tano, & Garcia-Rodriguez, 2020; Hattab, 2022). Social entrepreneurship is described as the use of innovative means to create and exploit opportunities that yield sustained solutions to social problems. Similarly, Tran and Korflesch (2016) stressed that social entrepreneurship aims at creating social value or addressing social issues by innovative solutions. Individual intention to launch social entrepreneurship is borne out of the desire to contribute meaningfully to the development of the society via socio-economic strategies.

Social Entrepreneurial Intention (SEI) can be defined as the decision made by an entrepreneur to create a new business in creating social changes. Social entrepreneurial intention is described as individual's intention to create an innovative business venture that yields sustained solutions to social problems. In addition, it is meant as a state of mind such as a desire, a wish and a hope that steers the endeavor of entrepreneur towards a new business concept (Rozar, Razik, Sidik, & Bahrein, 2020). This is in agreement with Tran and Korflesch (2016) that summarized social entrepreneurial intention as a rooted belief, catalyst, desire, determination and engagement for an entrepreneur or a person to assemble a social enterprise. The need to venture into social entrepreneurship is often influenced by several factors such as social entrepreneurial self-efficacy and perceived social support (Hockerts, 2018).

Social Support (SS) is understood as the resources that people obtain from their social relationships and use when they face difficulties (Kim et al., 2013; Nielsen, 2020). Sarason et al. (1987) defined social support asthe Prior research demonstrates how support obtained from social surroundings has behavioural consequences and affects individual's likelihood of entering the entrepreneurial process and performing during it. Pierce et al (1996) described social support as instrumental support and emotional support. The author further stressed that instrumental support is provision of help or service as well as information and advice; while emotional support is understood as individuals' encouragement of others and expression of love and liking. In a similar vein, Tardy (1985) classified social support as available and enacted social support. Available support refers to the perceived quantity and quality of support the individual has access to; while enacted support refers to the actual utilization and expression of support. Sarason et al (1987) defined social support as the intensity of interaction of an individual with his/her friends and family to whom he/she feels attached. Generally, social support refers to the perceived belief and expectations a person has regarding the advice, guidance and assistance that he/she will obtain from his/her social group. Social supportgoes beyond expectations to actually provide an enabling social environment that encourages and fosters entrepreneurial behaviours. For example, it is one thing for family/friends to expect an individual to becomean entrepreneur versus those that go further to provide start-up finance and technical support for the individual's new venture.

Social support helps prospective entrepreneurs in setting up and operating their business (Leon, descals, & Deminguez, 2007). According to Levesque (2014), social support can be obtained in the form of instrumental support (e.g. tangible resources, material aid), appraisal/informational support (e.g. advice, guidance, and feedback), emotional support (e.g. expression of care, the reassurance of worth, empathy, affection) or financial support (e.g. financial assistance in the form of loans or gifts). Studies (Ismail et al. 2013; Sahban, Ramalu, & Syahputra, 2016) have categorized social support into two main dimensions (support by family; and support by peer groups). The social support obtained from family and friends is vital for translating a person's belief about their capability to accomplish a set of tasks and increases a person motivation and desire to start a business (Lee et al, 2011; Neneh, 2020). This social support received by prospective entrepreneurs has a way of boosting the entrepreneurial self-efficacy of individuals in launching anentrepreneurial venture

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Self-efficacy is not specific to a particular person but is associated with a particular challenge or related tasksin a specific domain (Bandura, 1977). For example a person may have a high sense of self-efficacy related to their competence in job search, but low self-efficacy related to mathematical ability (Zhang et al, 2020). Entrepreneurial self-efficacy can be defined as the strength of a person's self-confidence that he/she is able to successfully carryout various entrepreneurial roles and tasks (Amofah et al, 2020); roles and tasks in entrepreneurial activities including innovation, marketing, management, risk-taking and finance related to their line of business (Newman et al. 2019). ESE is similar to the Social Entrepreneurial Self-Efficacy (SESE) except for the fact that SESE has emphasis on the social context. Social entrepreneurial self-efficacyrefers to a person's perception of their ability to be an entrepreneur (Boyd & Vozikis, 1994). SESE expressesthe strength of an individual's belief that he or she has the skills and ability to perform the roles and tasks ofa successful social entrepreneur (Zhang et al, 2020).

There has been increasing research interest in the field of social entrepreneurship with a view to establishinga relationship among social entrepreneurial self-efficacy, social support and social entrepreneurial intention. Scholars have empirically established a link between social entrepreneurial self-efficacy and social entrepreneurial intention. The studies by Mair and Noboa (2006), Akhter, Hossain and AlAsheq (2010), Hockerts (2015), Cavazos-Arroyo, Puerite-Diaz and Agarwal (2017) found that social entrepreneurial self-efficacy significantly predicted social entrepreneurial intention. Recent studies by Tiwari, Bhat and Tikoria (2017), Aure (2018a, 2018b), Rambe and Nodofirepi (2019), and Kruse (2019) revealed that social entrepreneurial self-efficacy is a significant predictor of social entrepreneurial intention. In an empirical study conducted by Akhter, Hossain and AlAsheq (2010), Hockerts (2017), Aure (2018a), and Rambe and Nodofirepi (2019), the authors found that social support is a significant predictor of social entrepreneurial intention. The study by Kruse (2019) also established a positive relationship between social support and social entrepreneurial intention. However, the study did not find a significant relationship between social support and social entrepreneurial intention. The majority of the research done so far, according to the review, was done outside the scope of this topic, and there are few or no studies connecting social entrepreneurial self-efficacy, and social support with Business education students' social entrepreneurial intention in Edo State. By examining social entrepreneurial self-efficacy and social support as predictors ofBusiness education students' social entrepreneurial intention in Edo State, this study has significantly filled a gap in the literature.

Purpose of the Study

The main purpose of the study was to ascertain the extent to which social entrepreneurial self-efficacy and perceived social support predict business education students' social entrepreneurial intention in Edo State. Specifically, the study sought to find out if:

1. social entrepreneurial self-efficacy is a significant predictor of Business education students' social entrepreneurial intention in Edo State.
2. perceived social support is a significant predictor of Business education students' social entrepreneurial intention in Edo State.

Research Questions

The following research questions were raised to guide the study.

1. Is social entrepreneurial self-efficacy a significant predictor of Business education students' social entrepreneurial intention in Edo State?
2. Is perceived social support a significant predictor of Business education students' social entrepreneurial intention in Edo State?

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Hypotheses

The following hypotheses were formulated to guide the study.

1. Social entrepreneurial self-efficacy is not a significant predictor of Business education students' social entrepreneurial intention in Edo State.
2. Perceived social support is not a significant predictor of Business education students' social entrepreneurial intention in Edo State.

Theoretical Underpinnings

Social Cognitive Theory

Social cognitive theory (SCT) lends credence to this study. Students who take an entrepreneurship class may want to launch a business after graduation, presuming that this is a deliberate and well-considered decision. According to the SCT (Bandura, 1977; Ediagbonya et al, 2024a), intention is a stronger predictor of a person's choice of career. As a result, finding entrepreneurial chances is a better indicator of choosing entrepreneurship as a career (e.g., Bacq et al., 2017). To understand why students might choose to start theirown enterprises after graduating from college, it is essential to understand the social cognitive influences on EI. SCT is the most suitable theory for this study, in our opinion, because it provides a comprehensive framework for analyzing one's actions and their results in relation to personal, cognitive, behavioral, and environmental elements (Ediagbonya et al 2024a; Ediagbonya et al, 2024b). Using SCT, it is possible to discover students' aspirations to start their own business, which may be influenced by the combination of environmental inputs, individual characteristics, and behavioral outcomes (Biraglia & Kadile, 2016).According to SCT, people act in ways that help them achieve their goals. Social entrepreneurial self-efficacyand social supports are researched in terms of a variety of personal and environmental characteristics respectively (Biraglia & Kadile, 2016; Bacq et al., 2017). In terms of behavioral outcomes, we look into the students' plans to launch their own firms after graduation, or EI. The three-way reciprocal interplay betweena person's personal inputs, their environment, and their past experiences is what leads to behavior, accordingto SCT.

In the context of the current study, past experiences could be seen as previous learning opportunities that students gained as a result of exposure to required entrepreneurship education. These learning opportunities could have an effect on students' future EI by increasing their social entrepreneurial self-efficacy. This would suggest that graduates need to know the steps to take and how to execute it in order to launch their own enterprises. As a result, the more often students participate in or carry out particular entrepreneurial development activities or actions, the more likely it is that they will have the ability and capacity to launch and sustain an entrepreneurial venture. According to the current study, one sort of behavior that could be influenced by students' experiences engaging in entrepreneurial activities is their decision to pursue an entrepreneurial or business career after graduating from college. Based on the aforementioned, this theoretical framework emphasizes the critical individual inputs (contextual elements), particularly social entrepreneurial self-efficacy and the environmental inputs of social support as the fundamental predictive variables driving SEI (Ediagbonya et al, 2024b).

Method

This study utilized the correlational survey design since it was basically an enquiry into the extent to which social entrepreneurial self-efficacy and perceived social support predicts business education students' social entrepreneurial intention in Edo State. The population of this study consists of all business educationstudents in University of Benin and Ambrose Alli University, Ekpoma, Edo State. The total population was 382. The entire population was used for the study. Since the entire population was used, there was no sampling technique. The instrument used for this study was a structured questionnaire. The questionnaire was used in eliciting information from the respondents and it was titled: *Social Entrepreneurial Self-*

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Efficacy, Perceived Social Support and Social Entrepreneurial Intention Questionnaire (SEPSSEIQ). It was divided into two parts – A and B. Part A was made up of the demographic variables of the respondents suchas sex and institution; while Part B was made up of thirteen (13) opinion statements designed in a Likert Scale showing: Strongly Agree (SA). Agree (A), Neutral (N), Disagree (D), and Strongly Disagree (SD) weighted 5, 4, 3, 2, 1 respectively. The social entrepreneurial self-efficacy component was made up of three items adapted from Hockerts (2015). One of the items in the instrument reads 'I am convinced that I personally can make a contribution to address societal challenges if I put my mind to it'. The perceived social support component was made up of three items adapted from Hockerts (2015). One of the items in the instrument reads 'If I planned to address a significant societal problem, people would back me up'. The Social Entrepreneurial Intention (SEI) component was made up of three items adapted from Hockerts (2017). One of the items in the instrument reads 'I expect that at some point in the future, I will be involvedin launching an organization that aims to solve social problems'.

The instrument was subjected to content and face validity. It was given to experts in Business education and their inputs to the draft instrument were incorporated into the final questionnaire. The cronbach alpha was used in ascertaining the reliability of the instrument after administering the instrument to 20 business education students in Delta State University, Abraka, Delta State and it yielded a coefficient of .81. The researcher utilized the online method of data collection via sharing of google form links to respondents. The researcher was able to retrieve the 244 questionnaires from the respondents which was equivalent to 63.9 per cent of the population. The Statistical Package for Social Sciences (SPSS) version 23.0 was used in the analysis. The hypotheses 1 and 2 were tested using Simple Linear Regression Analysis.

Results

This section is basically structured to display the results from the analysis and the discussion of same.

Table 1 Linear regression estimates of the direct relationship between the study variables

Pathways	SE(β)	F	T	R^2	P
SESE → SEI	.065 (1.219)	16.826	4.102	.065	.000
SS → SEI	.056 (.225)	12.863	3.586	.050	.000

Note:– SS – Social Support; SESE – Social Entrepreneurial Self-Efficacy; SEI – Social EntrepreneurialIntention; R^2 – R-squared

Source: Researchers' Fieldwork, 2024

Table 1 reveals that SESE (F (1, 242) = 16.826, SE = .065, β = .255, t = 4.102, 95% had a significant positive influence on SEI. The R-square (.065) reveals that 6.5% of the variance in SEI is influenced by SESE. All in all, the results confirmed the expectations of the author. Therefore, hypothesis 1 is rejected in the study. That is, Social entrepreneurial self-efficacy is a significant predictor of Business education students' social entrepreneurial intention in Edo State.

Table 1 reveals that SS (F (1, 242) = 12.863, SE = .056, β = .225, t = 3.586, 95% had a significant positive influence on SEI. The R-square (.050) reveals that 5.0% of the variance in SEI is influenced by SS. All in all, the results confirmed the expectations of the author. Therefore, hypothesis 1 is rejected in the study. Thatis, social support is a significant predictor of Business education students' social entrepreneurial intention in Edo State.

Discussion of Findings

The analysis of hypothesis one revealed that social entrepreneurial self-efficacy is a significant predictor of business education students' social entrepreneurial intention in Edo State. It means that when business

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education students perceived their skills and abilities to be suitable in business, they will be more willing to venture into business start-up that will help in addressing societal problems. The finding corroborates the findings by Mair and Noboa (2006), Akhter, Hossain and AlAsheq (2010), Hockerts (2015), Cavazos- Arroyo, Puerite-Diaz and Agarwal (2017) found that social entrepreneurial self-efficacy significantlypredicted social entrepreneurial intention. Studies by Tiwari, Bhat and Tikoria (2017), Aure (2018a, 2018b), Rambe and Nodofirepi (2019), and Kruse (2019) also corroborates this finding in their various studies

The analysis of hypothesis two revealed that perceived social support is a significant predictor of business education students' social entrepreneurial intention in Edo State. It therefore means that when business education students are hopeful of receiving supports from family and peers, they will be more encouraged and willing to venture into business start-ups that will help to address the societal challenges and problems. This finding corroborates the findings by Akhter, Hossain and AlAsheq (2010), Hockerts (2017), Aure (2018a), and Rambe and Nodofirepi (2019) found that perceived social support significantly predicted social entrepreneurial intention.

Conclusion

The findings suggest that social entrepreneurial self-efficacy and perceived social support play significant roles in predicting the social entrepreneurial intention of business education students in Edo State. It was further observed that both social entrepreneurial self-efficacy and social support independently contribute tothe prediction of students' intention to engage in social entrepreneurship in the state. These results indicate the importance of incorporating practical aspects of business formation into social entrepreneurship or entrepreneurship-related courses. By providing students with the necessary competencies, educators can enhance their social entrepreneurial self-efficacy, thus influencing their inclination towards launching a business. Moreover, the findings highlight the various avenues through which aspiring social entrepreneurs can seek support for establishing and succeeding in their ventures. Overall, this study fills an important empirical and literature gap in the field and contributes significantly to our understanding of the factors influencing social entrepreneurial intention among business education students.

Recommendations

Based on the findings, the following recommendations are therefore put forward:

i. The practical component of social entrepreneurship education programme should be emphasized in order to make the people more inclined in venturing into business;
ii. There is urgent need for curriculum review in higher institutions with a view to emphasizing social entrepreneurship;
iii. Would-be entrepreneurs should build a formidable social network with a view to accessing support from family and peer groups; and
iv. Researchers should be encouraged to conduct more studies in the area of social entrepreneurship..

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ACCOUNTING SKILLS AND ITS RELEVANCE REQUIRED BY BUSINESS EDUCATION GRADUATES FOR SUSTAINABLE ENTREPRENEURSHIP

[1]Henrietta Abhameso OLUMESE [2]Joy Onunna ALIMNU

Department of Vocational and Technical EducationFaculty
of Education
University of Benin
Benin City

Abstract

The success of businesses relies heavily on the competencies of their personnel, particularly graduates witha background in business education. Accounting skills play a critical role in ensuring the effective management of financial resources and decision making. This paper focuses on the essential accounting skills of costing, inventory management, bookkeeping and budgeting and their profound impact on driving business success and sustainability. Through a comprehensive review of relevant literatures, the paper underscores the relevance of these skills in optimizing financial operations and enhancing decision-making process. Costing skills enable accounting professionals to accurately allocate costs to product and services, aiding in pricing strategies and cost control measures. Inventory management skills are crucial in managing stock levels, minimizing carrying costs, and meeting customer demands efficiently, contributing to improved profitability. Bookkeeping skill ensures accurate and timely recording of financial transactions, forming the foundation for informed decision-making and regulatory compliance. Lastly, budgeting skill allows organizations to plan and allocate resources effectively; ensuring financial stability and long-term growth. The paper concludes that, although these accounting skills are relevant for business sustainability, the dynamic nature of the business environment with regulatory changes, evolving business models and fast paced technological advancement require that business education graduates need continuous learning, adaptability, and ethical awareness in order to succeed in today's business world. The paper recommends that business education graduates should stay updated with the latest trends, technologies and regulatory changes in account and finance through professional development courses, workshops and certifications. Institution of business education should update their curriculum to integrate emerging topics like data analytics, sustainability accounting, and advanced financial technologies. Also, institution of business education should foster collaboration with industry partners to provide students with internships mentorshipprograms and networking opportunities.

Keywords: Accounting skills, Business Education, Graduate, and Entrepreneurship

Introduction

Business education is an aspect of vocational education that prepares student to function efficiently and effectively in administrative positions. According to Core Curriculum and Minimum Academic Standards (CCMAS) for Nigerian Universities (2022), business education is a specialized profession designed to provide students with knowledge, skills and competence for employability and advancement in office occupations, pedagogical skills in teaching business subjects at different levels of educational system and being self-employed or employer of labour. As an aspect of vocational education and training, business education is designed to fill the gap between knowledge and practice by exposing students to general education as well as specialized areas in accounting, entrepreneurship, marketing and office management.

Business education programme provides individuals with relevant knowledge, skills and competencies to be self-reliant and economically self-sufficient for gainful employment, meaningful living, and to contribute tothe development of the society. Core Curriculum and Minimum Academic Standards (CCMAS) for Nigerian Universities (2022) outlines the objectives of business education as follow: to provide opportunity for practical job preparation or vocational studies in order to make graduates render effective and efficient

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services in office, distributive and service occupations; to prepare students, based on interest and aptitudes needed to enter into a business occupation, advance and profit in it; to provide opportunities for students to develop an understanding of business and economic system of the nation so as to enable them to participate actively as producers and consumers of goods and services; to develop in students the basic awareness of the contribution which business and office employee makes to the nation's economy; to develop and improve personal qualities and attitude of students as required in personal and employment situation; to serve as a guide for individual student for suitable placement in business and office employment; to enable students to have career consciousness and economic understanding of the free enterprise system; to prepare student to assume the role of building a future generation through teaching and knowledge impartation; to prepare students for leadership position in both public and private life.

In the same vein, Edokpolor and Egbri (2017) summarized the goals of business education into two: education for business and education about business. Education for business refers to the specific training and learning programs that prepare individuals for careers in the business world. It focuses on practical skills,knowledge and techniques required for various business roles such as accounting, marketing, entrepreneurship, finance and management. On the other hand, education about business involves a more theoretical and academic understanding of the business environment. It includes studying various aspects ofbusinesses, their structures, functions and the economic, social and ethical implications of business practices. Therefore, education for business is more practical and career-oriented, while education about business is more theoretical and provides a comprehensive understanding of the business world as a whole.

In order to thrive in business, accounting skills are very vital. Accounting skills refer to a set of abilities and competencies required to effectively handle financial information, transactions and reporting. Abuka, Tunga and Nwandu (2020) define accounting skills as basic competencies required by a person in order to function competently, confidently, and successfully in carrying out the task of recording daily business transactions. Examples of these skills includes, costing, inventory management, bookkeeping, budgeting, among others.

- Costing skill involves the process of determining the cost of producing goods or providing services (including both direct and indirect costs) in order for entrepreneurs to understand the profitability of their products or services and to set appropriate pricing strategies.
- Inventory management skill involves the planning, tracking, and control of inventory to ensure sufficient stock levels, minimize carrying costs, and meet customer demand.
- Bookkeeping skill involves the systematic recording, organizing, and tracking of financial transactions within a company. It enables entrepreneurs to maintain an up-to-date and comprehensive record of their business's financial activities, make informed decisions, comply withlegal requirements, and evaluate their financial performance.
- Budgeting skill involves the process of planning, organizing, and controlling financial activities, including revenue generation, expense allocation, and cash flow management.

Studies by Nwaigburu and Eneogwe (2013); Obiamaka, Samuel and Anthony (2015); Okoye, Uniamikogbo and Adeusi (2017) confirmed that accounting skills are crucial to business success. Therefore, it is imperativefor business education graduates to acquire competence in requisite accounting skills for business success and sustainability.

However, despite the great prospects that business education holds in promoting economic growth and national development, many business graduates are unemployed and those who are employed are unable to sustain their businesses due to incompetence in requisite accounting skills needed to sustain any business orto function efficiently and effectively in business. Edokpolor and Owenvbiugie (2017) attribute this problem to a failed system of education in Nigeria, and further remarked that the high rate of poor-quality business graduates is as a result of long years of neglect of business education by the government, underfunding, outdated curriculum and lack of state-of-the-art facilities. In an earlier study by Anyaeneh and Nzegwu (2015), the problem of shortage of qualified business teachers, poor remuneration and motivation of teachers, poor public image of business education programme, inadequate industrial attachment among others were

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also identified as part of the reason why there are poor-quality business graduates today who lack basic accounting skills. Based on these findings, the question of what accounting skills are required by business education graduate for sustainable entrepreneurship becomes pertinent. It is therefore the aim of this paper to determine and conceptually analyze basic accounting skills that are required by business education graduates for sustainable entrepreneurship. By sustainable entrepreneurship, I mean a multilevel phenomenon connecting social, environmental and economic dimensions between entrepreneurial process market transformation as well as large scale societal development (Schaltegger, 2020).

Concept of Business Education

Business education refers to the academic discipline and professional training that equips individuals with knowledge, skills and competencies related to various aspects of business management, entrepreneurship, finance, marketing, operations and other related fields. Business education can take place in different settings, including universities, colleges, vocational schools, and professional development programs. Its goal is to prepare individuals for careers in the business world by providing them with the necessary knowledge, skills, and tools to navigate the complexities of the modern business environment.

Recent studies highlight the importance of business education in fostering entrepreneurship and driving economic growth. According to a report by the Global Entrepreneurship Monitor (GEM), business education plays a significant role in developing entrepreneurial intentions and capabilities. It provides individuals withthe knowledge and skills to identify opportunities, develop business plans, and manage resources effectively. For instance, a study by Liñán and Fayolle (2019) found that business education positively influenced entrepreneurial self-efficacy and intentions among students. Considering the changing landscape of technology and digitalization. The integration of emerging technologies, such as artificial intelligence (AI) and data analytics, have become increasingly crucial in business education. As stated by Hasan and Bae (2021), incorporating technology-related topics and tools into business education programs enhance students' readiness to meet the demands of the digital economy. This highlights the need for business schools to incorporate courses or specializations that address these emerging trends and equip students with relevantskills.

Business education promotes ethical and responsible business practices. Recent scandals and corporate misconduct have underscored the importance of ethical decision-making in the business world. Business education institutions are focusing on incorporating ethics courses and discussions to instill ethical awareness and responsibility in future business leaders. A study by Omer, He, Liu and Zhang, (2020) emphasizes the role of business education in fostering ethical behavior among students, which ultimately contributes to building a more sustainable and responsible business environment. Therefore, it is importantto conclude that business education plays a critical role in preparing individuals for careers in business such as office occupation, teaching business subject and fostering entrepreneurship. adapting to technological advancements, and promoting ethical business practices. Its relevance and impact continue to evolve in response to the dynamic nature of the global economy and the demands of the business landscape.

Concept of entrepreneurship

Entrepreneurship is a multifaceted and dynamic concept that plays a crucial role in economic development and innovation. It involves the identification and pursuit of opportunities to create, manage, and grow a new venture or business with the aim of generating value, solving problems, and satisfying market needs (Kuratko, 2020). Entrepreneurs are individuals who take calculated risks, exhibit creativity, and display a proactive mindset in building and expanding their enterprises (Hisrich, Peters, & Shepherd, 2020). One key aspect of entrepreneurship is its contribution to job creation and economic growth. According to Acs and Szerb (2017), new and young firms are major drivers of job creation, accounting for a significant portion of net new employment in many economies. The willingness of entrepreneurs to venture into unexplored territory and establish innovative enterprises often leads to the creation of new job opportunities, which helps reduce unemployment rates and stimulate economic growth. Entrepreneurship also fosters technological advancements and innovation. Fritsch and Wyrwich (2018) emphasize that entrepreneurs are more likely to

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introduce new products, services, and processes, contributing to overall technological progress and industry development. As they continuously seek ways to improve efficiency and meet consumer demands, entrepreneurs play a pivotal role in driving technological innovation and enhancing productivity. Entrepreneurs bring forth new ideas, products, and services, creating value for society while facing the challenges of risk and uncertainty. Governments and policymakers often recognize the significance of entrepreneurship and develop policies and support mechanisms to encourage and nurture entrepreneurial activities (Dutta & Sobel, 2019). By fostering a conducive environment for entrepreneurship, societies can harness the potential of innovative individuals to fuel economic growth and improve the quality of life for their citizens.

Entrepreneurship is not without challenges, however. Starting and growing a new business requires access to resources such as capital, knowledge, and networks. Scholar like Shane (2017) have emphasized the significance of an entrepreneur's network and social capital in accessing crucial resources. A strong networkcan provide access to funding, knowledge, mentorship, and potential business partners, enhancing the likelihood of a venture's success. Entrepreneurial ventures are often characterized by a degree of uncertainty and risk. Lumpkin and Lichtenstein (2019) suggest that successful entrepreneurs possess a high tolerance for ambiguity and are skilled at managing and mitigating risks. Their ability to navigate through uncertainty and adapt to changing circumstances is critical for the survival and growth of their businesses.

Sustainability is an emerging concept in entrepreneurship that combines the principles of entrepreneurship with a focus on environmental and social sustainability. It encompasses the identification and exploitation of business opportunities that not only generate economic value but also contribute to the well-being of society and the preservation of the planet (Schaltegger, Lüdeke-Freund, & Hansen, 2018). Sustainable entrepreneurs aim to create innovative and responsible business models that integrate environmental and social considerations into their core operations.

Recent trends in entrepreneurship include:

1. Digital Transformation: The rapid advancement of technology led to increased digitization and automation of various industries, giving rise to tech-based startups and digital business models (Choudhary, Harding & Tiwana, 2020).
2. Remote Work and Collaboration: The COVID-19 pandemic accelerated the adoption of remote work and virtual collaboration tools, providing entrepreneurs with opportunities to build global teams and access talent from diverse locations (Stewart & Standford, 2019).
3. Fintech and Alternative Finance: The FinTech revolution has democratized access to finance, with startups leveraging technology to offer innovative financial products and services (Zohar & Markovitch, 2018).
4. Innovative and Disruptive Technologies: Entrepreneurial ventures are increasingly focusing on disruptive technologies such as blockchain, Internet of Things (IoT), and sustainability-driven innovations to create competitive advantages (Schwab, 2018).

The contemporary trends shaping entrepreneurship emphasize the integration of technology, sustainability and innovation in driving entrepreneurial ventures and addressing global challenges.

Accounting Skills Required by Business Education Graduates

Accounting skills are a set of competencies essential for professionals working in the field of finance and accounting. These skills enable individuals to effectively manage financial information, analyze data and provide valuable insights to support decision making (Weygandt, Kimmel, & Kieso, 2020). Examples include, costing, inventory management, bookkeeping, budgeting amongst others. This paper shall focus onthese four.

Costing Skills: Costing is a crucial accounting skill that entrepreneurs need to possess in order to effectively manage their business operations and make informed decisions. Costing involves the process of determining

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the cost of producing goods or providing services, including both direct and indirect costs. This information is essential for entrepreneurs to understand the profitability of their products or services and to set appropriate pricing strategies. The importance of costing as an accounting skill are as follows:

i. Costing enables entrepreneurs to accurately calculate the cost of production for their goods or services. By analyzing the direct costs, such as raw materials and labor, as well as the indirect costs, such as overhead expenses and administrative costs, entrepreneurs can determine the total cost of producing each unit. This information is crucial for pricing decisions, as it allows entrepreneurs to set prices that cover their costs and ensure profitability (Drury, 2020).
ii. Costing helps entrepreneurs in assessing the profitability of different products or services. By allocating costs to individual products or services, entrepreneurs can identify which ones are generating the highest profit margins and contributing the most to their overall financial performance. This analysis enables entrepreneurs to focus their resources on the most profitable offerings and make informed decisions regarding product mix and resource allocation (Collier & Agyei-Ampomah, 2016).
iii. Costing assists entrepreneurs in evaluating the efficiency of their business processes and identifying areas for cost reduction. By analyzing the different cost components, entrepreneurs can identify cost drivers and areas where expenses can be minimized without compromising the quality of products or services. This helps in improving operational efficiency and reducing unnecessary expenditures, leading to higher profitability (Eldenburg, Wolcott, & Chen, 2019).
iv. Costing provides entrepreneurs with valuable information for budgeting and financial planning purposes. By understanding the costs associated with various business activities, entrepreneurs can prepare accurate budgets, set realistic financial goals, and make informed decisions regarding resource allocation. Costing data serves as a foundation for forecasting future costs and revenues, aiding entrepreneurs in making sound financial plans (Langfield-Smith, Thorne, & Hilton, 2019).
v. Costing as an essential accounting skill for entrepreneurs enables them to determine the cost of production, assess product profitability, identify areas for cost reduction, and support budgeting and financial planning. By utilizing costing techniques effectively, entrepreneurs can make informed decisions regarding pricing, resource allocation, and overall business strategy. Possessing strong costing skills empowers entrepreneurs to effectively manage their business operations and enhance financial performance.

However, the dynamic nature of the modern business environment with growing technological innovations constitutes a serious challenge for cost accountants. Drury (2018) opined that traditional costing methods may become outdated with the advent of advanced technologies like AI and automation. Hence, there is the vital need for continuous learning, adaptation and innovation in the field of costing to address the complexities of the modern business landscape. Another notable challenge to costing is complex supply chains. According to Kaplan and Atkinson (2015), costing becomes more intricate with complex global supply chains. Lastly, the constantly evolving nature of the business environment necessitates regulatory changes. Constantly evolving accounting standards and regulations can pose challenges in ensuring compliance and accurate costing (IFAC, 2018).

Inventory Management Skill: Inventory management is a crucial accounting skill that entrepreneurs need to possess in order to effectively control and optimize their inventory levels. It involves the planning, tracking, and control of inventory to ensure sufficient stock levels, minimize carrying costs, and meet customer demand. The importance of this skill are as follows:

i. Effective inventory management enables entrepreneurs to maintain optimal inventory levels. By accurately forecasting demand, monitoring sales trends, and analyzing historical data, entrepreneurs can determine the appropriate quantity of inventory to keep on hand. This helps in avoiding stockouts that can result in lost sales and dissatisfied customers, as well as preventing overstocking that ties up valuable capital (Agrawal, Srikant, & Xu, 2018).

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ii. Inventory management helps entrepreneurs minimize carrying costs associated with inventory. Carrying costs include expenses such as storage, insurance, obsolescence, and the opportunity costof tying up capital in inventory. By implementing efficient inventory management practices, such as just-in-time (JIT) inventory systems and economic order quantity (EOQ) models, entrepreneurs can reduce carrying costs and improve overall profitability (Ranjan & Mittal, 2019).
iii. Inventory management plays a crucial role in ensuring accurate financial reporting. Proper valuation of inventory is essential for the preparation of financial statements, including the balance sheet and income statement. Entrepreneurs need to understand different inventory valuation methods, such as the first-in, first-out (FIFO) and last-in, first-out (LIFO) methods, and apply them appropriately to reflect the true value of inventory on their financial statements (Weygandt, Kimmel, & Kieso, 2019).
iv. Effective inventory management enables entrepreneurs to identify slow-moving or obsolete inventory and take appropriate actions. By regularly analyzing inventory turnover ratios and conducting periodic inventory audits, entrepreneurs can identify items that are not selling well or are no longer in demand. This allows them to implement strategies such as discounts, promotions, or product phase-outs to minimize inventory holding costs and maximize overall profitability (Wisner, Tan, & Leong, 2019).
v. Inventory management is closely linked to efficient supply chain management. Entrepreneurs needto establish strong relationships with suppliers, negotiate favorable terms, and coordinate order fulfillment to ensure timely delivery of inventory. Effective inventory management ensures that the right products are available when needed, reducing lead times and improving customer satisfaction (Chopra & Meindl, 2019).
vi. Inventory management as a critical accounting skill for entrepreneurs enables them to maintain optimal inventory levels, minimize carrying costs, ensure accurate financial reporting, identify slow-moving inventory, and enhance supply chain efficiency. By effectively managing their inventory, entrepreneurs can improve customer satisfaction, reduce costs, and enhance business performance.

Just like costing, Inventory management is also affected by the evolving business landscape and technological advancements. For instance, accurate demand forecasting is crucial for efficient inventory management, but it becomes challenging in the face of market uncertainties and changing consumer behaviour (Wang, 2019). Also, there is sustainability concerns. Kerlin (2019) states that balancing inventorylevels to meet demand while minimizing waste and promoting sustainability poses new challenges for inventory management. Concerning data security and privacy, Kshetri (2018) remarked that managing inventory data while ensuring data security and privacy in line with regulations such as GDPR is quite challenging.

Bookkeeping Skills: Bookkeeping is a fundamental accounting skill that plays a crucial role in the successof entrepreneurs and their businesses. It involves the systematic recording and organizing of financial transactions, making it easier for entrepreneurs to monitor the financial health of their businesses, make informed decisions, and comply with tax regulations. The following are importance of bookkeeping skills:

i. Bookkeeping allows entrepreneurs to keep track of their income, expenses, and overall financial performance. It provides real-time insights into the financial status of the business, enabling entrepreneurs to identify profitable areas and potential financial challenges (Ahmad & Ahmad, 2016). By having accurate and up-to-date financial records, entrepreneurs can make informed decisions about resource allocation, investment opportunities, and cost-cutting measures.
ii. Tax Compliance: Proper bookkeeping is essential for tax compliance, ensuring that entrepreneurs accurately report their income and expenses to tax authorities. It simplifies the process of preparing financial statements and tax returns, reducing the risk of errors and potential penalties (Khan, 2017). Timely and accurate tax reporting helps entrepreneurs avoid legal issues and maintain a good relationship with tax authorities.

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iii. Investor and Lender Confidence: When seeking funding from investors or loans from financial institutions, entrepreneurs need to demonstrate the financial stability and growth potential of their businesses. Reliable bookkeeping provides transparency and credibility, increasing the confidence of investors and lenders in the entrepreneur's ability to manage finances effectively (Ismail, Shaari,Isa, & Karim, 2018).

iv. Budgeting and Forecasting: Bookkeeping data serves as the foundation for creating budgets and financial forecasts. By analyzing historical financial data, entrepreneurs can project future trends and set realistic financial goals for their businesses (Abdullah, Taib, & Kamardin, 2020). This aids in effective financial planning and resource management.

v. Financial Analysis: Bookkeeping facilitates financial analysis by providing valuable information on profitability, liquidity, and overall financial performance. Ratios such as gross profit margin, current ratio, and debt-to-equity ratio can be calculated using bookkeeping data to assess the business's financial health and make strategic decisions accordingly (Ismail et al., 2018).

Bookkeeping is therefore a vital accounting skill for entrepreneurs that empowers them to monitor their financial status, make informed decisions, comply with tax regulations, gain investor and lender confidence, and engage in effective financial planning and analysis. Neglecting proper bookkeeping can hinder an entrepreneur's ability to succeed in the competitive business landscape.

Although Bookkeeping is a foundational skill, several contemporary challenges is of concern as a resultingof rapidly evolving business environment. Again, the advent of AI, machine learning, and automation tools is transforming traditional bookkeeping tasks, requiring professionals to adapt and upskill (Choi & Meek, 2019). Another notable challenge in Bookkeeping is skill Gap. There is a growing demand for bookkeepers with a broader skill set, including analytical and communication skills in addition to traditional bookkeepingexpertise (AICPA, 2020). Also, there is the challenge of Remote work. The shift towards remote work models presents challenges in terms of collaboration, supervision, and ensuring data accuracy and security (Brynjolfsson et al., 2020).

Budgeting skill: Budgeting is a fundamental accounting skill that entrepreneurs must possess to effectively manage their financial resources and make informed decisions. Budgeting involves the process of planning, organizing, and controlling financial activities, including revenue generation, expense allocation, and cash flow management. The importance of budgeting as an accounting skill for entrepreneurs are as follows:

i. Budgeting enables entrepreneurs to establish clear financial goals and objectives. By developing a budget, entrepreneurs can set targets for revenue generation, expense control, and profitability. A budget provides a roadmap for financial success and serves as a benchmark against which actual performance can be measured (Horngren, Datar, & Rajan, 2020). It allows entrepreneurs to focus their efforts, prioritize resources, and align financial activities with strategic priorities.

ii. Budgeting helps entrepreneurs in resource allocation and decision-making. A well-structured budget allows entrepreneurs to allocate financial resources effectively and efficiently across various business activities. It helps in determining the optimal allocation of funds to areas such as marketing, research and development, and operations. Budgeting also assists in evaluating investment opportunities and making decisions regarding resource acquisition or disposal (Collier & Agyei- Ampomah, 2016).

iii. Budgeting supports cash flow management and ensures the availability of adequate funds for day- to-day operations. By forecasting cash inflows and outflows, entrepreneurs can anticipate periods ofcash surplus or shortfall. This information enables them to take necessary actions, such as securing additional financing or adjusting expenses, to maintain sufficient liquidity and avoid financial crises (Drury, 2020). Effective cash flow management is essential for the smooth functioning and long- term sustainability of a business.

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iv. Budgeting facilitates performance monitoring and control. By comparing actual financial results tothe budgeted amounts, entrepreneurs can evaluate their performance and identify areas of variance. Budget variances provide valuable insights into the efficiency and effectiveness of business operations. Entrepreneurs can take corrective actions or make adjustments to their strategies based on these variances, ensuring that financial goals are achieved (Eldenburg, Wolcott, & Chen, 2019).

v. Budgeting enhances accountability and communication within the organization. By involving relevant stakeholders in the budgeting process, entrepreneurs can foster a sense of ownership and responsibility for financial outcomes. Budgets serve as a communication tool, enabling entrepreneurs to share financial goals, performance expectations, and resource requirements with employees, investors, and other stakeholders. This promotes transparency and alignment of efforts toward common financial objectives (Langfield-Smith, Thorne, & Hilton, 2019).

vi. With regards to sustainable entrepreneurship, budgeting enables entrepreneurs to integrate sustainability goals into financial planning, allocate resources to sustainable initiatives, monitor financial performance, manage risks, and enhance transparency. By incorporating sustainability into budgeting practices, entrepreneurs can ensure that their financial decisions align with their long- term sustainability objectives, contributing to the overall success and resilience of their businesses.

Budgeting faces contemporary challenges such as uncertainty and volatility, technological disruption, complex business models and data overload. The increasing unpredictability of global markets, exacerbatedby events such as COVID-19 pandemic, makes accurate forecasting and budgeting challenging as stated byAtrill and McLaney (2018). Also, rapid technological changes require businesses to invest in new technologies, affecting budget allocations and long-term financial planning.

Conclusion

The accounting skills of costing, inventory management, bookkeeping, and budgeting are crucial for the financial health and sustainability of businesses. The contemporary challenges facing these accounting skills such as technological advancements, regulatory changes and evolving business models, highlight the need for continuous learning, adaptability, and ethical awareness among business education graduates. By equipping themselves with updated knowledge, technical proficiency, and soft skills, graduates can navigate the complexities of the modern business landscape and contribute to sustainable business practices. Business education institutions play a crucial role in preparing graduates for these challenges by enhancing curricula, fostering industry partnerships

Recommendations

In order to navigate the complexities of modern business landscape and contribute to sustainable business practices, this paper recommends the following:

1. Continuous learning: Business education graduates should stay updated with the latest trends, technologies and regulatory changes in account and finance through professional development courses, workshops and certifications.
2. Adaptability: Business education graduates should cultivate a mindset of adaptability and resilienceto navigate uncertainties and rapid changes in the business environment.
3. Curriculum enhancement: Business education institutions should update their curriculum to integrate emerging topics like data analytics, sustainability accounting, and advanced financial technologies.
4. Practical training: Business education institutions should incorporate hands-on training, case studies, and real-world projects to bridge the gap between theoretical knowledge and practical application.
5. Industry Partnerships: Business education institution should foster collaboration with industry partners to provide students with internships mentorship programs, and networking opportunities.

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INFLUENCE OF UTILIZATION OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) ON ACADEMIC PERFORMANCE OF STUDENTS IN BUSINESS EDUCATION PROGRAMME

Helen Edowaye CHUKWUEMEKE

Department of Vocational and Technical EducationFaculty of Education
University of Benin, Benin City
E-mail: helen.chukwuemeke@uniben.edu
ORCID: 0009-0007-8933-3942
Phone: +2348086812494/ +2348051002744

Abstract

Information and Communication Technology encompasses a broad range of technologies and tools used to manage, store, transmit, and exchange information electronically. ICT includes both hardware (such as computers, smartphones, and servers) and software (applications and programs) as well as various communication technologies (like the internet, email, and social media platforms). the study uncovers the role of ICT in fostering self-directed learning, collaborative endeavors, and real-world relevance within the Business Education curriculum. To guide the researcher in carrying out this study, four research questions were raised and in a bid to answer the research questions, the descriptive survey research design was used. The population of the study comprised one hundred (100) 400 level business education students in the 2021/2022 Academic Session. A sample size of sixty respondents was used for the study, simple random sampling technique was used to select respondents. The research instrument used to collect data for the study was a structured questionnaire. The instrument was subjected to face validity and to determine the internal consistency of the instrument, a reliability test using Cronbach alpha method and the reliability coefficient of 0.75 was obtained. The study finds out that there is a significant positive correlation between ICT (Interactive Digital Whiteboards, Internet, Telephony and Recorded Broadcasting Technology) utilization and academic performance among Business Education students. Based on the findings it was concluded thatthat Information and Communication Technology has a high influence on the academic performance of Business Education students. It was therefore recommended that ICT usage should be encouraged in businesseducation programme.

Keywords: **Business Education, Academic Performance, Information and Communication Technology**

Introduction

Business education is a branch of education that involves teaching the skills and operations of the business industry. Business education programmes are housed in the Department of Vocational and Technical Education, Faculty of Education, in some other institutions they are housed in the Faculty of Vocational and Technical Education and while in some other universities stands on own, this structure of domiciliation reflects the eclectic nature of business education. According to Njoku in Chukwuemeke and Igbinedion (2021), the objectives of business education are to empower business education students with suitable knowledge, values and skills to be able to perform particular functions in order to be self-reliant; to contribute optimally to the social and economic development of the nation; and for them to be appreciativeof the world around them. If information and technology communication is embedded in business education

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programme, it will enhance the achievement of the objectives that would promote the nation's economic growth and recipients' wellbeing. Well-being is a state of being healthy, happy or prosperous. It can also be seen as a state of doing well. In relationship to this study it is a state of being motivated. Business education students can be motivated to achieve the objectives of business education programme thereby enhancing their academic performance through information technology communication (ICT)

ICT plays an essential role in the Business Education programme. For students setting out on their educational journey, ICT can be a fundamental component of the learning experience. With the effective useof technology in classrooms, allied with more conventional teaching process, there's no limit to the positivedevelopment of young minds, whether that is in the guises of academic achievement and improved learning outcomes, enhanced creative thinking or the development of skills that will prove vital later in life, it helps to ensure a more efficient, effective learning. The lack of access to ICT resources (computers, internet, connection and many more) can potentially hamper the kind of education learners receive, with implications to their performance. A student with more access to computer and technologies due to the economic background of parent (guardian) tends to perform better in their academic than a student who has never beenexposed to the use of these ICT gadgets.

Utilization means the ability to use something for practical purpose or the act of putting things or resources that are tangible or intangible to proper use. According to Okolocha & Nwadiani (2015), utilization of ICT in education refers to the use of computer based communication that is incorporated into instructional processes. When properly utilized, ICT can facilitate instructional advancements and reforms in business education programme. The use of ICT in business seems to make business education students well-grounded in technology thereby leading to their well-being and academic performance.

Academic performance refers to the measurement of the learning level achieved by students and isconsidered a key indicator of the effectiveness of educational institutions. Academic performance can be influenced by various factors including social, psychological, educational, economic, family, personal and institutional factor. In the study, the focus is on the institutional factor. The utilization of ICT by institutionsmay influence the academic performance of business education students.

When Business Education students do not acquire the necessary skills required for their development with the aid of ICT, it may result to poor academic performance of the said students. This will also affect them inthe long run when they leave the four walls of the classroom. Having access to ICT in universities expose and prepare students of higher institution to real life work situation to be met after graduation outside the regular class room environment and experience. It serves as a smooth transition from the classroom to the world of work and further helps in the application of knowledge gained. Hence the study seeks to find out the role of Information and Communication Technology on business education students academic performance and four research questions were posited

1. To what extent do interactive digital whiteboards influence business education students'academic performance
2. To what extent do internets influence business education students' academic performance
3. To what extent do telephony influence business education students' academic performance
4. To what extent do recorded broadcasting technologies influence business education students' academic performance

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Information and Communication Technologies (ICT)

According to Bagne and Ross (2021), Information and Communication Technologies (ICT) is defined as the digital processing and utilization of information by the use of electronic computers. It comprises the storage, retrieval, conversion and transmission of information. It is a diverse set of technological tools and resources used to transmit, store, create, share or exchange information. These technological tools and resources include computers, the internet (websites, blogs and emails), live broadcasting technologies (radio, television and webcasting), recorded broadcasting technologies (podcasting, audio and video players, and storage devices) and telephony (fixed or mobile, satellite, video-conferencing, and so on.). Information and communications technology (ICT) is an extensional term for information technology (IT) that stresses the role of unified communications and the integration of telecommunications (telephone lines and wireless signals) and computers, as well as necessary enterprise software, middleware, storage and audiovisual, that enable users to access, store, transmit, understand and manipulate information. ICT is alsoused to refer to the convergence of audiovisuals and telephone networks with computer networks through a single cabling or link system. There are large economic incentives to merge the telephone networks with the computer network system using a single unified system of cabling, signal distribution, and management.

ICT is an umbrella term that includes any communication device, encompassing radio, television, cell phones, computer and network hardware, satellite systems and so on, as well as the various services and appliances with them such as video conferencing and distance learning. ICT also includes analog technology,such as paper communication, and any mode that transmits communication. ICT is a broad subject and the concepts are evolving. It covers any product that will store, retrieve, manipulate, transmit, or receive information electronically in a digital form (e.g., personal computers including smartphones, digital television, email, or robots). According to Owie and Igbinedion ICT has practically permeated every sphereof human endeavor and has relevance and applicability in such diverse areas as security, business settings, industrial environment and so on. Thus it has become imperative that people from all walks of life acquire some level of knowledge in the use and application of ICT. (Brown, Dehoney and Millichap 2020; Guri- Rosenblet, 2020; Dringues, 2020; Hrastinski, 2018; Kim and Bonk 2021).

ICTs are making dynamic changes in society. They are influencing all aspects of life. The influences are felt more and more at schools. According to Yesilyurt, Bastunk, Yesilyurt and Kara (2014) ICTs provide both students and teachers with more opportunities in adapting learning and teaching to individual needs. Information and Communications Technology (ICT) may influence student learning when teachers are digitally literate and understand how to integrate it into curriculum. When teachers are digitally literate and trained to use ICT, these approaches may lead to higher order thinking skills, provide creative and individualized options for students to express their understandings, and leave students better prepared to deal with ongoing technological changes in society and the workplace. (Coates, 2017; Koohang, Riley, Smith & Schrears 2019; Simens & Conole, 2019; Smith & Kurthen, 2017; Twigg, 2020, and Yusuf 2019). There are different types of ICT which can influence business education students' academic performance. However, this paper will be focusing on interactive digital whiteboard, internet, telephony and recorded broadcasting.

Interactive digital whiteboard

The interactive digital whiteboard, also known as a smart board, is an interactive display in the format of a whiteboard that reacts to user input either directly or through other devices. It allows users to project files and manipulate them on a board's surface. An interactive whiteboard will only function when a computer, projector and LCD display are present. A whiteboard will display whatever is shown on a user's computer screen. When connected to a computer, the interactive whiteboard transforms into a large-scale, touch-sensitive version of a user's screen. The user can control the screen by touching it with a special pen or witha hand, rather than a mouse. It functions as an input device for your computer, enabling one to work in any application on the connected computer. Interactive digital whiteboards promote active participation and engagement in the learning process. It allows students to interact directly with the content displayed on the board, enabling them to manipulate objects, write, draw, or annotate. This hands-on approach stimulates

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their involvement, increases motivation, and fosters a sense of ownership over their learning. It facilitates the integration of multimedia elements into lessons. Teachers can display images, videos, interactive simulations, and educational software directly on the board, making abstract concepts more tangible and engaging. Visual representations can enhance comprehension, improve retention, and cater to different learning styles.

Internet

Internet which stands for Interconnected Network is a network system that connects millions of web servers. A global computer network providing a variety of information and communication facilities, consisting of interconnected networks using standardized communication protocols. It is a network of networks in which users at any one computer can if they have permission get information from any other computer (and sometimes talk directly to users at other computers). The internet provides instant access to a vast amount of information and educational resources. Students can conduct research, access digital libraries, online databases, and academic journals, allowing them to gather diverse perspectives and in-depth knowledge on various topics. This access to information enhances students' understanding, supports their learning, and encourages critical thinking.

Recorded broadcasting technologies

Recorded broadcasting technologies such as radio, podcast and so on refer to various methods and systems used to capture, store, and transmit audio and visual content for broadcasting purposes. Recorded broadcasting technologies such as radio and podcasts offer opportunities to broadcast informative and instructional content that can supplement classroom learning. Educational radio programs can cover a wide range of subjects, including science, history, literature, and more. Similarly, recorded technologies, such as podcasts and audio lectures, provide students with on-demand access to educational content that they can listen to at their convenience. These resources may enhance students' understanding of topics, provide additional explanations, and broaden their knowledge base. Radio and recorded technologies can offer flexible learning options, allowing students to access educational content beyond traditional classroom settings. Students may listen to radio broadcasts or recorded materials while commuting, exercising, or engaging in other activities. This accessibility promotes continuous learning and can accommodate different learning styles and preferences.

Telephony

Telephony refers to the technology and processes used for transmitting voice signals over a distance, enabling communication between individuals or groups separated by a physical distance. According to Rajesh (2020), telephony encompasses the systems, devices, and infrastructure involved in telephone communication. Telephony allows people to have real-time conversations through audio transmission. Telephony plays a significant role in enabling remote learning, especially during situations like the COVID-19 pandemic or in regions with limited access to physical educational facilities. With telephony tools, students may participate in virtual classrooms, access online lectures, submit assignments digitally, and engage in distance education programs. This flexibility can provide educational opportunities for students who would otherwise face barriers to attending traditional schools.

Methodology

The study adopted a descriptive survey research design was for this study. A descriptive survey involves the selection of respondents (sample) from a large population to determine and report their view/opinions in the way things are. This design is suitable for this study because it sought the opinions of business education students on the role of Information and Communication Technology on Business Education students' academic performance. The population of the study comprised one hundred (100) Business education students in University of Benin, Benin City, Edo State. With sample size of sixty (60) business education students. The instrument for data collection from respondents was A-20 item questionnaire which was designed by the researcher and validated by three (3) experts. Means and Standard Deviation were used to analyze the data generated from the research questions. Items with mean score of 2.50 and above were

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regarded as high extent of utilization while items mean score of below 2.50 were regarded as low extent of utilization.

Research Question 1. To what extent do interactive digital whiteboards influence business education students' academic performance

Table 1: Data showing the interactive digital whiteboards influence business education students' academic performance

S/N	Item Statement	N	Mean	S.D	Decision
1	Interactive digital whiteboards such as projector is in use in business education classes	60	2.9833	1.21421	**High extent**
2	The use of digital whiteboards such as projectors makes you feel engaged and motivated during lectures	60	3.1500	.79883	**High extent**
3	Do you think interactive digital whiteboards such as projector offer unique advantages over traditional teaching tools	60	3.4333	.69786	**High extent**
4	To what extent do you find interactive digital whiteboards such as projector enhance your classroom learning experience	60	3.4167	.69603	**High extent**
5	Has interactive digital whiteboards such as projector influence your ability to retain information	60	3.2333	.92730	**High extent**
	Cluster Mean	**60**	**3.38**	**1.05**	**High extent**

In response to research question one. Table 1 shows the extent to which interactive digital whiteboards influences the academic performance of business education students. However, item 1-5 indicates high extent with mean ranging from 2.9 - 3.4. With these results above mean score shows the extent to which interactive digital whiteboard influences the academic performance of Business Education students is high

Research Question 2

To what extent does internet influence business education students' academic performance

Table 2: Data showing the internet influence business education students' academic performance

S/N	Item Statement	N	Mean	S.D	Decision
6	How frequently do you use online learning platforms to supplement your business education studies	60	2.9000	.89632	**High extent**
7	Has the internet positively influenceed your access to information relevant to your business education	60	3.1500	.79883	**High extent**
8	Has the internet contributed to your overall grades in business education courses	60	3.2333	.59280	**High extent**
9	Has your academic performance improved due to your internet usage for educational purposes	60	3.2167	.71525	**High extent**
10	How effective do you find these online platforms in supporting your learning compared to traditional classroom instruction	60	3.2167	.90370	**High extent**
	Cluster Mean	**60**	**3.27**	**0.93**	**High extent**

Table 2 shows a mean of above 2.50 for items 6-10 ranging from 2.9 - 3.2 are positive. With these results, the above mean score shows the extent to which internet influence the academic performance of Business Education students is high.

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Research Question 3

To what extent does telephony influence business education students' academic performance?

Table 3: Data showing the internet influence business education students' academic performance

S/N	Item Statement	N	Mean	S.D	Decision
11	How frequently do you use telephony (telephone communication) for academic related activities	60	3.5667	.74485	**High extent**
12	Has telephony positively influence your productivity and academic progress	60	3.1500	.75521	**High extent**
13	Has telephony facilitated communication with your instructors and classmates	60	2.9000	.81719	**High extent**
14	Do you properly manage time when engaging in telephony for academic purposes to balance it with other study related activities	60	3.3833	.73857	**High extent**
15	Do you think telephone is a suitable platform for addressing complex academic issues or questions	60	3.0000	1.04151	**High extent**
	Cluster Mean	**60**	**3.42**	**0.93**	**High extent**

In response to research question three, the table shows a mean of above 2.50 for items 11 - 15 ranging from 2.9 - 3.5 are positive. With these results, the above mean score shows the extent to which telephony influencethe academic performance of Business Education students is high.

Research Question 4

To what extent does recorded broadcasting technology influence business education student's academic performance?

Table 4: Data showing the recorded broadcasting technology influence of business education students academic performance

S/N	Item Statement	N	Mean	S.D	Decision
16	How frequently do you personally use your mobile device to record lectures you attend for future references	60	3.3667	.71228	**High extent**
17	Has the use of other recorded broadcasting technologies such as radio and podcast enhanced your access to academic content	60	3.2667	.75614	**High extent**
18	Do you find recorded broadcasts convenient for studying at your own pace and time	60	3.0167	.77002	**High extent**
19	Does studying with recorded broadcasts ensure effective comprehension and retention of information	60	2.9667	.93820	**High extent**
20	Does recorded broadcasting technology allow you to focus better on complex topics	60	2.9333	.88042	**High extent**
	Cluster Mean	**60**	**3.30**	**0.93**	**High extent**

In response to research question four, the table shows a mean of above 2.50 for items 16 - 20 ranging from 2.9 - 3.3 are positive. With these results, the above mean score shows the extent to which recorded broadcasting technology influence the academic performance of Business Education students is high.

Discussion of Findings

The findings of research question 1 shows that interactive digital whiteboards can influence the academic performance of Business Education Students. The findings implied the extent to which the academic performances of Business Education Students are influenced by the interactive digital whiteboards is high.

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This finding is in agreement with the work of Rajesh (2020), who stated that utilization of ICT in schools will in turn leads to sustainable growth of industry in the society.

The findings of research question 2 reveals the influence of internet on the academic performance of Business Education Students. The finding implies that the extent to which the academic performance of Business Education Students' is influenced by the internet is high. This finding is in consonance with Yesilyurt et al. (2014), who stated that possessing a computer at home with internet connectivity is just as critical for learners' academic performance as having self-learning skills.

The findings of research question 3 shows the influence of telephony on the academic performance of business education students. The findings implied that the extent to which the academic performance of business education students is influenced by telephony is high. This finding is in consonance with Warschaver, (2016) who stated that integrating mobile devices such as telephony in teaching and learning positively influenced students' performance.

The findings of research question 4 shows the influence of Recorded Broadcasting Technology on the academic performance of business education students. The implication of this finding shows that the extentto which the academic performance of business education students is influenced by Recorded Broadcasting Technology is high. This finding is in agreement with the work of Owie and Igbinedion (2022) who posited that ICT technology such as recorded broadcasting technologies are highly utilized in business education programme. Okolocha and Nwadiani (2015) also agreed with this finding as they posited that ICT resources such as recorded broadcasting technology is positively utilized in tertiary institutions.

Conclusion

Information Communication and Technology (ICT) are reshaping the learning styles of many students in higher education. As a result, advances in technology create new opportunities for higher education; emerging technologies can be used to deliver instruction matched to the learning styles of the new genre ofstudents. Therefore, it is critical for Higher education to make use of modern technologies as this will greatlyinfluenced the academic performance of students as seen in this study. It becomes imperative to affirm thatthe usage of ICT is a viable tool that will enhance the academic performance of Business Education students.

Recommendation

Based on the findings of this study, the following recommendations were made;

1. The use of ICT technologies such as interactive digital whiteboard, internet and others should be encouraged in business education programme for enhanced students' academic performance.

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PERCEPTION, AWARENESS AND KNOWLEDGE OF INDIGENOUS TEXTILE DESIGNERSIN ITOKU-ABEOKUTA ON THE DISCHARGE METHOD OF FABRIC DECORATION

[1]Adebiyi O ADEBOYE [2]Oloruntomi R. DOSUNMU [3]Adetoun A AMUBODE
Department of Home Science and Management, Federal University of Agriculture, Abeokuta. Nigeria.
adeboyeao@funaab.edu.ng +234 802 711 7877
ORCID id: https//orcid.org/0000-0002-5520-484X,
tomedy14@gmail.com +234 818 019 8755
amubodeaa@funaab.edu.ng +234 703 393 3430

Abstract

Despite the development of discharge paste, textile designers in Itoku-Abeokuta still ignore its use in screen printing. A descriptive survey involving a practical approach through the production of discharge printed fabric and a questionnaire was used to purposively collect data from (72) Itoku Adire designers. The result shows that 58.3% of respondents were female and aged ($\bar{x}$= 35.1) years, 61.1% have less than 10 years of designing experience and 73.6% were aware of the discharge method of fabric decoration. A low level of awareness was revealed as respondents do not know discharge can be done with screen printing ($\bar{x}$= 0.33); but a high level of awareness on the effect chlorine bleaches has on fabric ($\bar{x}$=1.67). Knowledge of the discharge method measured revealed that respondents had good knowledge of the use of bleach for discharge ($\bar{x}$ = 3.11). There is no significant relationship between respondents' socio-demographic characteristics and their awareness (p = 0.32), and also respondents' perception of the discharge screen printing method (p = 0.08). Furthermore, the results revealed a significant relationship (p > 0.01) between respondents' knowledge, awareness, and perception of the use of bleach for the discharge method. In conclusion, the discharge screen printing method is not used in the study area because respondents had low awareness, relatively good knowledge, and a negative perception of the discharge method of fabric design due to the lack of ready-to-use discharge pigment, as well as other pigments used for designing.

Keywords: Perception, Awareness, Knowledge, Textile, Designers, Discharge

Introduction

Surface decoration is the process of adding structures, patterns, and ornamentation to fabric surfaces by coordinating complementary colours and materials. Applique, embroidery, quilting, heat setting, textural effects, and printing techniques are among the techniques used (Vidyasagar, 2016; Surface Design Association, 2002; Wisbrun, 2012). Three types of printing are mentioned by Pamela (2021): discharge, resist, and direct printing. Lakshmi et al. (2011) emphasizes how surface design may be used artistically. Rathore 2022; Beca, 2019; Vidyasagar, 2016; and Storey, 1992 discuss direct printing, which is a technique for colouring fabric using pigment or print paste. One common technique for creating colourful pattern designs is screen printing, however direct printing is also widely used. The earliest methods for printing textiles were resist and coloured printing; discharge printing calls for taking colour out of a coloured cloth. For designs to be distinctive and aesthetically pleasing, both approaches are necessary.

The discharge agent is applied using various suitable methods, including stencils, embossed rollers, brushes,or sprays. Kiron (2011) highlights the use of saponifying chemicals in the discharge printing process to create various colour effects on fabrics, especially organic cellulose esters. Printing involves creating coloured designs on textiles, rather than dyeing, weaving, or combining coloured threads. The process involves steaming, washing, drying, and additional finishing procedures. Miles (2003) and Adeboye (n.d) have explored discharge printing, a vital process in textile printing. In comparison to direct screen printing, it provides more visually appealing outcomes, better quality, and a more manageable approach. Nevertheless,

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Adeboye's research revealed that the discharge approach is not used by the majority of Nigerian designers of handcrafted fabrics and clothing, who instead only employ two of the three surface decoration techniques. This is because the initial discharge agents, Rexoleme and Melcol RR, were only widely available and were in use for decades prior to the introduction of the discharge technique. Olowookere (2016) stated that indigenous textile designers from Itoku Abeokuta exhibit unusual individuality through their hands-on skills. Quick technical progress has caused a move away from the discharge method of cloth decoration and towards resist techniques and handcrafted screen printing. Because there is a shortage of discharge pigment and aesthetics, indigenous designers are not as familiar with this technique, which produces subtle colours and intricate patterns. Their investigation of the discharge technique has been hampered by this.
In 1802, Monteith created the first discharge printing by discharging a chlorine solution. The fabric was placed in between perforated plates, and the cloth was exposed to the chlorine solution through the plates. Storey, (1992) asserted that the first person to produce both coloured and white discharge on the same fabric was Daniel Knoechlin, a Frenchman. Knoechlin found an illuminating dye solution that didn't require a discharge agent, which allowed him to colour and remove dye from fabric at the same time. In order to produce a solid shade of colour, pre-dyed fabric is destroyed using chemicals in a process called discharge printing, often referred to as extract printing. In this method, dyes are reduced and oxidised by a discharging agent such as chlorine bleach, which leaves a white discharge pattern on a coloured ground. Compared to screen or roller printing, this technique produces a light-printed image that is richer and more saturated while maintaining a darker background colour (Vidyasagar, 2016).

Storey (1992) and Miles (2003) draw attention to the aesthetic benefits of discharge printing, which include the avoidance of overlapping colours, light patterns, crisp edges, and deep hues. Because of the better aesthetic results these patterns provide than direct printing, discharge printing has become a niche market for textiles. Even with its advantages, discharge printing is still a common design option.

Miles further identifies the following reasons for the limited use of the discharge method to be expensive, specialized equipment is required; the results are difficult to control; Removal of dyes generates large amounts of waste; the reducing agent used can be hazardous; and Registration is difficult. The discharge style of printing, which uses the chemical oxidation of dye to produce a pattern, is covered by Abd El-AAty et al. (2022). Acids, alkalis, salts, and oxidising or reducing agents are examples of discharging agents. The right conditions are essential since oxidising chemicals can have negative effects on cotton substrates. Sodium formaldehyde sulphoxylate is a widely used discharge agent, available from Ciba Formosul or BASF Rongalite. The dyes, backdrop depth, and fabric being printed all affect how much reduction agent is needed. According to Karmakar's research from 1999, bleach works well to remove colour from cellulosic fibres like rayon, cotton, and linen. When bleached, 100% cotton produces the greatest results. However, due to inconsistent or ambiguous effects, fabrics dyed with vat dye mixed with caustic soda and hydrosulphite solutions are not recommended for bleaching. One technique for applying bleach solution directly to cloth is to splash, spray, or pour the solution onto the material. Applying the bleach directly to the fabric after tracing or painting the design on it with a paintbrush, toothpick, earphones, or pointed foam is another way to accomplish this. Another technique for producing graphics that are exact or almost correct is screen printing. The design can be photo-stenciled or blocked by hand to appear on the screen. Nevertheless, depending on how much bleach is applied, colour gradation may occur. Light colours are produced by excessive application, while variances in colour are produced by little application, which lowers intensity. Artists can use this phenomenon to incorporate colour changes into their works.

The study examines how native textile designers in Abeokuta perceive and are familiar with the discharge process for fabric decorating, with a particular emphasis on hand-printed fabrics and sociodemographic traits. Through increased and varied production, the results can enhance the level of living, economy, and revenue generation of indigenous textile designers. The study also emphasises the necessity for easily accessible, widely available discharge agents that are easy to use and environmentally beneficial. At the 0.05 threshold of significance, three null hypotheses were examined.

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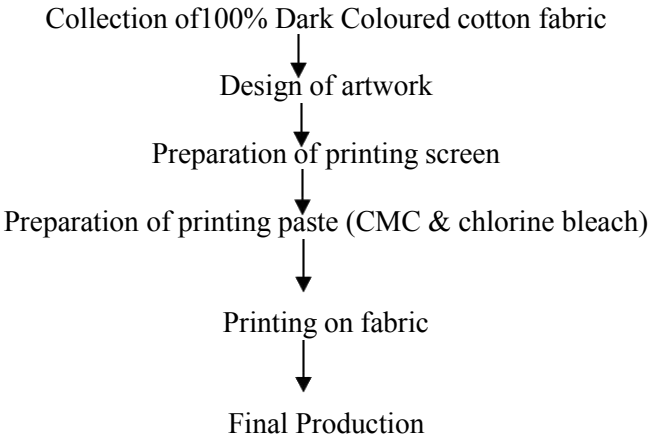
Materials and Methods

The study used a descriptive methodology, combining theoretical and practical approaches, to survey the Itoku market in Abeokuta. While the actual technique entailed printing cloth using the discharge process, the theoretical approach required using questionnaires to collect information from Itoku adire-indigenous textile designers. Situated in Ogun State, Nigeria, Abeokuta is 103 kilometres away from Lagos and 79 kilometres away from Ibadan. (Karmakar, 1999). *Itoku, a hub of arts and fashion in* Abeokuta, is home to the Egba Yoruba subgroup, as noted by (Biobaku, 1991). The city's renowned Itoku market attracts designers, dyers, fabric beaters, and adire fabric retailers (Saheed, 2013).

The study surveyed 72 textile designers in the Itoku market, including screen printers, batik designers, and tie-and-dye artists. A purposive sample technique was used to select Itoku adire designers. Pilot research among Asero textile designers tested questionnaire validity, finding a Cronbach's Alpha reliability coefficient of 0.803. Data analysis included mean, percentage, frequency, and rank, with Chi-Square used totest hypotheses.

Experimental Procedure

Fabrics suitable for the discharge process were bought and tested from the Itoku market. Two 64 by 16-inch wooden rectangular frames were constructed with the help of a carpenter, and T110 mesh was put on top ofthe frames. Using graphics software, two 14 x 20-inch artworks were produced, and three of each were printed on ISO A3 paper. The printed artwork on ISO A3 paper were merged to make a 60 by 14-inch artwork, which was then exposed via photo-stenciling method. Opaque ink from the inside of the mesh was applied to the screen's surface upon exposure. The ink was allowed to dry on the exposed part of the mesh. The flat-bed screen printing technique, which is usually used for custom work, was used to complete the printing. The two ingredients that comprise the printing paste are carboxymethyl cellulose (CMC), a strongerbleach, and chlorine bleach, which was previously used by Adeboye (n.d) as a fabric discharge agent. The flowchart below demonstrates the procedure.



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Results

Socio-Demographic Characteristics of the Respondents

Table 1- Socio-Demographic Characteristics of the Respondents (n=72)

S/n	Items	Freq.	%	Mean	Std. Dev.
	Male	30	41.7		
	Female	42	58.3		
	>= 20	1	1.4		
	21-39	49	68.1		
	40-59	21	29.2		
	Above 60	1	1.4		
	Yoruba	71	98.6		
	Others	1	1.4		
	Single	25	34.7		
	Married	41	56.9		
	Divorced	6	8.4		
	No formal education	2	2.8		
	Primary	7	9.7		
	Secondary	40	55.6		
	Tertiary	23	31.9		
	1 to 10	44	61.1		
	11 to 20	20	27.8		
	21 to 30	4	5.6		
	31 to 40	4	5.6		
	Yes	53	73.6		
	No	19	26.4		

According to Table 1, 58.3% of respondents were female, demonstrating that there is no gender balance in the indigenous textile business, and 68.1% of respondents were between the ages of 21 and 39 (x = 35.1). 52.8% of the interviewees were Muslims, 98.6% were Yoruba, and 1.4% were Idoma. The majority had completed secondary education (55.6%), while 31.9% had completed tertiary education. Moreover, 61.1% of respondents had less than 10 years of expertise in designing native textiles. The discharge method of fabric decoration is known to 73.6% of the respondents.

Knowledge of Indigenous Textile Designers on the discharge printing

Multiple choice questions with one correct and two wrong answers were set comprehensively on the discharge method of fabric decoration to test respondents' knowledge and were graded.

Table 2: Respondents knowledge on the discharge method of Fabric Designing

QUESTIONS (Correct option)	Answer option						Mean	Rank
	A		B		C			
	Freq.	%	Freq.	%	Freq.	%		
The discharge method is **(Colour Removal)**	59	81.9	0	0	13	18.1	2.64	**3rd**
Discharge affects only fabric colour (**No**)	52	72.2	20	27.8	0	0	1.72	**8th**
Fabric can be discharged with (**bleach**)	56	77.8	16	22.2	0	0	1.78	6th
Major substance use for Discharge (Bleach)	11	15.3	58	80.6	3	4.2	2.11	5th
Discharge can be done like this (**Screen Printing**)?	27	37.5	16	22.2	29	40.3	1.97	**10th**
Fabrics can be discharge using (Bleaches)	58	80.6	4	5.6	10	13.9	2.67	4th
Fabrics colours best for discharge are (Dark **colours**)	55	76.4	14	19.4	3	4.2	2.72	7th
Colour you get when you discharge fabric (**off-white**)	5	6.9	64	88.9	3	4.2	2.03	**2nd**
Effective discharge fabric has to be (**cotton**)	68	94.4	0	0	4		2.89	**1st**
Bleaching is same as discharge ((**Yes**)	49	68.1	23	31.9	0	0	1.68	9th
					Average Mean		**2.22**	

Table 2 shows a measure of knowledge of respondents on the discharge method of fabric design. According to the respondents' percentage of correct answers, the table also shows the respondents'knowledge of the discharge method of fabric decoration as follows: Question 9 ranked first, Question 8

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ranked second, Question 1 ranked third, Question 6 ranked fourth, Question 4 ranked fifth, Question 3 ranksixth, Question 7 rank seventh, Question 2 rank eighth, Question 10 rank ninth, and Question 5 rank tenth. Table 4- Summary of Knowledge Test Score

S/N	Knowledge Score	Frequency	%
1	9-10	39	54.2
2	7-8	13	18.1
3	5-6	9	12.5
4	1-4	11	15.3

Table 5- Categorized Mean Knowledge Test Score

S/N	Knowledge Level	Range	Mean Range
1	Excellent	9-10	3.5-4.0
2	Good	7-8	2.5-3.4
3	Fair	5-6	1.5-2.4
4	Poor	1-4	0-1.4
Grand Mean		**3.11**	

According to Table 4, which summarises knowledge test results using the discharge method, 54.4% of respondents scored a total of (9–10) questions, indicating an excellent level of knowledge; 18.1% scored (7-8), indicating a good level of knowledge; 12.5% scored (5–6), indicating a fair level of knowledge; and 15.3% scored (1-4), indicating a poor level of knowledge.

Table 5 shows the results of the classified mean knowledge test scores. The average mean is 3.11, and the mean range indicates that the respondents have a solid understanding of the discharge method of cloth decoration.

Perception of Textile Designers towards Discharge Method as Fabrics Decoration

This section focused on the data analysis and presentation for the ten (10) questions on the (perception of textile designers checked towards discharge method as fabric decoration). When expressing an opinion, some statements employ the terms strongly agree (SA), agree (A), disagree (D), and disagree strongly (SD). Included among the descriptive data were mean, frequency, percentage, and rank.

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Table 6: Respondents' Perception towards the discharge method

S/n	Statement	SA Freq. (%)	A Freq. (%)	D Freq. (%)	SD Freq. (%)	Mean	Rank
1	Discharge method of fabric is stressful to practice	32 (44.4)	15 (20.8)	9 (12.5)	16 (22.2)	2.88	4
2	Using bleach to design can damage fabric	19 (26.4)	22 (30.6)	17 (23.6)	14 (19.4)	2.64	2
3	The designs done using discharge method appear beautiful	32 (44.4)	29 (40.3)	7 (9.7)	4 (5.6)	3.24	7
4	I am aware of discharge method of fabric decoration	39 (54.2)	13 (18.1)	7 (9.7)	13 (18.1)	3.08	6
5	If I use bleach to design fabric I won't get patronage	16 (22.2)	8 (11.1)	17 (23.6)	31 (43.1)	2.13	1
6	Design like Eleko motif can be done fabric using discharge method	28 (38.9)	27 (37.5)	9 (12.5)	8 (11.1)	3.04	5
7	Quality of fabric will reduce using bleach	24 (33.3)	19 (26.4)	15 (20.8)	14 (19.4)	2.74	3
8	Discharge fabric require more patience while working on it	38 (52.8)	26 (36.1)	6 (8.3)	2 (2.8)	3.39	9
9	Producing discharge fabric will be another source of income	42 (58.3)	23 (31.9)	5 (6.9)	2 (2.8)	3.46	10
10	Bleach create a unique design on fabric	38 (52.8)	23 (31.9)	7 (9.7)	4 (5.6)	3.32	8

Overall Mean= ∑x/No of Statement = 20.1/10 =2.01

Table 6 shows how respondents saw the discharge method as cloth decorating. The majority of respondents, 44.4%, said they strongly agreed that using the discharge method to design fabric is stressful to undertake, 30.6% said using bleach to design fabric can damage it, and 44.4% said using the discharge method to design fabric results in beautiful designs. I am aware of the discharge method of cloth decoration, according to 54.2% of respondents, whereas 43.1% of respondents said they strongly disagreed. I won't get any businessif I create fabrics using bleach. 33.3% of respondents strongly agree that bleaching fabrics will lower their quality, 52.8% of respondents say they strongly agree that working with discharge fabric requires more patience, 58.3% of respondents say they strongly agree that producing discharge fabric will be another sourceof income, and 38.9% of respondents say they strongly agree that designs like the Eleko motif can be appliedto fabric using discharge method.

The table shows that producing discharge fabric will be another source of income, with the lowest rank of 10 indicating a low perception of the respondents, and the highest rank of 1 indicating a high perception of the respondents on the statement that if I use bleach to design fabric, I won't get patronage. It can also be deduced from the table that the respondent's perception of the discharge method is low with an overall mean = 2.01.

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Level of Awareness of Discharge Method of Fabric Decoration among Textile Designers

This section was concerned with the analysis and presentation of the data regarding the ten (10) questions on the (level of awareness of textile designers on the discharge method as fabric decoration). The descriptive statistics used included mean, frequency, percentage and rank.

Table 7- Respondents' level of awareness on the discharge method

S/n	Statement	Yes Freq. (%)	No Freq. (%)	Mean	Rank
1	I have worked on fabric using bleach	55 (76.4)	17 (23.6)	1.76	5
2	I have seen discharge fabrics before	61(84.7)	11(15.3)	1.85	2
3	Does bleach have an effect on fabric?	50 (69.4)	22 (30.6)	1.69	6
4	Bleach is used to create designs on fabric	57 (79.2)	15 (20.8)	1.79	3
5	Bleach is used for discharge method	47 (65.3)	25 (34.7)	1.65	8
6	Bleach creates light colours on dark fabrics	57 (79.2)	15 (20.8)	1.79	4
7	Discharge can be done by screen printing	17 (23.6)	55 (76.4)	1.24	10
8	The *Eleko* motif can be used as a design for discharge	50 (69.4)	22 (30.6)	1.69	7
9	Chlorine has an effect on the fabric	21 (29.2)	51 (70.8)	1.29	9
10	Discharge fabric can be sewn as a garment	67 (93.1)	5 (6.9)	1.93	1

Overall Mean = ∑x / No of Statement = 16.68/10 = 1.67

Table 7 shows the level of awareness of discharge method of fabric decoration among respondents. 76.4% of the respondents reveal that they have worked on fabric using bleach, 84.7% agreed that they have seen discharge fabrics before, 69.4% know that bleach has an effect on the fabric, 79.2% of the respondents revealed they were aware of using bleach to create a design on fabric., 79.2% were aware that bleach creates light colours on dark fabrics. 76.4% of the respondents reveal they do not know discharge can be done like screen printing. 69.4% of the respondents reveal *Eleko* motif can be used as a design for discharge, and 93.1% of the respondents reveal they were aware that discharge fabric can be sow as garment.

This table shows that Do you know discharge fabric can be sow as garment have the highest rank of 1 which deduces that the respondents are much aware of this statement while Do you know discharge can be done like screen printing have the lowest rank of 10 which deduces that the respondents not aware of this statement.

It can also be deduced from the table that the respondents' level of awareness of the discharge method is high with an overall mean= 1.67.

a. Result of Hypotheses Test

Table 8- Test of significant relationship between socio-demographic characteristics and respondent's awareness of discharge method of fabric decoration.

H_{01}: There is no significant relationship between socio-demographic characteristics and awareness of the respondents on the discharge method of fabric decoration.

Null Hypothesis	Test	Sig.	Decision
The distribution of the socio-demographic characteristics is the same across categories of awareness	Independent-Samples Kruskal-Wallis Test	0.317	Retain the null hypothesis

The significance level is 0.317

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Table 8 shows that since the significance level is greater than Sig. (0.05), therefore do retain the null hypothesis and conclude there is no significant relationship between socio-demographic characteristics and awareness of the respondents on the discharge method of fabric decoration.

Table 9- Test of significant relationship between socio-demographics and respondents perception of discharge method.

H_{02}: There is no significant relationship between socio-demographics and the perception of the respondents on the discharge method.

Null Hypothesis	Test	Sig.	Decision
The distribution of the socio-demographic characteristics is the same across categories of perception	Independent-Samples Kruskal-Wallis Test	0.078	Retain the null hypothesis

The significance level is 0.078

Table 9 shows that since the significance level is greater than Sig. (0.05), therefore do retain the null hypothesis H_{02} and conclude there is no significant relationship between socio-demographics and the perception of the respondents on the discharge method.

Table 10: Test of significant relationship between knowledge and awareness of the respondent's perceptionof discharge method.

H_{03}: There is no significant relationship between knowledge and awareness of the respondent's perception of discharge method.

Null Hypothesis	Test	Sig.	Decision
The distribution of knowledge is the same across categories of awareness	Independent-Samples Kruskal-Wallis Test	0.000	Reject the null hypothesis

The significance level is 0.000

Table 10 shows that since the significance level is less than Sig. (0.05), we, therefore, do reject the null hypothesis H_{03} and conclude there is a significant relationship between knowledge and awareness of the respondent's perception of the discharge method.

Discussion

The major interest of this study is to access the knowledge, awareness and perception of indigenous textile designers on the discharge method of fabric decoration. The socio-demographic characteristics of the respondents revealed showing that the respondents with the higher percentage age range are between 21-39 years and also a higher percentage of the respondent is between 1-10 years as a designer which implies thatthe respondents are in their adult age and which has given them the opportunity to acquire textile design knowledge in their youthful age with that level of low experience as designers.

While trade secrets appear to remain a significant factor in the production of adire, the industry appears to be drawing a greater proportion of younger males than females. Currently, there are more women working in the field, but very few of these women are interested in learning the craft. These statistics suggest that there is beginning to be a gender balance. With the new trend, more young men acquiring *adire-making* skills and adapting the cloth to an entirely new range of products, the statement that *adire* production and sales are the sole business for women may change very soon (Braide, 2016).

The result revealed that 31.9% of the respondents have Tertiary education levels. Ogunduyile, (2001), affirmed that the introduction of Western education reduced the number of potential apprentices in textile production, as many parents prefer to send their children to school. The influx of foreign clothing and the recent development in technology also affected the production of fabrics. And also, a higher percentage of the respondent is married 56.9% which affirm their age range.

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Yoruba people make up 98.6% of the respondents suggesting that they are the native textile designers of Itoku. That being said, 73.6% of the respondents are aware of the fabric decorating discharge method, indicating that they are well-informed about the fact that this method can be used to generate cash for them.

The findings showed the categorized mean knowledge test score as 3.11 which implies that respondents have good knowledge about discharge method. 81.9% know that discharge method is a fabric decoration. 77.2% know that the discharge method is the removal of colour from fabric to form design. The respondents have knowledge of the type of fabric used for discharge, major substances used for discharge, discharge can be done by applying bleaches on fabric and the fabric has to be 100% cotton for effective discharge as Abrahamet-al., 2015 discuss the importance of an adequate knowledge of the properties of the print paste ingredients, coupled with effective application technique can produce a satisfactory discharge on whatever type of fabricis to be printed. However, the choice of discharging agent is determined largely by the type of fabric to be printed. The constituents of a basic discharge printing paste consist of a discharging agent, a thickener and water.

The study also revealed that a low number of respondents had a positive perception of the fabric discharge method. Respondents generally stated that practicing the fabric discharge method is stressful and needs more patience than other methods. The respondent (52.8%) agreed that bleach creates a unique design on the fabric and also agreed that the design done using the discharge method appear beautiful. According to Miles, (1994) discharge style aims at sharp and intricate patterns, it is essential to minimize the flushing and bleeding by using the low- viscosity thickeners and a high solids content.

Furthermore, respondents (30.6%) agreed that using bleach to design can damage the fabric and as well agreed that the quality of finish fabric will reduce using bleach. Adiji and Oladumiye, 2015 found that thereare such factors such as fading of the colours on the fabrics, the durability and the quality of the fabrics are militating against discharge fabric production, which does not really make it very effective and allow for multitudes in its practice. The study revealed that the respondent disagrees that if bleach is used to design fabric, it won't get patronage.

The finding of this research on the respondents' level of awareness on the discharge method reveals that the respondents disagree that discharge can be done like screen printing. Although Asmah, *et-al*., 2015 suggestthe use of the screen-printing method to produce the *Adire* in with cooked starch paste via the squeegee. Discharge methods of fabric design have been important since the early days of textile printing, accountingfor many processes that provided a wide range of effects without the advantages of modern dyes. The discharge method will always be significant due to the various and aesthetically superior effects that are frequently obtained. The usefulness of the process in comparison to other printing techniques is the technical and commercial reason for the conception and continuation of the discharge method of fabric decoration. With the increased use of discharge inks, screen printers now have more options when deciding how to approach a specific project (Grant, 2020).
The respondents know the materials used for discharge method. Hitherto, the discharged fabrics produced by the local fabric designers in the early years of 1995, applied a mixture of a discharging agent and water directly onto the dischargeable fabric, hand drawn, using either a bristle brush or a syringe. Respondents revealed that discharge fabric can be sown as a garment which shows high awareness of the commercial aspect of fabric decoration. Also, the respondents are not aware of chlorine as the discharge agent used.

Conclusion

In conclusion, the technique of discharge screen printing method has not been evidently practised by textile designer and discharge fabric decoration have an aesthetic quality that many consumers find appealing.

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Recommendations

In line with the findings of the study:

1. Textile scientists and chemists should develop a discharge paste that can be easily accessible and used by the textile designer.
2. A simple automated method of discharge screen printing production should be developed.
3. Textile designers should be well-trained and equipped in the discharge method of fabric design production.
4. Further study should be taken to differentiate the result of using fine mesh and that of this research used open mesh.

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Appendix

Fig. 1: Designed artwork, Discharge screen printing and Finished discharge printed Fabrics (Field study, 2021)

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IMPROVING QUALITY DELIVERY OF BUSINESS EDUCATION USING BLENDEDLEARNING TECHNOLOGY IN NIGERIAN UNIVERSITIES

[1]M. O. BINUOMOTE, [2]F. K. OLUWALOLA, [3]O. A. OLUWO
[1]Department of Vocational and Technical Education, Alex Ekwueme Federal University, Ndufu-Alike,Ebonyi State, Nigeria
E-mail: binuomotemichealolayinka@gmail.com
+2348039542477
[2] Department of Educational Management, University of Ilorin, Kwara State, Nigeria Email:doctoroluwalola@gmail.com
+2348035997530
&
[3] Department of Business Education, Lagos State University of Education Otto/ Ijanikin, Lagos State.
+2348066612337

Abstract
The study investigated improving quality delivery of business education using blended learning technology in Nigeria Universities. The design adopted for the study was descriptive survey. The population for the study which was also adopted as sample comprised all twenty five (25) lecturers of business education in two (2) Public Universities in Ebonyi State, Alex Ekwueme Federal University and Ebonyi State University.Twenty (20) items structured questionnaire titled: Questionnaire on improving quality delivery of business education using blended learning technology in Nigeria Universities. The questionnaire was face validatedby three experts in Business education and Test and measurement. Cornbach alpha was used to determine the internal consistency of the questionnaire items and coefficient of 0.80 was obtained. Research questionswere answered using mean and standard deviation while the hypotheses were tested using t-test statistics at 0.05 level of significances. The findings showcased the blended learning technologies available for instructional delivery of business education contents and the strategies employed in delivering quality business education contents. The study further revealed that there was no significant difference between the mean response of business education lecturers in both institutions (Alex Ekwueme federal university and Ebonyi State University). It was concluded that given blended learning technologies priority while teaching will make greater impact in quality delivery of business education contents. Based on the findings and conclusion of the study. It was recommended among others that government should make blended learning technologies available in their schools and train the business education lecturers on how best to use it as tools for quality delivery of business education contents.

Keywords: blended learning, instructional delivery, business education, students

Introduction

The educational gap created by the covid-19 pandemic was a life loss to the educational and economic sectorof the world. However covid-19 crisis may be considered as an opportunity for change because crisis can make innovations that seems previously impossible suddenly inevitable. Alorita, Obi and Okolocha (2022)expressed that there will be a year of reckoning that tertiary institutions need reimagining not just repairing. The above authors went further to say that change is not easy and in several cases it cause more problems than those supposed to solve. The authors concluded that moving from face-to-face to blended learning canbe considered as a case of change management.

In another development, Xie, Suhedole, and Wang (2021) lend their voices that educational environments have changed with the rapid development of technology, especially during the covid-19 pandemic. Friesen

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(2012) expressed that the age long method of teaching (face-to –face interaction) does not become irrelevantbut needs to be in semblance with the present environment of teaching and learning. Banditivilai (2016) responded that blended learning is a valuable concept that can be used to achieve teaching goals and it allows students to develop and practice learning skills outside the classroom. Supporting Banditivilai (2016), Wong (2016), expressed that blended learning is the most beneficial means of teaching.

Hilliand in Alorita, Obi and Okolocha (2022) described blended learning as a training modality that combines traditional instruction with digital technology to improve knowledge and skills that students can transfer to the work place. Graharn in Dharmawardence (2019) equally defined blended learning system as learning system that combined face to face instruction with computer mediated instruction. The author added that the two delivery methods aim to complement each other. Dharmawardence (2019) concluded thatthe use of the term blended learning involves combining internet and digital media with the established classroom forms that require the physical co-presence of teachers and students. Graham in Sheerah (2020) described blended learning as a combination of ansite (i. e face –to- face) with online experiences to produceeffective, efficient and flexible learning. The author expressed further that the definition provides students with ample occasions to attain actual personalised instructional delivery of business education concept.

Ugonwa (2023) expressed that the relevance of business education in the digital era cannot be over emphasized because of its potential in equipping the recipients with the relevant skills for self-employmentor paid job. Business education is concerned with the teaching of skills, attitudes and knowledge necessary for a successful career in the office and business world. Business education helps to develop skills for economic success through impartation of business knowledge, time management skills, organisational skills and goal setting skills. It provides information and communication technology skills through instruction in word processing, spread sheet, data base management, digital and internet skills. It help to develop skills andattitude needed for career success by inculcating soft skills, problem solving, critical thinking and team work skills in students (Edeh & Olupayimo, 2023)

There are many ways to applying blended learning to business education curriculum, some of the popular examples include flipped classroom model, where students learn online at home, then spend in class time participating with a teacher available to assist them, or rotational models, where students move between learns stations with at least one stations being a digital space where students can access a variety of learningresource (Moiseienko & Ozarko 2019).
Valiatham (2002) suggested other component applied in blended learning to facilitate teaching as follows, ermact, simulations, web based tests, and FAQ. The author went further to enumerate the three main modelin blended learning as skill driven, attitude driven, and competency driven model. All the model entail the overview of the topics to be careered. Other combinations of blended learning components according to Kayi and Dembo (2018) are online instructions, mentoring instruction, led support, web based, course ware, simulations, job aids, webinar, documents collaboration software, knowledge management practice, audio/video streaming, web based application, blog, social network sites among others.

Kayi and Dembo (2018) also submitted that blended learning helps students learn how to work alone, how to monitor ones learning, assess one's own learning and work cooperatively with other learners without the lecturers involvement with blended learning approach, students control their own learning and they feel that making mistakes is part of learning and is useful for achieving effective mastery. Blended learning provides more flexible content and access to instruction without putting time and distance into consideration.

Neal (2020) lent the voice of other authors and stated that blended learning offers several benefits which includes students' takes learning where they are and can assess class through flexibility of time and space. The authors expressed further that contents and learning activities with the materials can reduce variable costper students, provides a system to share; validate track and store various evidences formats and enable in timely manner communication between trainees, assessors, verifiers, moderators and trainee support

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persons. No wonder Federal Republic of Nigeria (2013) emphasized that teaching shall be practical activity based, experimental and ICT support.

Despite the importance of Blended learning to teaching and learning, research findings continued to show that business education students still graduate without skills which aggravated the increasing rate of unemployment. This apparently may be connected with the poor instructional design which relied heavily on traditional classroom instruction which has failed to yield the expected result. However, business education lecturers are still looking for a conducive learning environment and good teaching methods that will improve skills acquisition of students at tertiary levels with the aid of information and communication technology. The present level of acquisition of skills in business education programme irrespective of schoolaffiliation calls for immediate attention. Hence, this study was therefore designed to investigate theimproving quality delivery of business education contents using blended learning technology in Nigeria Universities.

Statement of the Problem

Quite a number of studies have been carried out to investigate the factors responsible for the business education students' poor acquisition of required skills that will make them to be self-reliance. These factors include the unavailability of resources such as the physical structure, computer internet and text books, teacher qualifications and training, learns attitude toward acquisition of required skills (Sibandze, Olayode & Pereira, 2020). Bath and Bourke (2010) in their submission expressed that using traditional method of teaching, move all students through the curriculum at the same pace regardless of mastery since the teachers have little time to assist individual students and at home students have no one to turn to for assistance thus, some learners end up not performing well.

Despite the tremendous number of projects aims to improve the quality delivery of business education contents in Nigeria Universities., the level of students understanding of the required contents remain unsatisfactory and most traditional classroom are teacher-centered. Thus students are not used to arguing, participating in open discussion of questioning others. Instead they simply sit, listening and accepting whatever the teachers say, In addition, the prominent teacher-centered approach has resulted in a lack of students' engagement and attention. For example some students talk with each other during lesson, use their laptops or mobile phones or fall asleep, so the lesson become quite dull. As a result of the draw backs of the traditional mode of lesson delivery, there is need to investigate the quality delivery of business education contents using blended learning technology in Nigeria Universities.

Research Questions

The study answered the following research questions in line with the specific purpose of study

1. What are instructional technologies for improving the quality delivery of business education using blended learning technology in Nigeria Universities.?
2. What are the instructional strategies for improving the quality delivery of business education using blended learning technology in Nigeria Universities?

Research Hypotheses

The following null hypotheses guided the study and were tested at 0.05 level of significance.

HO_1. There is no significant difference in the mean rating of business education lecturers of Alex Ekwueme Federal University and Ebonyi State University on improving quality delivery of business education using blended learning technology in Nigeria Universities

HO_2. There is no significant difference in the mean rating of business education lecturers of Alex Ekwueme Federal University and Ebonyi State University on the instructional strategies for improving quality deliveryof business education using blended learning technology in Nigeria Universities

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Methodology

The study used descriptive survey research design. The population comprised all 25 (12 and 13) Business educators from two public universities in Ebonyi State of Nigeria. Namely Alex Ekwueme Federal University and Ebonyi State University, Abakaliki. The choice of Federal and State University business education lecturers is that many University have almost the same characteristics and present the same problems. Business education lecturers also were chosen because they are the one that will impact the knowledge to the University students through blended learning. The entire population was studied without sampling because the size is manageable. Data for this study were collected by means of twenty (20) items questionnaire developed by the researchers titled: Questionnaire on improving quality delivery of business education using blended learning technology in Nigeria Universities (QIQDBEUBLTNU). The questionnaire was structured into three parts. Part A was designed to obtain personal data of the respondents,part B was structured to obtained data on technologies available for improving quality delivery of business education using blended learning technology in Nigeria Universities while part C was to obtain data on strategies for improving quality delivery of business education using blended learning technology in NigeriaUniversities. The response obtained for part B and C were structured on 4 points rating scale as follows; strongly Agreed (SA) = 4 Agreed (A) = 3; Disagreed (D) = 2 and Strongly Disagreed (SD) = 1. The questionnaire was subjected to face and content validation by three experts in Business education and test and measurement. Internal consistency of the instrument using Cornbach Alpha yielded a reliability co- efficient of 0.80, the instrument was administered to the respondent by researchers. Twenty five (25) copiesof the questionnaire administered were duly filled and returned, thus represent 100% return rate. The data collected through the questionnaire were analyzed using mean rating, the decision rule was that any item with a mean score of 2.50 and above was taken as Agreed upon while items with mean score below 2.50 wastaken as disagreed. The hypotheses were tested using t-test statistic at 0.05 level of significance

Results

Research Question 1

What are the instructional technologies for improving quality delivery of business education using blended learning technology in Nigeria Universities?

Hypothesis 1: There is no significant difference in the mean rating of business education lecturers of Alex Ekwueme Federal University and Ebonyi State University on the instructional technologies for improving quality delivery of business education using blended learning technology in Nigeria Universities.

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Table 1: mean ratings, standard deviation and t-test analysis of the responses of business education lecturers in AE FUNAI and EBSU on instructional technologies for improving quality delivery of business education using blended learning technology in Nigeria Universities.

S/N	ITEM STATEMENT	X1 Bus Edulec AE-FUNAI	SD1	X2 Bus Edu Lec EBSU	SD2	XG	Rem	t-cal	t-lab	Rem
1	The use virtual world for instruction purpose	3.25	1.15	3.03	1.80	3.08	Agreed	0.71	1.96	NS
2	Using of interactive forms to create feedback and asking questions	3.17	1.50	3.65	2.04	3.28	Agreed	0.60	1.96	NS
3	The use of multimedia projectors for teaching purpose	3.19	1.16	3.15	2.01	3.56	Agreed	0.75	1.96	NS
4	The use of digital video for teaching and learning purpose.	3.29	1.66	3.28	1.86	3.92	Agreed	0.49	1.96	NS
5	The use of survey tools for online survey and research	3.26	1.20	3.45	1.25	3.58	Agreed	1.37	1.96	NS
6	The use of interactive multimedia digital for technologies teaching	3.10	1.90	3.11	1.83	3.24	Agreed	1.08	1.96	NS
7	The use of interacting authoring such as author were	3.21	1.92	3.12	1.64	3.54	Agreed	0.96	1.96	NS
8	The use of e-book for education purpose	3.23	1.76	3.22	1.38	3.27	Agreed	0.63	1.96	NS
9	The use of web applications forinteractive teaching and learning	3.30	1.23	3.41	1.36	3.53	Agreed	0.97	1.96	NS
10	The use of white board orelectronic board for teach and learning	3.15	1.40	3.28	1.58	3.18	Agreed	0.14	1.96	NS

Note: X1 = Mean 1, X2 = Mean 2, SD1 = Standard Deviation 1, SD2 = Standard Deviation 2, XG = Grand Means, No of AE FUNAI Bus Edu lecturers, No of EBSU Bus. Edu lecturers; NS = Not Significant.

Table 1 showed the ten (10) instructional delivery technologies for improving quality delivery of business education using blended learning technology in Nigeria Universities which had their mean value ranged from 3.08 to 3.92 which were all greater than the cut of point value of 2.50 on 4 point rating scale. This implied that the respondents agreed with the ten (10) items instructional technologies for improving quality delivery of business education using blended learning technology in Nigeria Universities. The above table also revealed that the ten items had their t-calculated value range from 0.14 to 1.37 at probability level of 0.05 and 23 degree of freedom which are lower than the table value of 1.96. These shows that there is no significant difference in the mean rating of the two groups (AE-FUNAI and EBSU Business education Lecturers) on the instructional technologies for improving the quality delivery of business education using blended learning technology in Nigeria Universities.

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Research Question 2

What are the instructional strategies for improving the quality delivery of business education using blended learning technology in Nigeria Universities?
Hypothesis 2

There is no significant difference in the mean rating of business education lecturers of Alex Ekwueme Federal University and Ebonyi State University on the instructional strategies for improving quality deliveryof business education using blended learning technology in Nigeria Universities.

Table 2: Mean ratting, Standard deviation and t-test analysis of the responses of Business educatorsin AE FUNAI and EBSU regarding the instructional strategies for improving quality delivery of business education using blended learning technology in Nigeria Universities.

S/N	ITEM STATEMENT	X1 Bus edu lec AE FUNAI	SD1	X2 Bus edu lec EBSU	SD2	XG	Rem	t-cal	t-lab	Rem
1	Using online technology for course interaction	3.72	1.11	3.83	1.24	3.48	Agreed	0.45	1.96	NS
2	Using online technology to give and receive course works from students.	3.67	1.16	3.11	1.54	3.15	Agreed	0.54	1.96	NS
3	Upload lectures materials in the drop box for the students	3.22	1.53	3.56	1.01	3.46	Agreed	0.37	1.96	NS
4	Use you tube technologies to received feedback	3.54	1.28	3.76	1.43	3.09	Agreed	0.12	1.96	NS
5	Using of staggered approach to help students make steady progress as they become familiar with the blended learning	3.23	1.54	3.54	1.86	3.17	Agreed	0.89	1.96	NS
6	Using of the technologies before introducing it to students.	3.09	1.40	3.23	1.36	3.11	Agreed	1.25	1.96	NS
7	Showcase how blended learning will make the students more independent	3.28	1.60	3.43	1.44	3.60	Agreed	0.71	1.96	NS
8	Make the online instruments to cover its purpose and serve as a guide.	3.35	1.42	3.45	1.28	3.85	Agreed	0.61	1.96	NS
9	Allotted enough time for blended learning teaching	3.12	1.28	3.90	1.38	3.53	Agreed	0.19	1.96	NS
10	Introduce different activities in a timely manner to avoid bored	3.45	1.31	3.18	1.86	3.33	Agreed	1.37	1.96	NS

Note: X1 = Mean 1, X2 = Mean 2, SD1 = Standard Deviation 1, SD2 = Standard Deviation 2, XG =Grand Means, NS = Not Significant.

The two groups of respondents (AE-FUNAI and EBSU business education lecturers) agreed that the items listed above are the instructional strategies for improving the quality delivery of business education using blended learning technology in Nigeria Universities.

The result in table 2 revealed that the mean values of the respondents on the ten (10) items ranged from 3.09to 3.85 which are all greater than the cutoff point value of 2.5 on 4 point rating scale. This indicated that the respondents agreed that the ten (10) identified items were the instructional strategies for improving quality delivery of business education using blended learning technology in Nigeria Universities. The above table also revealed that the ten items had their t-calculated value rated from 0.12 to 1.37 at probability level of 0.05 and 23 degree of freedom. This indicates that their t-calculated value is 1.96 which shows that there is

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no significant difference in the mean rating of the two groups of respondents (Business education lecturers of AE FUNAI & EBSU) on the items.

Discussion of findings

This study in respect to research question one identified instructional technologies for improving quality delivery of business education using blended learning technology in Nigeria Universities to include: the useof simulation or virtual world for instructions; using interactive form to create feedback and asking question;using of multimedia projects for teaching purpose; using of digital video for teaching and learning purpose;the use of survey tools for online survey and research; using of interactive multimedia and digital technologies teaching, using of interactive authoring such as authorware, the use of e-book for educational purpose; the use of web application for interactive teaching and learning. Yusoh in Utoware, Ikide and Apreala (2016) who found that blended learning technologies support and facilitates teachers' competencies.The study also revealed that there is no significant difference between the mean rating of business educationlecturers in Alex Ekwueme Federal University and Ebonyi State University on the identified technologies for improving quality delivery of business education contents using blended learning technology in NigeriaUniversities. The findings agreed with Osakwe (2010) who agreed that there are significant benefits in using blended learning technologies for teaching and learning process as long as teachers recognize the relationship between the use of this new technologies and the overall curriculum.

The result of the analysis of the second research question which dealt with identified instructional strategiesfor improving the quality delivery of business education using blended learning technology in Nigeria Universities to include: using blended learning for course interaction; using blended learning to give and received course work from students; using staggered approach to help students make steady progress as they become more in the blended learning instructions; clear and covering the purpose and guidance on how to carry it out; allotted enough time for blended learning teaching; introduce different activities in timely manner to avoid demotivation. The findings agreed with Banditivilai (2016) who submitted that online supplementary materials provided in blended learning offered more positive advantages by supporting time flexibility, which allowed students to practice and learn the required contents at any time convenient to themas well as take the responsibility for their learning which students strongly appreciated. Supporting the foregoing, Thai et al (2017) submitted that in the flipped classroom environment, students can spend a significant amount of time reading, watching lectures and preparing before attending face to face lectures (Picci & Poitscher, 2015). The study also found out that there is no significant difference in the mean ratingof business education lecturers of Alex Ekwueme Federal University and Ebonyi State University on the instructional strategies for improving quality delivery of business education using blended learning technology in Nigeria Universities. The finding is in agreement with Salun (2018) who submitted that blended learning can significantly increase students' performance in vocational education which is supported by the data, indicating that the blended learning mode significantly affected the students' performance, yielding a high success rate for students in vocational education.

Conclusion

The findings of the study provide evidence that blended learning can be successfully used to support quality delivery of business education contents in Nigeria Universities. Wong (2016) says, the blended learning method provides more opportunity for acquiring new knowledge, sub-skills and successful learning habits. In addition, the use of modern technology as part of blended learning is not only desirable, but also needful in term of learning business education contents. Making use of blended learning is a sensible courses of action as it allows students flexibility in their studies and exposes them to quality business education programme in Nigeria Universities.

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Recommendations

In the light of the findings from the study and the literature review, it is recommended that:

- Business education lecturers should implement new technologies in the course of their instructions for improving quality delivery of business education using blended learning technology in Nigeria Universities.
- Government and Universities should organize workshop for lecturers on how to design electronic courses using virtual learning environment so as to equip them with the skills necessary for designing and implementing blended learning
- Adequate funding should be provided by the government, parent forum and non-governmental bodies to procure more blended learning facilities
- The government and the management of Nigeria Universities should address the problem of epileptic power supply without further delay as most of these instructional materials are electrically driven.

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