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ABOUT THE JOURNAL

The Journal of Education, Psychology and Research (JEPAR) is a multi-disciplinary peer-reviewed and institutional based journal that is published annually by the Educational Psychology Society of Nigeria (EPSO), Obafemi Awolowo University, Ile-Ife, Nigeria. The Journal focuses on empirical studies as well as theoretical frameworks and provides an avenue for interactions among researchers, professionals in education and scholars to express their views on modern innovations, concepts and ideas. The Journal will adhere strictly to international standards.

Guidelines for Paper Submission

- Article should not be longer than 15 (Fifteen) A-4 sized pages using Times New Roman font size 12.
- Reference style should conform to the American Psychological Association (APA) format (Sixth edition).
- Manuscript's cover should include the title of the paper, author(s)' name(s), institution affiliation and email address(es).
- Abstract should not be more than 250 words with at most five (5) key words.
- Soft copy of the manuscript should be sent electronically via email: epanpublications@gmail.com, baomoteso@yahoo.co.uk, adesun223ng@yahoo.com
- Assessment fees is #7,500.00 (Seven Thousand Five Hundred Naira) or \$15 (Fifteen Dollars) for international contributors while the publication fees for an accepted article is #25,000.00 (Twenty Five Thousand Naira) or \$60 (Sixty Dollars) for international contributors.
- Any article that is more than 15 (Fifteen) pages will attract an additional fee of #5,000.00 (Five Thousand Naira).
- Additional copy will attract an extra charge of #3,000.00 (Three Thousand Naira) per copy.
- Submission should be on or before March every year
- Publication will be out by 30th September of every year.

Preview of Volume 3, 2023 Issue of the Journal of Education, Psychology and Research

I am very delighted to welcome you to Volume 3, 2023 issue of the Journal of Education, Psychology and Research (JEPAR). The journal is unique as authors are encouraged to submit studies addressing fundamental issues that advance scholarship and make significant contributions to knowledge. It publishes issues regularly and welcomes papers from every specialty in the fields of Education, Psychology and other related areas of research in tertiary institutions in Nigeria and globally. This issue comprises research articles presented in 10 chapters. The chapters cover both empirical and theoretical discourse in Psychology of Education, Counselling Psychology, Tests and Measurement, Psychology, Educational Technology and Educational Management.

The issue starts with the article by Oyeyemi Bukola Babalola on *“Peer Relations and Internet Addiction among Nigeria Adolescents: The Mediating Role of Family Relations”*. It determines the relationship between peer relations and internet addiction among adolescents and the mediating role of family relations in the relationship that exists between peer relations and internet addiction. The study finds a significant positive relationship between peer relations and internet addiction. Family relations also mediate the positive relationship that exists between the two study variables. The study concludes that family relationships play an important mediating role in the relationship that exists between peer relationships and adolescents’ internet addictive behaviour.

“Monitoring and Information Recovery Control Mechanisms for Effective Information Management in Colleges of Education in South-South Nigeria” is an article jointly written by Augustine Naboth-Odums, Friday Ekahe Abanyam and Fabian Ugbe Udida. The paper ascertains the monitoring and information recovery control mechanisms embraced by administrative officers for effective information management in Colleges of Education in South-South Nigeria. The findings of the study show that the administrative officers moderately embrace the identified monitoring and information recovery control measures for effective information management. The authors recommend that the management of Colleges of Education in Nigeria should enact and implement effective policies and laws that support the adoption of information control mechanisms for effective information management in their institutions.

In T. J. Ogedengbe. and B. I. Popoola’s paper, the contemporary dressing behaviour of students in tertiary institutions in Lagos State is investigated. The study examines the perception of students on what constitutes indecent dressing and determines the association between type of institutions and students’ dressing behaviour in Lagos State. The authors find that most of the students are of the opinion that the dressing patterns of the majority of female students in tertiary institutions are indecent. It is recommended in the study that effective implementation of dress code policy in tertiary institutions should be explored.

Suleiman Chado Suleiman and Ramatu Haruna assess the prospects and challenges of Information and Communication Technology (ICT) and blended learning in secondary schools in Nigeria. The problems of blended learning are discussed in the paper. These problems include: lack of facilities and materials, inadequate specialized personnel, lack of funding, building structures and lack of enabling legislation among others. The paper also highlights the advantages of ICT in Education

and blended learning. The study recommends full implementation of ICT in education and blended learning in secondary schools in Nigeria.

“Character Strength and Subjective Well-Being of Boarding Students in Secondary Schools in Southwestern Nigeria” is a paper jointly written by Sarah Temitope Ogumgbaigbe and Bonke Adepeju Omotoso which determine the subjective well-being of secondary school students in boarding schools in Southwestern Nigeria and assess the character strengths of the students. The study finds that the majority of boarding students experience a high subjective well-being. Boarding secondary school students possess character strength of appreciation of beauty and excellence, gratitude, humour, judgment, fairness, and leadership. The study recommends among others that teachers should encourage students’ participation in exercises designed to increase character strengths such as moral talks which could result in increased subjective well-being.

D. Omiyale, M. Dike, and O. Modebelu, explore the effects of the use of Information and Communication Technology (ICT) tools in teaching and learning mathematics in primary and secondary schools in Lagos, State. The study finds that the teachers have high perception of the use of ICT and there exists a linear relationship between the use of ICT tools in learning mathematics and the performance of students. The study recommends that there should be policy intervention to improve the educational sector across the landscape of Nigeria.

F. F. Zakariyah and W. O. Adeniyi in their paper titled *“Influence of Motivational Styles on School Adjustment of University Undergraduates in Osun State”* ascertain the level of adjustment among university undergraduates in Osun State and examine the motivational styles (goal-settings, learning and social activity orientations) being used by undergraduates. They assess the influence of each of the motivational styles (goal-settings, learning orientation and activity orientation) on school adjustment of undergraduates. These were with a view to providing information on the ability of motivational styles to influence school adjustment of university undergraduates in Osun State. The findings show that many of the students demonstrate low levels of school adjustment and many of them have social activity orientation. Motivational styles have significant influence on school adjustment of the undergraduate. The study recommends that freshmen orientation should be made mandatory for all fresh students so as to understand the situation and what it takes to be in the university.

Aduke Deborah Soyoye in her paper titled *“Educational Infrastructure in Nigeria: Past, Present and Future”* presents the meaning of infrastructure and its components. She opines that provision of educational facilities plays a very important role in making quality education available in schools for Nigerian citizens. She observes that there are schools in Nigeria sited in adequate environments conducive for learning with suitable and modern educational facilities such as computers, white boards and television sets with appropriate accessories among others while there are some sited inadequately without appropriate facilities which make learning difficult for students. The underfunding of education, lack of political will and shortage of personnel which are challenges facing the future provision of educational infrastructure are highlighted. The paper recommends the need for the Government to ensure the maintenance of existing infrastructure and the provision of modern teaching gadgets.

The study “*Assertive Discipline as Predictor of Teachers’ Management of Classroom Behaviour in Secondary Schools in Osun State, Nigeria*” written by Folake A. Odejebi investigates the level of teachers’ management of classroom behaviour among secondary school teachers in Osun State and examines the predictive ability of teachers’ assertive discipline on the management of classroom behaviour in the study area. The findings of the study indicate that most of the secondary school teachers demonstrate a moderate level of classroom behaviour management. There is also a significant predictive ability of teachers’ assertive discipline on their management of classroom behaviour. The paper concludes that classroom management is very important in the teaching-learning process and its effectiveness depends on the teachers.

The study by Shina Olayiwola titled *Analysis of Governance System of Public Universities in Southwestern Nigeria* examines the governance structures and decision-making processes of public universities in Southwestern Nigeria. It also assesses the influence of politics on governance of public university education. The study finds that decision-making processes within the political structure of public universities are characterized by strong leadership at both departmental and faculty levels while central council plays a paramount role at university level. The study recommends that university administrators need to find objective criteria on which agreement among contesting participants can be achieved and that university stakeholders (academic administrators, policy makers) need to be politically savvy in order to survive.

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PEER RELATIONS AND INTERNET ADDICTION AMONG NIGERIA ADOLESCENTS: THE MEDIATING ROLE OF FAMILY RELATIONS

by

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Abstract

The global spread of internet usage among the populace has been on increase in recent times. Despite its several benefits, there are tendencies for addiction especially among adolescents with several associative factors. The present study focussed on the relationship between peer relations and internet addiction among adolescents. It also investigated the mediating role of family relations in the relationship that exists between peer relations and Internet addiction. The study employed correlational design with purposive sampling technique. The study participants were 629 adolescents ($F=52.7\%$; Mean age= 17.1; $SD = 1.02$) in first year undergraduate programme. Data were collected through the administration of three standardized psychological scales. PROCESS macro in Statistical Package for Social Scientists (IBM/SPSS) Version 25 was used for the analysis of data gathered. Mean, Standard Deviation, Pearson Product Moment Multiple correlation and Hayes PROCESS Macro (model 4) were computed on the data collected. There was a significant positive relationship between peer relations and Internet addiction ($r = 0.21$, $p = 0.000$). Also, Family relations mediated the positive relationship that existed between the two study variables at a rate of 06% ($\Delta R^2 = 0.06$), $F(2, 626) = 19.17$, $p < 0.05$. The findings implied that family relationships played an important mediating role in the relationship that exists between peer relationships and adolescents' internet addictive behaviour.

Key words: Internet, Addiction, Adolescents, Peer, family Relations

Introduction

Adolescence is a crucial period characterised by an increase in risk-taking and excitement-seeking behaviours. In recent times, several features of the adolescence stage might have been impacted more by the advancement and global spread of internet usage. Anecdotal observation shows that individuals within this age group use a variety of internet applications, such as chat rooms, electronic mail, and blogs among others, for peer-to-peer relationships and services. Internet has become an indispensable tool among adolescents for several purposes such as school work, information gathering, gaming, socializing, surfing, and communication purposes among others. This might be because of adolescents' sensitivity to peer influence, and poor impulse control compared with adults among others (Somerville, 2013). Thus, the tendency for addictive use of the internet during this period. According to Shaw and Black, (2008), internet addiction is often characterised by poorly controlled preoccupations, urges, or behaviours regarding computer use and internet access that can lead to distress. It is also defined by Niu et al., (2013) as uncontrollable internet usage that causes impairment in an individual daily functioning.

Although the criteria for diagnosing internet addiction have not been outlined in the Diagnostic Statistical Manual, its adverse effects are indisputable, especially among adolescents. For example, some studies have found that internet addiction could be linked with physical, health, academic, relationship, and emotional problems (Samaha and Hawi, 2016; Kim, Kim, and Jee, 2015). Also, in a study conducted by Demir and Kutlu (2018) among some adolescents, it was

discovered that learning motivation, academic achievement and general well-being were adversely affected by adolescents' internet addictive behaviour. Recently, some studies have examined the predictive and associated factors of internet addiction (Razik et al., 2021; Zenebe, Kunno, Mekonnen, et al., 2021; Duong, 2020). However, this paper focused on the mediating role of family relations in the relationship that exist between peer relations and internet addiction.

Peers and family may play crucial roles in adolescents' interactions and interpersonal bonds with their virtual environment during this developmental stage. From the perspective of the ecological model of Bronfenbrenner (1986), adolescents have direct contact with peers and family which form the two important independent closest microsystems in which they operate. The inter-linked between two microsystems will form the level of mesosystem. According to Demir, Baran, and Ulusoy, (2005), peer relationships compared to any other form of relationships are more important during the adolescence period. With the advent of global internet usage, a significant proportion of peer interactions occur online. This necessitates adolescents to seek popularity, value and recognition among online peers. The need for value, popularity, connection and recognition among online peers may expose adolescents to online addiction. On the other hand, family as a unit of social organisation plays a key role in adolescents' actions and inaction. Bengtson and Schrader, (1982) emphasised the roles of parent-child relations as an important aspect of adolescents' social interaction. Family relations are attractive for adolescents in realising a sense of love. However, family or peer relations that occurred in forms of conflict and cohesion may impact adolescents' mental health negatively (Beiser et al., 2002; Wissink et al., 2006). Thus, an individual within this stage+ of development faces the challenges of redefining their relationships with families and peers. According to Dekovic et al. (2003), the quality of the parent-adolescent relationship accounted for the largest amount of variance in adolescent antisocial behaviour. Adolescents' relationships with peers and families are important in determining their internet addiction.

Reports from studies on the link between peer relations and internet addiction are contradictory. For instance, it was found that poor peer relations predicted internet addiction (Babalola, 2019); other studies found that both addicts and non-addicts perceived improved peer relations as a result of internet usage (Shu & Chien-Ju, 2007). Patrick and Kian (2018), examined the mitigating effects of parental mediation activities on internet addiction and risky online activities among some teenagers. It was found that parents could have more influence on teenagers than their peers. In another study, Huang et.al. (2021) found that the negative association between parent-children relationships and internet addiction was partially mediated by self-concept. In addition, family, and peer, were found to have moderated mediation effects on Internet addiction among adolescents (Ding, et.al. 2017), Bae (2015) found that peers relationships played a key role in smartphone addiction among school students in South Korea based on the negative association that exists between the two variables.

Savcı, and Aysan, (2016) also found that peer relations, and two other psychological variables accounted for 19% of Internet addiction among their studied participants. However, mediating mechanisms of family relationship underlying the relational link between peer relationship and adolescent internet addiction remain understudied. Confirming the mediating role of family relationships in this link could add to the body of knowledge in the area of underlying factors of adolescent internet addiction. It will also aid the development of an effective intervention programme. Thus, for awareness prevention and intervention purposes, there is need

to investigate the mediating role of family relations in the relationship between peer relationships and internet addictions among undergraduates in Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria.

Purpose of the Study

This study examined the relationship between peer relations and internet addiction among adolescents. It also investigated the mediating role of family relations in the relationship that exists between peer relations and internet addiction.

Research Question/Hypothesis

The study provided answers to the following research questions:

1. Will there be any relationship between peer relations and internet addiction?
2. To what extent would family relations mediate the relationship between peer relations and internet addiction?

Hypotheses

Based on the above research questions, the following hypotheses were formulated and tested:

1. There would be a significant relationship between peer relations and internet addiction
2. Family relations would significantly mediate the relationship between peer relations and internet addiction

Methodology

This research employed descriptive correlational design. The study recruited 650 undergraduates purposively selected from five faculties (Social Science, Arts, Law, Administration and Education) at Obafemi Awolowo University, Ile-Ife. The participants were recruited based on the inclusion criteria of being adolescents of ages 15 to 19 years old, having internet gadget(s) and access. After the initial data screening, 629 copies of the questionnaire were valid and used in this study. Of the participants, 47.3% (298/629) were males and 52.7% (331/629) were females. The participants' ages ranged from 15-19 years mean = 17.1 years and SD = 1.02. Administration of questionnaires was carried out in participants' various lecture classes within each faculty after taking permission from the course lecturers. Also, written informed consent forms about the study were given to the participants to append their signatures. The researcher emphasized the importance of accurate responses to the items as it applies to individual as there are no wrong or right answers. The researcher also assured them of strict confidentiality of information given as they would be used for research purposes only. With 650 questionnaires administered, 636 were retrieved altogether from the participants out of which, 629 were properly completed.

All participants completed a paper-and-pencil questionnaire divided into sections which measure internet addiction, peer relations and family relations. The first section sought information on the socio-demographic characteristics of the participants. These include: gender, age, level, faculty/department, and religion.

The second section assessed the symptoms and manifestation of internet addiction through the administration of a 28-item Internet Addiction Scale (IAS) developed by Babalola, Agiobu-Kemmer and Ayenibiowo (2016). The IAS has good reliability coefficients of Cronbach alpha = 0.92 and split-half of 0.88. It has a concurrent validity of 0.74 by correlating IAS with Internet

Addiction Test. The mean scores on IAS form the basis for interpreting the scores of an individual on it. Participants whose score is equal to or less than the mean score indicate Normal User of internet while those whose score is higher than the mean score with one standard deviation indicate Addictive User of the Internet.

Index of Peer Relations (IPR) assesses the degree and severity of a problem a person has in relationships with his/her peers. It consisted of 25 items developed by Hudson, Nurius, Daley and Newsome (1986). The items were written on a 7-point response scale. Hudson et. (1986) reported an alpha reliability coefficient of .94 while Anumba (1995) reported a divergent validity coefficient of 0.62 by correlating IPR with Hare Self Esteem Scale. Individual total score on IPR was obtained by adding together the results of the direct and reverse scores items and then subtracting 25 from it.

Index of Family Relations (IFR) is a 25-items measure of severity of relationship problems among relatives developed by Hudson et. al. (1997). Participants' response on the items ranges from 1 (none of the time) to 7 (all of the time). They reported an alpha reliability coefficient of 0.90 and a validity coefficient of 0.60 by correlating IFR with Hare Self Esteem Scale. Individual total score on IFR was obtained by adding together the results of the direct and reverse scores and then subtracting 25 from it. The mean scores on IFR form the basis for interpreting the scores of an individual on it.

Analysis of data was carried out through PROCESS macro for IBM/SPSS Version 25. Mean, Standard Deviation (SD), Pearson Product Multiple Correlation and Hays (2021) model 4 were computed on the data gathered. Mediation effect analyses were also computed.

Result

Table 1: Distribution of participant’s demographic data

Variable	category	Number	Percentage %
Gender	Male	298	47.3
	Female	331	52.7
Age	15	18	2.8
	16	36	5.7
	17	116	18.5
	18	172	27.4
	19	287	45.6

Table 1 showed that the majority of the participants were average age 17-19 years old. The highest percentage of gender variable was female participants (52.7%).

Table 2: Summary of correlation matrix

S/n	Variables	Mean	SD	1`	2	3	Skewness	Kurtosis	p-value
1	Peer Relations	84.05	20.51				-0.70	0.34	
2	Family Relation	79.44	24.46	-0.54**		--	-0.44	-1.17	0.000
3	Internet Addiction	70.16	15.96	0.21**	-0.22**	--	0.14	0.80	0.000

The result in Table 2 showed that peer relations have a significant positive relationship with internet addiction at $r = 0.21$, $p = 0.000$, and negative correlation with family relations at $r =$

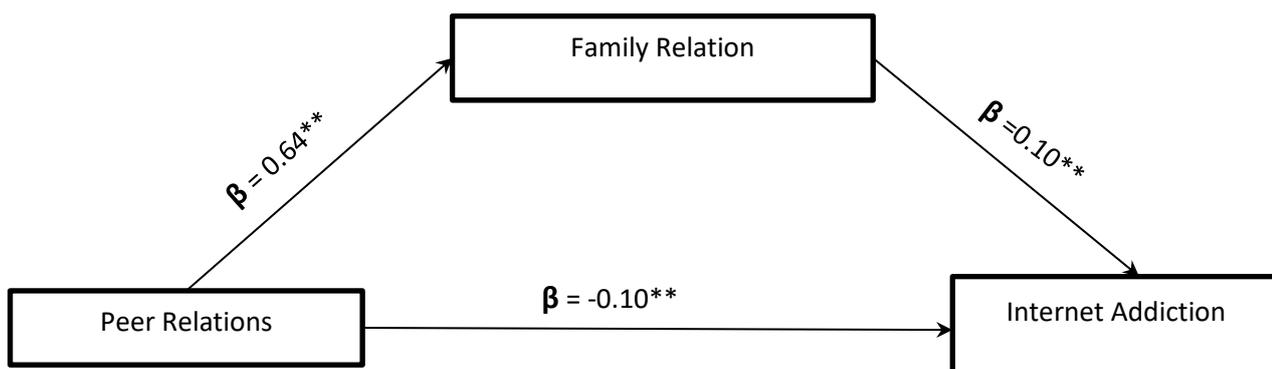
-0.54, $p = 0.000$. Also, the result revealed a significant negative correlation between family relations and internet addiction ($r = -0.22, p = 0.000$). This implies that peer relations increase as internet addiction increases. Also, the better or more appropriate the family relations are, the less addiction to the internet.

Table 3: Mediation analysis result of family relations and peer relations on Internet Addiction

Explained Variables						
Model	Family Relation			Internet Addiction		
	B	SE	95% CI LLCI (ULCI)	B	SE	95% CI LLCI (ULCI)
Constant	25.40**	3.47	18.59 (32.21)	54.25**	2.72	48.91 (59.60)
Peer Relations	0.64**	0.04	0.56 (0.72)	-0.10**	0.04	0.04 (0.17)
Family Relation				0.10**	0.03	0.03 (0.15)
	R		0.54	R	0.24	
	R²	0.29		R²	0.06	
	F(df)	$F(1, 627) = 257.08^{**}$		F(df)	$F(2, 626) = 19.17^{**}$	

*Significant at $p < 0.05$

Results on Table 3 showed that peer relations had direct positive and significant relationship with family relations among the participants at a rate of $\beta = 0.64, p < 0.05$, [95% CI: = 0.56 (0.72)] (see figure 1). There was a significant positive direct relationship between peer relations and internet addiction, at a rate of $\beta = 0.10, p < 0.05$, [95% CI: = 0.04 (0.17)]. Internet addiction among the participants was explained by model 4 of PROCESS macro at a rate of 06% ($\Delta R^2 = 0.06$), $F(2, 626) = 19.17, p < 0.05$. The results further showed family relation significantly mediated direct relationship between peer relations and internet addiction at a rate of $\beta = 0.10, p < 0.05$, 95% CI: = 0.03 (0.15] (see figure 1). Family relations among the participants were explained by model 4 of PROCESS macro at a rate of 29% ($\Delta R^2 = 0.29$), $F(1, 627) = 257.08, p < 0.05$. This implies that family relationship plays important roles in mediating the relationship that exists between peer relationship and Internet addiction among the participants.



Discussion

This study explored the mediating role of family relations in the relationship between peer relations and internet addictions. The finding that peer relations have a significant positive relationship with internet addiction implies that peer relations increase as adolescents' internet addiction increases irrespective of the nature of peer relations (that is whether appropriate or inappropriate). This finding might be explained by the fact that a significant proportion of peer interactions occur online. With the global spread in internet usage, many adolescents' social interactions occur virtually. The higher the Internet usage among adolescents, the lower the frequency of face-to-face interactions with peers. The interaction of adolescents with their physical environment may get reduced along with the rising of the excessive use of the Internet so that quality time in physical environment can unconsciously be ignored. According to Dilmac, (2014), the process of seeking popularity, value, connection and recognition among online peers could result in addictive use of the internet among this developmental age group. This finding is congruent with Babalola (2019) who reported that poor peer relations predicted internet addiction and contradicts that of Shu and Chien-Ju, (2007) who found that both addicts and non addicts perceived improved peer relations as a result of internet usage.

Also, the result of this study revealed that peer relations increased as adolescent's family relationships increased which in turn was negatively related to adolescent internet addiction. This implies that family relations mediated the relationship between peer relations and internet addiction. This finding is congruent with the study of Patrick and Kian (2018) which found that the competitiveness between peer and parental attachment influenced adolescents' internet addiction and their online activities. An appropriate family relationship among adolescents has the tendency of reducing antisocial behaviour among adolescents, most especially when the relationship is stronger than that of peers in mediating the online activities of adolescents. The findings of this study revealed the importance of family relationships in reducing adolescent internet addiction. Some previous studies on adolescents' internet addiction mainly focused on peer relationships with little attention to the impact of family relationships. This study explored the roles of both areas of relationship to understand part of the underlying correlates of adolescent internet addictive behaviour. The incorporated family relationship indicates protective factors in the interpersonal context of peer relationships which in turn reduce adolescent's tendency for internet addiction. Thus, the implication of the findings of the study shows the importance of family relations in ameliorating adolescent internet addiction.

Conclusion

There is a significant positive relationship between peer relations and Internet addiction. Also, Family relations mediated the positive relationship that exists between peer relations and internet addiction. The finding implies that family relationship played an important mediating role in the relationship that exists between peer relationship and adolescent's internet addictive behaviour.

Recommendation

This study suggested a family-based preventive approach for adolescents with peer risk factors for Internet Addiction.

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MONITORING AND INFORMATION RECOVERY CONTROL MECHANISMS FOR EFFECTIVE INFORMATION MANAGEMENT IN COLLEGES OF EDUCATION IN SOUTH-SOUTH NIGERIA

by

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Abstract

The present study determined the monitoring and information recovery control mechanisms embraced by administrative officers for effective information management in Colleges of Education (COEs) in South-South Nigeria. The study embraced descriptive survey research design. The population for the study was 1580 consisting of 232 Strategic, 569 Tactical and 779 Operational Administrative Officers from the 11 COEs across the six States that make up South-South Nigeria. 320 respondents using a proportional sampling technique was used to determine the number of the strategic, tactical and operational administrative officers for each of the COEs studied. The instrument for data collection was a structured questionnaire titled "Information Management Control Mechanisms Questionnaire (IMCMQ)" which was developed by the researcher in line with the reviewed literature. The questionnaire was face-validated by five experts. The reliability of the instrument was tested using Cronbach Alpha method to determine its internal consistency and this yielded an overall coefficient of 0.93. Mean, standard deviation and Analysis of Variance were used to analyze data collected. The findings showed that the administrative officers moderately embraced the identified Monitoring and information recovery control measures for effective information management. The findings of the hypotheses also showed that there was no significant difference among the opinions of the respondents. Based on the findings, it was recommended among others, that the management of COEs in Nigeria should enact and implement effective policies and laws that support the adoption of information control mechanisms for effective information management in their institutions.

Keywords: *Monitoring and information recovery control mechanisms, administrative officers, effective information management, COEs*

Introduction

Colleges of Education (COEs) are among the tertiary institutions in Nigeria that were established by Act of Parliament to cater for the training of middle level manpower in the teaching profession. Colleges of Education award the Nigeria Certificate in Education (NCE) as the minimum teaching certificate and qualification for Nigerian teachers. The products of these institutions are groomed to teach at the pre-primary, primary, junior secondary school levels and/or proceed to university education. College of Education programmes are run for a period of

three years including four months Student Industrial Work Experience Scheme and six months teaching practice (National Commission for Colleges of Education NCCE, 2019). According to the NCCE (2019), the NCE programme was introduced to prepare individuals to become leaders and practitioners in education and in related human service fields by expanding and deepening understanding of education as a fundamental human right.

Administrative officers in COEs deal with the gathering, processing and communication of information. They also maintain effective oral and written communication processes between the college management and other levels of staff with regard to fiscal and other matters. According to Agomuo (2015), administrative officers are the greatest resource of colleges of education because they make critical difference in the ability of the colleges not to merely survive, but to thrive. However, in management, there are three major classifications of managerial levels, namely: strategic, tactical and operational levels (Jumper, 2005; Osuala, & Okeke, 2006; Martin, 2011; Mikoluk, 2013). This classification is based on functions and responsibilities of the administrative officers. According to Osuala and Okeke (2006), the levels of management are traditionally represented as strategic, tactical and operational. The authors added that the strategic managers are referred to as the top-level managers; the tactical managers are the middle-level managers, while the operational managers are the low-level managers. The strategic managers are concerned with the planning functions of an organisation, policy formation and development of long-term goals of the entity. The tactical level managers carry out the visions of the top-level managers by coordinating both human and material resources to achieve the organisational goals.

The main function of the tactical managers is centered on organizing, coordinating and staffing while the operational managers are the supervisors. They direct, control and monitor workers to perform the planned activities. They check workers' attendance, maintain quality control, handle complaints, track schedules, cost, ensure effective and efficient maximisation of workers input to duty (Mikoluk, 2013). Hence, the higher one grows in cadre and in promotion the higher responsibility he or she is assigned. However, it is important to note that in spite of the major responsibilities of the administrative officers in COEs, they also have other duties like managing their subordinates. This means that the higher one is promoted to high level of administrative office, the higher the level of responsibility of information and human resources management is attached to such a level of administrative officer irrespective of gender. Operationally, the administrative officers in colleges of education are the strategic, tactical, and operational groups who are directly in charge of information management. The administrative officers under the strategic group include: Deans of Schools, the College Bursar, Librarians, Directors of Centres (works, sports, medical services, quality assurance, academic planning, research and statistics), and the Registrar. Under the tactical group, we have the Deputy Registrars, Principal Assistant Registrars, Senior Assistant Registrars, Heads of Departments, Coordinators of Units, and finally, under the operational group, we have Assistant Registrars, Administrative Officers I, and Administrative Officers II. The degree of success of any educational institution depends on the extent to which the administrative officers are able to manage the information systems.

Information management (IM) concerns a cycle of organizational activity: the acquisition of information from one or more sources, the custodianship and the distribution of such information to those who need it, and its ultimate disposition through archiving or deletion. According to State of Vermont (2015), for an institution to run and control its operations

effectively, it must have relevant, valid, reliable, and timely information relating to internal and external events. Administrative officers must be able to provide reliable information to enable management to make informed decisions, determine their risks, and communicate policies and other important information to those who require it. Operationally, IM is the acquisition, processing, storing, distributing, and providing of information when necessary for the effectiveness of information systems in COEs with the sole aim of achieving the institutions' set goals. Effective information management involves the application of administrative control measures to ensure that information is properly processed, secured and delivered as at when due.

There are several administrative controls that can be adopted by educational institutions in Nigeria, but the depth with which they operate may vary according to the peculiarity of the institution. Administrative controls are classified as procedural preventive and detective measures (State of New York Comptroller, 2007); logical security and environmental control measures (Mattie, Hanley, & Cassidy, 2005); storage, information communication, environment (physical), and monitoring measures (Gauthier, 2014; Institute of Internal Auditors, 2008); and recovery control measures (Africa Cyber Security, 2016; Johanson, 2009). However, this study only focused on the monitoring and information recovery control mechanisms for effective information management.

The control system requires to be monitored, to assess whether controls are effective and are operating as intended. According to State of Vermont (2015), monitoring occurs through routine managerial activities such as supervision, reconciliations, checklists, comparisons, performance evaluations, and status reports; monitoring may also occur through separate internal evaluations or from use of external sources. Institute of Internal Auditors (2008) posited that deficiencies found during monitoring require to be reported to those responsible for the function, with serious deficiencies being reported to top management. If an effective continuous monitoring program is in place, it supports effective information recovery required to maintain effective information management.

The information recovery control measures are the steps or mechanisms taken to reduce or eliminate various threats to information management in an organization or institution (Petal, 2010). Petal (2010) stated that the information recovery control measures involve the process of planning, developing, testing and implementing disaster recovery management procedures and processes to ensure the efficient and effective resumption of vital business functions in the event of an unscheduled interruption. According to Martin (2011), recovery control measures provide procedures used at data center site after unforeseen disasters have occurred and repairs have been made. It also provides recovery procedures for the restoration of critical applications using either data recovered from the damaged data center or from the backup data stored off-site. Most times, administrative operations in COEs crumbled as a result of some disaster such as fire gutting important official documents, malfunctioning of the electronic storage system, and negligence on the part of the officers to appropriately store, retrieve, and disseminate information as at when due. Therefore, to avoid total collapse of administrative operations in the CPES, there is need to put on ground recovery measures for effective information management such as use of disaster recovery site, system and data backups among others (Firefox Monitor, 2019).

Furthermore, the increased demand for efficiency in the administration of COEs has brought more concern on the way information is managed in the administrative offices. This growing concern is largely due to the awareness that effective management of colleges of education in Nigeria, including the South-South zone, to a large extent, depends on the efficiency

of management of information in the administrative offices by the administrative officers. However, despite the increased attention given to administrative office operations such as the employment and training of qualified personnel and the deployment of modern technology in information management, there is a still noticeable shortfall in the efficiency with which information is managed and secured in the administrative offices. For instance, in Nigeria and other parts of the world, there have been several reports of cybercrimes, hacking activities and information falsification against educational institutions. There are also increasing cases of unauthorized, cybercrimes and intrusions into the educational institutions' databases and networks in Nigeria and South-South in particular (Rogers & Ashford, 2015).

Several authors have noted that most tertiary institutions in the study area have witnessed various threats and breaches of information. Unfortunately, they hardly identify the sources of the attack at the early stage, until much later when serious harms had already befallen them. These shortfalls are threats to institutional fulfillment and goal attainment. Several researchers have also stated that many institutions of learning including COEs have lost huge sum of money to hackers, lost credentials and valuable information assets to unscrupulous hackers because of poor etiquette/practice of information management. Many authors are of the view that unless institutions of learning embark on aggressive information security management, more harms will be done to their database and digital resources (Ward, 2008). It is against this background that the present study sets to determine the monitoring and information recovery control mechanism adopted by administrative officers for effective information management in colleges of education in South-South Nigeria.

Research Questions

The following research questions guided the study:

1. What are the monitoring control mechanisms adopted by administrative officers for effective information management?
2. What are the information recovery control mechanisms adopted by administrative officers for effective information management?

Hypotheses

The following null hypotheses formulated to guide the study were tested at 0.05 level of Significance:

1. There is no significant difference in the mean responses of strategic, tactical, and operational administrative officers on the monitoring control measures required for Effective Information Management.
2. There is no significant difference in the mean responses of strategic, tactical, and operational administrative officers on the recovery control measures required for Effective Information Management.

Methodology

This study adopted descriptive survey research design. The population for the study was 1,580 consisting of 232 strategic, 569 tactical and 779 operational administrative officers from the 11 Colleges of Education across the six States that make up South-South Nigeria. The strategic, tactical, and operational administrative officers were chosen because they are the main information management staff of the Colleges of Education. Again, they possess the experience

and expertise required for effective information management, therefore, were in good position to respond to questions about the administrative information control measures adopted for effective administrative office operations in the Colleges.

The sample size of the study was 320 respondents from eleven Colleges of Education in South-South Nigeria. Taro Yamene's formula in Uzoagulu (2011) was used to determine the sample size of the respondents from the Colleges of Education being studied. After determining the sample size, proportionate sampling technique was used to determine the number of the strategic, tactical and operational administrative officers for each of the Colleges of Education studied.

The instrument used for data collection was a structured questionnaire titled "Information Management Control Measures Questionnaire (IMCMQ)" developed by the researcher. The questionnaire was divided into two parts: Part I and II. Part I solicits for information on the general characteristics of the respondents. Part II was further divided into two sections (A-B) in line with the specific purposes of the study. Section A has 20-items that sought information on monitoring control measures while section B has 25 items on information recovery control measures adopted by administrative officers for effective information management in Colleges of Education. The Sections were structured on a 4-point scale with response options of Very Highly Adopted (VHA), Highly Adopted (HA), Moderately Adopted (MA), and Lowly Adopted (LA) with weights of 4, 3, 2, and 1 respectively.

The questionnaire was face-validated by five experts. Their suggestions, comments and corrections were utilized to produce the final copy of the questionnaire for the study. The questionnaire was trial-tested on a sample of 30 administrative officers in AlvanIkoku Federal College of Education Owerri, Imo State, Nigeria, which is outside the study area. Cronbach Alpha reliability method was used to determine the internal consistency of the instrument which yielded 0.93 for monitoring, and 0.95 for recovery control measures with an overall coefficient of 0.93.

The researcher with the help of eleven (11) research assistants, one for each of the 11 Federal and State Colleges of Education in South – South administered the questionnaire to the respondents. Three hundred and twenty (320) copies of the questionnaires were administered to the respondents while two hundred and eighty (280) representing 87.5% rate of returns of correctly completed questionnaires were retrieved after two weeks from respondents and were used for the data analysis (i.e. S=45, T=96, O=139 respectively).

The data collected for the study was analyzed using mean to answer the research questions and standard deviation to determine the closeness or otherwise of the responses from the mean, while Analysis of Variance (ANOVA) was used to test all the null hypothesis at 0.05 level of significance at the relevant degree of freedom. The real limit of numbers was used for interpreting the analyzed data as follows: Very Highly Adopted (VHA)4:3.0-4.0; Highly Adopted (HA)3:2.0-2.99; Moderately Adopted (MA) 2:1.0-1.9; and Lowly Adopted (LA) 1:0.00-0.9. In the test of hypotheses, the hypothesis of no significant difference was not rejected if the probability value is greater than or equal to 0.05 level of significance. However, where the probability value is less than 0.05 level of significance, the null hypothesis was rejected.

Results

This section presents the analysis of data collected for the study. The analysis is presented according to the research questions and the hypotheses that guided the study.

Research Question/Hypothesis One

Table 1: ANOVA of the Mean Responses of Administrative Officers on the Monitoring Control Measures Required for Effective Information Management

S/No	The Monitoring Control Measures	Nos of S = 45, T = 96, O = 139. Total Respondents = 280							
		\bar{x}_S	\bar{x}_T	\bar{x}_O	Remarks	Df	F-ratio	P-value	Rmk
1	Monitor all the aspects of the institution's information centers that are most critical in fulfilling schools' long-term goals.	1.2 4	1.2 3	1.3 6	MR	31 9	3.29	0.04	S
2	Specify a standard or range of satisfactory performance in service delivery.	1.1 4	1.1 6	1.2 0	MR	31 9	0.56	0.57	NS
3	Know who, when, and how information about institution's data, file, and transactions are to be collected and recorded.	1.2 0	1.1 8	1.2 9	MR	31 9	2.44	0.09	NS
4	Specify the type of comparisons that will be made, and Developing some possible responses if performance is outside the range.	1.2 4	1.3 4	1.2 3	MR	31 9	2.24	0.11	NS
5	Identify the important stages of each information process.	1.1 8	1.4 0	1.2 0	MR	31 9	8.11	0.00	S
6	List the key inputs and outputs of each information process stage.	1.2 7	1.2 7	1.1 7	MR	31 9	2.24	0.11	NS
7	Assign the right and capable staff to the monitoring unit.	1.1 8	1.2 7	1.1 7	MR	31 9	2.38	0.09	NS

8	Set special monitoring activities in high-risk information areas like financial, online transactions, identification code, and confidential documents.	1.2 2	1.3 6	1.1 3	MR	31 9	10.0 9	0.00	S
9	Use routine managerial activities such as supervision, reconciliations, checklists, comparisons, performance evaluations, and status reports as tools for monitoring.	1.2 2	1.5 2	1.2 2	MR	31 9	15.6 9	0.00	S
10	Use monitoring software such as Google Alerts, <u>GFI LanGuard</u> , <u>Nagios</u> , with alerting, notification, reporting features to monitor.	1.2 7	1.1 7	1.2 9	MR	31 9	2.96	0.05	NS
11	<u>Use Google Alerts to generate updates of new action and monitor</u> information user online reputation more effectively to detect any potentially harmful activity.	1.4 7	1.1 2	1.3 2	MR	31 9	13.1 3	0.00	S
12	<u>Use GFI LanGuard</u> software to scan the network against any vulnerability, unpatched or unlicensed applications that are harmful to the institution's server or applications.	1.2 0	1.1 4	1.2 6	MR	31 9	2.94	0.05	NS

13	Use Microsoft Message Analyzer to capture, view and analyze network protocol traffics side-by-side with other system to monitor activities going on around the network.	1.1 0	1.1 2	1.3 6	MR	31 9	14.3 9	0.00	S
14	Set up Microsoft Message Analyzer to assess multiple log data sources from a single pane.	1.1 8	1.1 8	1.2 9	MR	31 9	2.68	0.07	NS
15	Install Nagios to monitor institutions' critical systems, applications, and services to ensure that they are working actively.	1.2 4	1.2 3	1.3 2	MR	31 9	1.49	0.23	NS
16	Set Nagios to generate alert whenever the systems are attacked. .	1.0 4	1.1 4	1.2 5	MR	31 9	6.99	0.00	S
17	Set Nagios software to check how the health of institutions' systems is and to generate reports whenever the systems are attacked.	1.1 2	1.1 8	1.2 7	MR	31 9	2.86	0.06	NS
18	Install OpenNMS to monitor events, notifications, and to automate discovery of any malfunctioning and intrusions.	1.2 2	1.3 7	1.2 4	MR	31 9	3.13	0.05	NS
19	Use Capsa Free to monitor network traffics, troubleshoot network issues and analyze packets so as to detect if there is any intrusion.	1.4 5	1.3 1	1.2 5	MR	31 9	3.65	0.03	S

20	Use MSN, Yahoo or Google Messenger to filter and monitor email and auto-save, and customize reports when necessary.	1.3	1.1	1.2	MR	31	3.09	0.05	NS
		5	8	7		9			
	Grand mean	1.2	1.2	1.2	MR	31	0.88	0.42	NS
		7	4	4		9			

Key: \bar{x}_S = Means of Strategic Administrative Officers, \bar{x}_T = Means of Tactical Administrative Officers, \bar{x}_O = Means of Operational Administrative Officers, S = Strategic Administrative Officers, T = Tactical Administrative Officers, O = Operational Administrative Officers, Rmk = Remark, MR= Moderately Required, NS = Not Significant, S = Significant.

The result in Table 1 shows the mean ratings of respondents on the monitoring control measures adopted by the administrative officers for effective information management in Colleges of Education in South-South Nigeria. The result showed that mean ratings on all the items ranged from 1.18 – 1.37 with a grand mean of 1.25, indicating that the respondents (Strategic, Tactical and Operational Administrative Officers) moderately required the monitoring control measures. On the other hand, the corresponding standard deviation to each of the items ranged from 0.38–0.47 with an overall of 0.12, signifying that the opinions of the respondents were very close to one another on the level at which they required the monitoring control measures.

The result in Table 1 further shows the ANOVA result of the hypothesis of no significant difference among the mean responses of Strategic, Tactical and Operational Administrative Officers on monitoring control measures required by them for effective information management in Colleges of Education in South-South Nigeria. The result revealed a cluster F-value of 0.88 with a significant value (P-value) of 0.42. Since the overall P-value of 0.42 is greater than 0.05 set as level of significance, the null hypothesis (H_{01}) was not rejected. Although the analysis revealed significant and non-significant p-values on different items, the hypothesis (H_{05}) was not rejected because the overall p-value was not significant.

Research Question/Hypothesis Two

Table 2: ANOVA of the Administrative Officers on the Recovery Control Measures Required for Effective Information Management in Colleges of Education

S/No	The Monitoring Control Measures	Nos of S = 45, T = 96, O = 139. Total Respondents = 280							
		\bar{x}_S	\bar{x}_T	\bar{x}_O	Remarks	df	F-ratio	P-value	Rmk
1	Develop and maintain a framework to measure and identify harms and to recover lost data.	1.35	1.34	1.31	MR	319	0.26	0.77	NS

2	Provide formal methods for risk assessment, management and recovery.	1.43	1.27	1.32	MR	319	1.94	0.15	NS
3	Ensure that all relevant security communications are made to stakeholders to inform, advise and encourage best recovery practices.	1.35	1.39	1.43	MR	319	0.68	0.51	NS
4	Ensure that information assets and processing facilities are protected against further unauthorized access, misuse and disclosure after attack is noticed.	1.29	1.11	1.29	MR	319	6.77	0.00	S
5	Ensure that all relevant recovery security-related legal obligations are adhered to for effective recovery of lost information.	1.29	1.19	1.19	MR	319	1.11	0.33	NS
6	Follow the processes and approaches stated in the database backup retention policy.	1.31	1.21	1.24	MR	319	0.86	0.42	NS
7	Use automated backups settings to save database, files and media etc. to external storage devices for future use.	1.20	1.26	1.26	MR	319	0.37	0.69	NS
8	Restore database, files and media etc. from backup sources after damage, hack, or intrusion has occurred.	1.51	1.17	1.30	MR	319	10.69	0.00	S

9	Change encrypted keys to avoid further access to data base, network etc.	1.39	1.15	1.25	MR	319	5.76	0.00	S
10	Use disaster recovery site to recover lost websites, or portals etc.	1.41	1.15	1.30	MR	319	7.27	0.00	S
11	Ensure that disposals of any media containing sensitive information are conducted in an agreed manner in situations where such is required for recovery.	1.45	1.29	1.31	MR	319	2.06	0.13	NS
12	Alert the bank concern to block further access to an account where breaches include sensitive institutional financial information.	1.45	1.25	1.34	MR	319	3.46	0.03	S
13	Alert the network providers to block further access to an account where breaches include web or portal attacks.	1.27	1.25	1.38	MR	319	2.61	0.08	NS
14	Restore files or media documents backed up on Private Cloud solutions.	1.33	1.23	1.38	MR	319	3.67	0.03	S
15	Use Hybrid Cloud solutions that restore both on-site and off-site data after physical disaster.	1.27	1.24	1.35	MR	319	2.19	0.11	NS
16	Use High Availability Systems to keep both data and system replicated off-site, enabling continuous	1.53	1.25	1.30	MR	319	6.48	0.00	S

	access to systems and data, even after a disaster.								
17	Use storage area network (SAN) (i.e. technology replication approach to recover off-site data after damager or threat has occurred.	1.39	1.20	1.27	MR	319	3.11	0.05	NS
18	Restore all the fire prevention/mitigation systems such as alarms and fire extinguishers.	1.45	1.20	1.36	MR	319	6.23	0.00	S
19	Restore or re-install anti-virus software and other security measures	1.43	1.34	1.26	MR	319	2.93	0.06	NS
20	Restore data lost from secondary storage devices from other backed up sources.	1.41	1.32	1.43	MR	319	1.79	0.17	NS
21	Ensure that network restored is secured and free from future vulnerable attack.	1.10	1.30	1.36	MR	319	6.24	0.00	S
22	Use latest version of applications where necessary for recovery process.	1.08	1.32	1.31	MR	319	5.89	0.00	S
23	Avoid pirated version of the recovery applications in data recovery activities.	1.31	1.36	1.35	MR	319	0.22	0.80	NS
24	Perform root cause analyses after recovery measures have been taken.	1.39	1.41	1.34	MR	319	0.82	0.44	NS
25	Document or feedback lessons learned into the	1.39	1.35	1.33	MR	319	0.27	0.77	NS

information security
 policy and planning
 functions as a guide for
 future preventive
 measures.

Grand mean	1.35	1.26	1.32	MR	319	3.35	0.22	NS
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The result in Table 2 showed the mean ratings of the respondents on the recovery control measures required by administrative officers for effective information management in Colleges of Education in South-South Nigeria. The mean ratings of the items together with the grand mean ranged from 1.21 – 1.40 implying that the Administrative Officers moderately required the recovery control measures. On the other hand, the corresponding standard deviation to each of the items ranged from 0.12– 0.49 with an overall of 0.12, signifying that the opinions of the respondents were very close to one another on the level at which they required the recovery control measures.

The result in Table 2 also showed the ANOVA result of the hypothesis of no significant difference among the mean responses of Strategic, Tactical and Operational Administrative Officers on recovery control measures required by them for effective information management in Colleges of Education in South-South Nigeria. The result revealed a cluster F-value of 3.35 with a significant value (P-value) of 0.22. However, the item-by-item analysis showed that the hypothesis was not significant on items 1-3, 5-7, 11, 13, 15, 17, 19, 20, 23-25 and the overall mean, whereas items 4, 6, 8-10, 12, 14, 16, 18, 21 and 22 are significant. Although the analysis indicated significant and non-significant differences in different items, since the overall significant value (p-value) of 0.22 is greater than 0.05 level of significance, the null hypothesis (Ho₂) was not rejected.

Discussion of Findings

The discussion of the findings was done according to the specific control mechanisms studied and the hypotheses tested.

Monitoring Control Measures for Effective Information Management

These findings of the study revealed that the administrative officers in COEs in South-South, Nigeria, do not highly required most of the monitoring control measures identified in this study. The level of their adoption of the monitoring control measures for effective management of their institutional information is at the moderate level. Some of the monitoring control measures identified include: Monitor all the aspects of the institution’s information centers that are most critical in fulfilling schools’ long term goals; Specify a standard or range of satisfactory performance in service delivery; Know who, when, and how information about institution’s data, file, transactions are to be collected and recorded; Specify the type of comparisons that would be made, and developing some possible responses if performance is outside the range; Identify the important stages of each information process; List the key inputs and outputs of each information process stage; Assign the right and capable staff to the monitoring unit, and Set special monitoring activities in high-risk information areas like financial, online transactions, identification code, and confidential documents.

The findings of this study strengthened National Vulnerability Database(2019) who noted that some of the reasons why organisations design and implement monitoring control measures include: to attack or indicate potential attacks on institutions' information systems; ii) to identify unauthorized local network, and remote connections from malicious attackers. The findings are also in agreement with Abanyam,,Nwokedi and Agbomi (2022) who found that the information officers can maintain monitoring control measures in an institution by strategically deploying monitoring devices to collect organization-determined essential information. The findings were also congruent with State of Vermont (2015) who found that monitoring control are maintained through managerial activities such as supervision, reconciliations, checklists, comparisons, performance evaluations, and status reports. Similarly, the findings of the study is in agreement with Fisher (2019) who maintained that one of the approaches to effective monitoring control measures is by using OpenNMS to put surveillance over an institutions' databases and for automated discovery of any fraudulent attempt on the institutions' information system.

Recovery Control Measures for Effective Information Management

The findings of the study revealed that the administrative officers in colleges of education in South-South, Nigeria moderately required the recovery control measures. Some of the recovery control measures identified include: Develop and maintain a framework to measure and identify harms and to recover lost data; Provide formal methods for risk assessment, management and recovery; Ensure that all relevant security communications are made to stakeholders to inform advise and encourage best recovery practices; Ensure that information assets and processing facilities are protected against further unauthorized access, misuse and disclosure after attack is noticed; Ensure that all relevant recovery security-related legal obligations are adhered to for effective recovery of lost information; Follow the processes and approaches stated in the database backup retention policy; Use automated backups settings to save database, files and media etc. to external storage devices for future use; Restore database, files and media etc. from backup sources after damage, hack, or intrusion has occurred; Change encrypted keys to avoid further access to database, network etc. and Use disaster recovery site to recover lost websites, or portals etc.

The findings of this study also supported the findings of Petal (2010) who found that recovery control measures are mechanisms proactively set by information officers to reduce and eliminate various threats to information management in the institutions. The findings of the study also gave credence to Martin (2002) who noted that recovery control measures provide procedures to the information center after an unforeseen disaster had occurred. In addition, the findings of this study are in agreement with Izuora (2017) that the aim of any recovery control measure is to see how systems that have been attacked can be put back to its normal condition before the attack occurred. The findings of the study strongly supported Firefox Monitor (2019) who outlined that recovery control measure approaches include: use of disaster recovery site, system and data backups, and high availability.

Conclusion

This study investigated the control measures required by administrative officers for effective information management in COEs in South-South Nigeria. Based on the findings of the study, it is inferred that the level of adoption of the identified information control measures by the administrative officers of the COEs in South-South Nigeria are not high. This could be among the reasons why the information in the colleges is highly vulnerable to several online threats and

malicious attacks. It is clearly established in this study that effective information management through the monitoring and recovery control measures is the key to the survival of the institutions from unscrupulous hackers. Diligent application of the identified control measures will also help the administrative officers to check-mate against internal errors, frauds, and abuse of information by staff and students. It is therefore imperative for the stakeholders of colleges of education in Nigeria to take seriously issues of adaptation of control measures for effective information management in the institutions.

Recommendations

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

1. Administrators and managements of COEs in Nigeria should enact effective policies and laws that support the adaptation of procedural preventive control measures in their institutions.
2. The management of COEs should provide 21st-century Information and Communication Technology equipment that has updated applications that guarantee detective control measures.
3. The administrative heads should on a routine basis assign administrative officers to monitor the traffics generated to and from the institutions' websites, portals and databases using monitoring control measures to ensure early detection of unauthorized access of the institutions' virtual environments.
4. The Head of Information Management should on regular bases assign administrative officers who can effectively use recovery control measures applications and procedures to recover lost information assets of the institutions and to block further damage/harm to the institution.

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STUDENTS' DRESSING BEHAVIOUR IN TERTIARY INSTITUTIONS IN LAGOS STATE

by

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Abstract

The study explored the contemporary dressing behaviour of students in tertiary institutions in Lagos State. It examined the perception of students on what constitutes indecent dressing and determined the association between type of institutions and students' dressing behaviour in Lagos State. The study adopted the descriptive survey design. The study population consisted of students of tertiary institutions (university, college of education and polytechnics) in Lagos State. A sample of 600 respondents was drawn from six purposively selected tertiary institutions in Lagos State. Data for the study were collected using a questionnaire developed by the researcher titled "Students' Dressing Behaviour Questionnaire" (SDBQ). Data collected were analysed using percentages, ANOVA and t-test statistics. The results showed the pre-dominant dressing patterns of male students were Tee shirt with dreadful messages 53.4%, rag jeans 48%, fitted shirt 43.6% and "sagging" of trousers 40.2%, while the majority of female students wore tight or low waist trousers 51.9%, one hand top or blouse 49.5%, body hug dresses 46.6%, bumb short dresses 46.2%, off-shoulder dresses 50.5% and mini gown 50.7%, to lectures. The results also showed that 80% of respondents were of the opinion that the dressing patterns of the majority of female students in tertiary institutions were indecent. The results further showed that there was a significant relationship between types of institution and students' dressing pattern. ($F = 16.92$, $p < 0.05$). The study concluded that effective implementation of dress code policy in tertiary institutions would be required to enhance the culture of decent dressing among students.

Keywords: Dressing Behaviour, Dressing Pattern, Indecent Dressing, Contemporary, Perception

Introduction

Dressing is an important aspect of life. Since God covered the nakedness of Adam and Eve in the Garden of Eden (Gen. 3:21), man had seen dressing as means of covering nakedness. The Yoruba, for example, attach importance to proper and decent dressing. They believe that impressions are formed, interpreted and established about a person's personality through his dressing. This made the Yoruba to say *Iri ni si ni so ni lojo*: that is, the way you dress, is the way you will be addressed. This shows the importance of good dressing. To be appropriately dressed implies wearing the right dress for the right occasion, and that implies the occasion figures out what to wear; while indecent dressing is a conscious and deliberate action to uncover the parts of the body that should be covered. Akpan, (2018) described indecent dressing as a provocative and disruptive mode of dressing. Dressing therefore, is the complete arrangement of all outward beautification of the body and all material articles added to it. The dressing behaviour of an individual is impacted by social, mental, monetary, physical, ecological resources and the capacity to properly utilize these resources.

Globally, dressing designs have become more perplexing. Societal roles are changing; individualization and technological headway have nudged more individuals to check out the manner in which they look. Notwithstanding, society has become dynamic, consequently certain individuals find it challenging to communicate their qualities and goals accurately particularly in the space of dressing. Great dress sense is knowing what to wear, when to wear it and how to wear it. An outfit, whether modest or costly, will be valued on the wearer assuming it is appropriately or accurately utilised. The dressing patterns of numerous tertiary institutions students in Nigeria today have turned into a worry to the whole society. The manner of dressing of some students gives an impression that some of them lack a sense of decency. Many female students dress seductively with almost all their underwear showing under “one inch” skirts Obeta, & Uwah (2015). This pattern of dressing has caused havoc to some female students’ lives such as, rape, sexual harassment, poor academic performance, mistaken identity and so on (Ifedili & Ifedili, 2015; Oli, 2017; Birhan 2019; Ibrahim,2020). Although, there are no universally acceptable ways of dressing, there are dresses that are meant to serve some definable purposes, such as aesthetic, protection, warmth, identification etc. irrespective of country or race. Some dresses constitute part of people’s culture as they define the people’s tribal or ethnic identity.

Students of higher institutions in Nigeria appear to recognize the significance of dressing patterns as a means of sending signals, displaying affluence and for creating class. Many of them adopt patterns of dressing that express their particular distinct identity. It has been observed that students demonstrate awareness that every style or mode of appearance has a meaning, and more reasons some dress provocatively in and outside their hostels to send some unhealthy signals and messages (Uzobo, Olomu, & Ayimoro, 2014). Literature also indicates that most adolescents look up to celebrities, theatre artists and media presenters as models for fashion ideas of what to wear and how to appear (Olori, 2003; Apuke, 2017). Some scholars also confirmed in various studies on influence of peer pressure and family background on wrong dressing orientation and imitation of western styles.

In recent times, there has been a change in the mode of dressing, dressing patterns and dressing behaviour of students in Nigerian higher institutions of learning. This change is noticeable both in rural and urban schools. It is common knowledge that the mode of dressing of many students completely deviates from the cultural requirements of their societies. For example, in Nigeria, Utoh, (2010) noted that the Yorubas are by custom fully clothed people, likewise the Ibos and the Hausas. There is no region in Nigeria where nudity is embraced. It is considered in the highest degree unfashionable to appear in the public without a complete covering.

Today, the dressing pattern of students in tertiary institutions is frantically going from the customary method of dressing to contemporary styles of nudity. Female students dress in meager dresses that show their bosoms, back and once in a while the lines that part the buttocks. Picking up things or bending, climbing of a bike becomes a major problem. Some female students while sitting will need a scarf to cover their thigh because everything is out and the cloth worn is not up to the knee. Male students comfortably "sag" their trousers by putting them below the buttock exposing their boxers and the pubic hair. Before, modesty, fairness, prudence, virtue, chastity, devotion, genuineness, and so forth, are terms which parents utilized in training, nurturing and sustaining; yet today socialisation or modernity appears to have cleared every one of these or if nothing else recast them in new relative implications (Fayokun, Adedeji & Oyebade, 2009).

Arubayi (2010) specified the motivations behind why individuals wear materials: to safeguard, to cover their exposure, to improve their magnificence, to draw in and lure the other gender, to communicate individual status, to adjust, to control, and to go about as a type of personality. Schalla and Appiah (2016) also corroborated the fact that clothing is worn mainly for adornment of the body. Individuals do say "you are what you wear". The communication sign of human dressing conveys the individual's gender, economic status, religion and social qualities, tribe or culture, occupation, way of lifestyle perspectives and degree of humility or indecency. Dressing behaviour is impacted by various elements, like social, individual, and psychological variables. Nonetheless, these elements should be thought about so as to consistently dress appropriately in order to avoid wrong interpretation of one's personality or intentions at any given time.

Statement of the Problem

In recent times the dressing behaviour of tertiary institutions students has generated a lot of concern to school authorities, parents, religious bodies, government and the entire society. Many students seem not to know the value of good dressing. They seem not to know how to dress properly, decently or suitably for different occasions. Previous studies indicate that poor parenting, the society, wrong use of the internet, peer pressure, fading cultural values, globalisation and ignorance of the proper way of dressing are some of the causes of indecent dressing (Omede, 2011; Fayokun, et al. 2009). This trend is known to have many negative consequences, such as rape, sexual harassment, identity problem, poor performance in academic work, health problem human immunodeficiency virus (HIV)/acquired immunodeficiency syndrome (AIDS), ritualism and untimely death (Okeh, 2009). To alleviate these problems, many institutions of learning in Nigeria have adopted dress codes and prescribed punitive measures to monitor the dressing patterns of students. Annually, most institutions usually come up with dressing codes for their students and some types of dresses, caps and jewelry banned from the students' wardrobe (Ayodele, 2003; Okafor, 2022). In spite of strict official sanctions for offenders, the phenomenon has continued unabated on campuses of higher institutions. An understanding of factors which could precipitate indecent dressing among students is required to proffer a lasting solution to the problem.

Objectives of the Study

The general purpose of this study was to investigate the dressing behaviour of students in higher institutions of learning in Lagos State. The specific objectives of the research were to:

- (1) identify contemporary dressing patterns of tertiary institutions students in Lagos State;
- (2) investigate the perception of students on what constitutes indecent dressing among them;
and
- (3) determine the association between type of institutions and dressing behaviour of student.

Research Questions

The following research questions were raised

- (1) What are the dressing patterns of students of tertiary institutions in Lagos State?
- (2) What is the perception of students of tertiary institutions of what constitutes indecent dressing?

Research Hypotheses

- (1) There is no significant effect between the type of institutions and the dressing behaviour of students.

Methodology

The study adopted the descriptive survey design. The study population consisted of students in Tertiary Institutions in Lagos State. Six institutions were purposively selected on the basis of ownership i.e. federal and state. 100 respondents were selected using accidental sampling techniques from one randomly selected Faculty (for University), School (for Polytechnics), and Department (for College of Education) respectively, giving a total of 600 respondents. An instrument titled “Students’ Dressing Behaviour Questionnaire “(SDBQ) was constructed by the researcher. The instrument consists of six sections A, B, C, D, E and F. Section A consists of items on demographic variables of the respondents. Sections B and D respectively consisted of ladies’ and men’s dressing patterns as well as occasion for the use of the different dressing patterns. Sections C and E required both ladies and men to indicate the frequency of the use of the different dressing patterns on a 3-point scale of Always, Sometimes and Never. The instrument for the study was pilot tested in a university outside Lagos State. Kaiser-Meyer-Olkin (KMO test) and Bartlett’s Test of Sphericity (BTS) were carried out to ascertain the usability of factorial validation of the items in each section and to determine if each item would yield uniform data. Inter-correlation matrices were then constructed among the items in each section to observe the interrelationship of the items and finally the factor extraction information was obtained to confirm the validity of the sections as shown in Table 1.

Table 1: Factorial Validity of items in Research Instrument

Sections	Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO)	Bartlett’s Test of Sphericity (BTS)	
		Approx. Chi-square	Sig.
B	0.53	103.51	.00
C	0.50	126.77	.00
D	0.58	153.09	.00
E	0.59	226.56	.00
F	0.83	2.395	.00

In all the cases as observed in Table 1, the KMO values were greater than critical value at 0.05 level of significance and thus are acceptable.

Two approaches were adopted in determining the reliability of the SDBQ. The Cronbach’s Alpha and Split Half reliability estimates were obtained. The Cronbach’s Alpha and Split Half reliability estimates of Sections B, C, D, E, and F were 0.86 and 0.70, 0.89 and 0.80, 0.71 and 0.83, 0.87 and 0.79 and 0.81 and 0.86 respectively. The values were considered adequate to justify the reliability of the instruments.

Results

Research Question 1: What are the dressing patterns of students of tertiary institutions in Lagos State?

To answer this question, students' responses to Section B, C and D, E of the SDBQ which sought information on the patterns of dressing of male and female students on specific occasions and the frequency of use of the patterns were compiled and analysed using percentages. The result of the analysis is as presented in Tables 2 and Table 3.

Table 2: Patterns of Dressing of Female Students

Ladies' Pattern of Dressing	Occasions for the use of Pattern							TOTAL
	Lecture	Fellowship	Sports	Leisure	Official Gathering	Free Period	None at all	
Body hug dresses	135 (46.6%)	34(11.7%)	16 (5.5%)	18 (6.2%)	20 (6.9%)	36 (12.4%)	31 (10.7)	290
Spaghetti tops	125 (42.4%)	47(15.9%)	19 (6.4%)	17 (5.8%)	24 (8.1%)	35 (11.9%)	28 (9.5%)	295
Off-shoulder dresses	148 (50.5%)	0	19 (6.5%)	21 (7.2%)	47 (16%)	38 (13%)	20 (6.8%)	293
Mini gown or skirt	147 (50.7%)	0	19 (6.6%)	18 (6.2%)	38 (13.1%)	36 (12.4%)	32 (11.%)	290
Sleeveless tops or tube tops	133 (44.5%)	0	39 (13.0%)	31 (10.4%)	34 (11.4%)	35 (11.7%)	27 (9.0%)	299
Tops or blouse that show the navel or (jalopy top)	139 (48.3%)	0	19 (6.6%)	21 (7.3%)	38 (13.2%)	51 (17.7%)	20 (6.9%)	288
One hand top or blouse	147 (49.5%)	0	19 (6.4%)	18 (6.1%)	45 (15.2%)	36 (12.1%)	32 (10.7%)	297
Tight or low waist trousers	152 (51.9%)	0	19 (6.5%)	31 (10.6%)	29 (9.9%)	35 (11.9%)	27 (9.2%)	293
Short knickers or bumb short	134 (46.2%)	0	29 (10%)	31 (10.7%)	34 (11.7%)	35 (12.1%)	27 (9.3%)	290
Skirt/trousers suit	81 (28.4%)	67(23.5%)	0	25 (8.8%)	54 (18.9%)	35 (12.3%)	23 (8.0%)	285
Skirt and blouse	95 (32%)	90(30.3%)	0	21 (7.1%)	30 (10.1%)	49 (16.5%)	12 (4.0%)	297
Iro and buba or any native dress	35 (11.7%)	31(10.3%)	0	1 (0.3%)	15 (5.0%)	44 (14.7%)	174 (58.%)	300

Table 2 shows the dressing patterns of ladies and the occasions for wearing the patterns. It shows that 46.6%, 42.4%, 12.4% and 11.9% wear body hug dresses and spaghetti tops to lectures and during their free period while 6.9% and 8.1% wear the patterns to official gatherings respectively. The Table shows further that 44.5% , 51.9%, 46.2%, 50.5% and 48.3% wear sleeveless tops, tight or low waist trousers, short knickers or bump short, off-shoulder dresses, mini gowns or skirt and tops or blouses that show the navel to lecture. The percentage of ladies who have never worn spaghetti tops, body hug dresses and off shoulder dresses are 9.5%. 10.7%,

6.8% respectively. In the light of this result, it can therefore be concluded that ladies wear tight, revealing and fitting patterns of dressing than any other patterns.

Table 3: Patterns of Dressing of Male Students

Men's Pattern of Dressing	Occasion for the use of pattern						TOTAL	
	Lecture	Fellowship	Sports	Leisure	Official Gathering	Free Period		None at all
Trousers placed below the buttock i.e. "Sagging:	115 (40.2%)	55 (19.2%)	19 (6.6%)	31 (10.8%)	9 (3.1%)	35 (12.2%)	22 (7.7%)	286
Sleeveless tops	107 (37.5%)	53 (18.6%)	20 (7.0%)	21 (7.4%)	19 (6.7%)	46 (16.1%)	19 (6.7%)	285
Short knickers	123 (42.4%)	0	53 (18.3%)	18 (6.2%)	20 (6.9%)	44 (15.2%)	32 (11%)	290
T-shirt with dreadful messages and images	154 (53.5%)	0	27 (9.3%)	31 (10.8%)	14 (4.8%)	35 (12.2%)	27 (9.4%)	288
Slit-trousers or rag jeans	139 (48%)	0	19 (6.5%)	31 (10.7%)	39 (13.4%)	35 (12.1%)	27 (9.3%)	290
Short or long sleeve shirt	105 (35.7%)	71 (24.1%)	4 (1.4%)	18 (6.1%)	40 (13.7%)	25 (8.5%)	31 (10.5%)	294
Fitted shirt or trousers	130 (43.6%)	93 (31.2%)	3 (1.1%)	17 (5.7%)	14 (4.7%)	15 (5.0%)	26 (8.7%)	298
Shirt and trousers with ties	83 (28.6%)	63 (21.7%)	9 (3.1%)	13 (4.5%)	10 (3.4%)	30 (10.3%)	82 (28.3%)	290
Trouser Suit	74 (25.1%)	42 (14.2%)	12 (4.1%)	13 (4.4%)	30 (10.2%)	36 (12.2%)	88 (29.8%)	295
Buba and Sokoto or any native dress	50 (17.1%)	71 (24.1%)	0	1 (0.3%)	15 (5.1%)	48 (16.3%)	109 (37.1%)	294
T-shirt with jeans	111 (37.6%)	121 (41.0%)	0	1 (.3%)	15 (5.1%)	45 (15.3%)	2 (.7%)	295

Table 3 shows the patterns of dressing with associated occasion for use. It revealed that 40.2%, 37.5%, 42.4%, 53.5%, 48%, 43.6%, and 37.6% of male students wear trouser placed below the buttock, sleeveless top, short knickers, t-shirt with dreadful messages and images, slit or rag jeans, fitted shirt or trouser, and t-shirt with jeans to lectures respectively. The result further showed 19.2% and 12.2% wear sag trousers to fellowship and during their free period while 18.6% and 16.1% wear sleeveless tops to fellowship and during free period respectively. In addition, 28.6% and 21.7% wear shirt and trouser with tie to lecture and fellowship with only 25.0% wearing trouser suit to lecture and 14.2% to fellowship respectively. Furthermore, 28.3% of male students did not have a shirt and trouser with tie while 29.8% also had no trouser suit. In the light of this result, it can be concluded therefore, that male students wear tight, rag patterns and T-shirts with dreadful messages more than any other patterns.

Research Question 2: What is the perception of students on what constitutes indecent dressing?

To answer this question, students' responses to Section F of the SDBQ which seeks information on students' perception of indecent dressing were scored and analysed using percentages. The result is as presented in Table 4.

Table 4: Students' Perception of What Constitute Indecent Dressing

S/N	Type of Dressing	Students' Perception			
		Decent		Indecent	
		N	%	N	%
1.	Dresses showing buttocks while walking because of short tops	66	11%	533	89%
2.	Transparent dresses	132	22%	460	77%
3.	Dresses showing part of the breasts	66	11%	521	87%
4.	Trousers revealing underwear's	96	16%	493	82.1%
5.	Short skirt showing part of one's pants	103	17.1%	491	82%
6.	Ladies gown reaching the knee	466	78%	127	21.1%
7.	Skirt slitted to the buttock	137	22%	448	75%
8.	Dresses that show pubic hair	119	20%	486	81%
9.	Dresses that open at the chest	189	31.5%	394	66%
10.	Dresses sewn too tight	489	81.5%	101	17%
11.	A shirt that open men's chest	141	23.5%	446	74.3%
12.	Sagging of trousers	76	13%	498	89%
13.	Dresses that reveal body contour	208	35%	374	63%
14.	Wearing underwear as a top	103	17.1%	483	81%
15.	Short knickers that reveal the tight	85	14.1%	494	82.3%
16.	T-shirt with dreadful messages	112	19%	472	79%
17.	Show me your back dresses	163	27.1%	425	71%
18.	Dresses that cover buttock when sitting	15.1	15.1%	498	83%
19.	Dresses that do not cover sensitive body parts	489	83%	103	17%
20	Bomb short dresses are okay	529	88.1%	57	10%

Table 4 shows students' perception on what constitutes indecent dressing. The results show that not less than 80% of the sampled students perceive most of the dressing patterns for male and female students on the table as indecent. The table also shows 89.0%, 87.0%, 82.0% of students respectively perceive dresses showing buttocks while walking, sagging of trousers, dresses that show part of the breasts, short knickers that reveal the tights as indecent while 78%, 81.5%, 83%, 88.1% of sampled male and female students perceived dresses such as ladies gown reaching the knee, dresses sewn too tight and bomb short dresses as decent respectively.

Hypotheses Testing:

Hypothesis 1: There is no significant effect between the type of institutions and dressing behaviour of students.

To test this hypothesis, students’ responses to Sections C and E of the SDBQ which seek information on students’ patterns of dressing were scored and the scores were converted to 100% to put all students, male and females on the same scale. On the scale, the minimum and maximum scores are 10 and 100 respectively with a mean of 7.02. Individual students’ scores were used to categorise the students’ dressing behaviour into decent and indecent. A student with a score that ranged between 10 and 54 is categorised to be dressing indecently while a score between 55 and 100 implies dressing decently. The difference in students' dressing behaviour score was then determined using one way analysis of variance. The results are as presented in Table 5

Table 5: Descriptive statistics of students dressing pattern scores

Types of Institution	N	\bar{X}	SD
University	192	71.74	13.56
Polytechnic	190	66.43	5.82
College of Education	189	71.92	10.46

From Table 6, the mean and standard deviation values of the dressing patterns of students in the institutions are shown for university ($\bar{X} = 71.74$ and $SD = 13.56$), for polytechnics ($\bar{X} = 66.4$ and $Sd = ,5.82$) and college of education ($\bar{X} = 71.92$ and $SD = 10.45$) respectively.

Tables 6: ANOVA showing effects between institution type and students dressing behaviour

Source	Sum of Squares	Df	Mean Square	F	P-value
Between Groups	3697.078	2	1848.539	.16.92	<.05
Within Groups	62067.284	568	109.273		
Total	65764.362	570			

As shown in Table 6, the mean squares between groups and within groups are 1848.539 and 109.273 respectively. These yielded F-value of 16.92 which is significant at 0.05 level. This implies that there is a significant effect between the type of institution and students dressing behaviour.

Discussion

The findings revealed the patterns of dressing of male and female students and also showed the type of occasions when students wear these patterns. The findings showed that both male and female students like to wear few, scanty and revealing dresses as earlier identified by (Obodo,2010; Obeta & Uwah, 2015). Good percentage of the female students wear sleeveless tops, tight and low waist trousers and bump short and their male counterpart who also sag trousers and wear short knickers to lectures and fellowship’ This finding of this study finds support in the conclusions of many previous researchers like Akpan, (2018) who described such patterns as “dressing to kill”, as most students dress to attract opposite sex and create unhealthy attachment (Dada, 2010; Omede, 2011). The similarities in the findings only confirm the fact that indecent

dressings is a global phenomenon and in which the majority of youths have been indoctrinated into it. Another major finding of this study is the hatred shown by students towards native dresses. Most of the students had no native dress in their wardrobe, especially female students. This result is further corroborated by Utoh (2010), Dada (2010) and Amoo (2011) when they revealed that Nigerian youths are no longer wearing traditional attires but prefer scanty dresses. The finding is further supported by Olori (2003); Apuke, (2017) who opined that cultural influence on dressing is no longer as dominant as it used to be in the past. The probable reason for this is simply because the world is a global village; students copy patterns from social media and celebrities and Nigeria is also among the villages of the world. Majority of the students might believe that native dresses are heavy or too robust compared to the scanty, mini tops and skirt being worn now. Majority might also consider the comfort and simplicity of these dresses compared to natives.

The results of the second research question indicated that the majority of students perceived most of the patterns as indecent. Plausible reason might be because most of these students see the nakedness of fellow students wearing them and feel uncomfortable or might have heard or seen the repercussions on someone as a result of indecent dressing. However, some patterns that were considered as decent corroborate previous findings on the patterns of dressing of students such as bump short dresses, mini gowns and tight or low waist trousers. This is so because most of these students wear all these types of dresses and might not likely see any indecency in such dresses. These findings also find support in previous studies by Fayokun, et al. (2009; Akpan, (2018); and Amoo, (2010) that in today's world the event of decency in dressing has been overturned and conspicuously replaced by obscene habits of half nakedness and nudity. This is further supported by Yohanna, Sababa, Filgona (2020) in their study where students perceived most of the revealing patterns as decent.

The findings from this study further revealed that the problem of indecency in students' dressing patterns is not limited to a particular type of tertiary institution. All students in the university, polytechnic and college of education are involved in the menace; just that polytechnic students are found to be more engrossed than their counterparts from other types of institutions investigated.

Conclusion

In conclusion, it was discovered that students wear more revealing dresses to lecture, during their leisure and free period. Ladies' and men's pattern of dressing showed that they wear scanty dresses and few native dresses.

Recommendations

The following recommendations are therefore proposed:

1. Students should dress decently by wearing clothes that cover sensitive body parts and ensure that the choice of dressing pattern fits their figure.
2. School authorities should also introduce dress code and sanction any student caught violating the dress code laws.
3. Students should study the environment properly and bring out the positive value in it.
4. Students should be encouraged to wear body friendly dresses instead of dressing provocatively

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PROSPECTS AND CHALLENGES OF INFORMATION AND COMMUNICATION TECHNOLOGY AND BLENDED LEARNING IN SECONDARY SCHOOLS IN NIGERIA

by

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Abstract

The paper attempted to investigate the prospects and challenges of Information and Communication Technology (ICT) and Blended learning in secondary schools in Nigeria. Some of the problems hindering Blended Learning which include lack of facilities and materials, Inadequate specialized personnel, lack of funding, building structures and lack of enabling legislation among others were fully discussed, advantages of ICT in Education and Blended Learning were also highlighted. The reasons why ICT in Education and Blended Learning in secondary schools should be fully implemented in these regions were also examined.

Keywords: *ICT, Education, Blended, Learning, online.*

Introduction

The basic philosophy of education which has been generated in the recent development of integration of Information and Communication Technology (ICT) in Education and Blended Learning in secondary schools in Nigeria is the inception of Junior Engineers Scientists and Technologist (JEST) Apart from this, there is also Nigerian Government National Policy on Education (2004) section 39 and 49 which spelt out the goals of science, technical and vocational education.

ICT is the acronym for “Information and Communication Technology”. It refers to technologies that provide access to information through the use of telecommunication. This includes the internet, wireless networks, cell phones and other communication devices. Therefore, ICT in education is the mode of education that uses information and communications technology to support, enhance and optimize the delivery of information. Worldwide research has shown that ICT can lead to an improved student learning and better teaching methods. It shows there are ample opportunities to use ICT in teaching and learning effectively in recent times and to improve the quality of teachers for teaching effectively Ratheeswari, (2018). According to UNESCO, (2022) defined ICT as 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 (podcasting, audio and video players and storage devices) and telephony (fixed or mobile, satellite, vision/video-conferencing, etc.). (UNESCO, 2022).

Furthermore, ICT in Education and Blended learning in schools is also based on the philosophy that Information and communication Technology (ICT) devices plays a vital role in all aspects of human endeavors. Throughout the ages, there has not been any human endeavour that is not confronted with institutional, organizational and administrative problems that require the intervention of ICT. Information and Communication Technology is the practical offshoot of Educational Technology which by definition is the study and ethical practice of facilitating learning and improving performance by creating, using and managing appropriate technology processes and resources Daramola and Adegbija, (2012).

Therefore, schools and learning centers are to support the philosophy which stresses the fact that ICT is the tool of communication for obtaining and getting in touch with any part of the whole world by mere touching of a combination of keyboard buttons. There is more to ICT than computer because it is the aggregate of the potentials inherent in computing and telecommunication. The role of ICT in teaching and learning is rapidly becoming one of the most important and widely discussed issues in contemporary education policy. Most experts in the field of education agreed that when properly used, ICT holds great promise to improve teaching and learning in addition to shaping the workforce opportunities. It is now regarded as the new literary which has actually rekindled a new and strong desire to equip schools with computers and other ICT and qualified personnel necessary to produce technologically proficient and different students in developed countries of the world.

There is no doubt that ICT can aid instructional processes and facilitate students' blending learning. Studies have found positive effects associated with technology aided instructions. ICT is rapidly changing our world in all ramifications; it has transformed our world into a global village. In addition, ICT devices play a significant role in everyday life and technological development of airplanes, car engines, telephones, systems, industrial robots, home appliances, toy games, etc. ICT devices are also used for collecting data for educational research with the current emphasis on science and technology by both the federal and state governments. The use of ICT has become imperative for schools in general. Therefore, as indispensable as ICT is to the attainment of educational stated goals and technological development as a whole, its use is confronted with some problems. In the light of the above, this paper investigated the problems confronting the application of ICT in Education and Blended learning in schools.

The Concept of ICT in Education

The role of technology in teaching and learning is rapidly becoming one of the most important and widely discussed issues in contemporary Education Policies. Most scholars in the field of Education are of the view that, when properly used, ICT holds a greater promise to improving teaching and learning and to shaping workforce opportunities. According to Charles et al, (2019), the introduction of ICT in education was part of the more fundamental objective to improve education globally and to make it accessible to everyone. They observed that the use of ICT in education had the potential to enhance the quality of teaching and learning, the research productivity of the teachers and the students, and the management and effectiveness of institutions. ICT has provided the opportunity to revolutionize pedagogical methods, expand access to quality education and improve the management of education. ICT is regarded as a critical tool for preparing and educating students with the required skills for the global workplace (Ibe-Bassey, 2011). Anthony (2012), examined that the impact of ICT in education cannot be over emphasized.

He further highlighted that ICT solves problems concerning space and time. Accordingly, through ICT students can communicate, contact their teachers and collect and exchange information anywhere and anytime. Further, ICT also gives access to knowledge hence enabling the students to draw from a global pool of knowledge and also makes saving and sharing knowledge easier. The students can therefore individually or together create records of note and presentations which may help them to do better in their examinations. This way they are also trained for future participation in global research and communication.

The new forms of ICTs constitute an integral part of their lives. Therefore passive listening and doing class work in isolation is no longer acceptable. (The Center for Digital Education, 2015). It is obvious that university education for instance more often combines traditional teaching methods with e-learning solutions. One of such solutions is the blended learning method, which provides the learners and the teachers with the prospective environment to learn and to teach more effectively Marsh, (2012).

The Concept of Blended Learning

Blended learning is an innovative concept of learning that embraces the advantages of both traditional teaching in the classroom and ICT supported learning including both offline learning and online learning. Blended learning is more effective than traditional methods because learners can focus on content like new vocabulary, or pronunciations while using their self-paced, online materials on their own time. In a live session, the instructor can work with learners to support their unique needs and goals. Blended learning is the integration of traditional face to face learning in technology, the internet, and distance learning. This approach is becoming pervasive in the education system in recent years; the quality of the blended courses can be enhanced by combining the advantages of both online and in-person learning Avazmatova, (2020).

A blended learning method is a new solution to the challenges of tailoring learning and development to the needs of the individuals. It represents an opportunity to integrate the innovative technological advances offered by online learning with the interaction and participation offered in the best of traditional learning. It is likely to emerge as the predominant teaching model of the future. It can be concluded that blended learning is integrating traditional face-to-face learning with technology and distance learning.

Integration of Blended Learning:

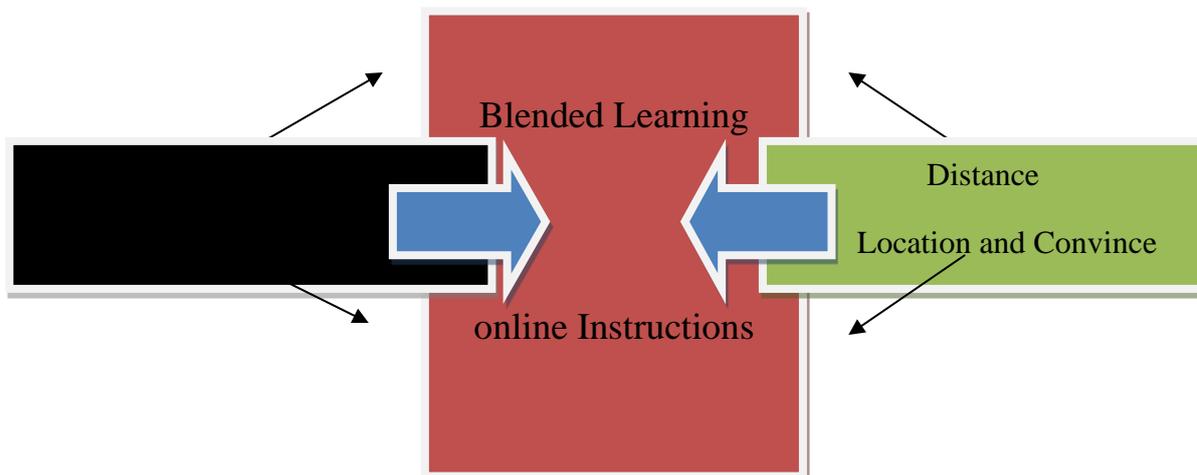


Fig.1: *Depicted integration of the traditional face-to-face form of instruction and current blended learning and it resolves the hindrance of distance, location and convince.*

Advantages and Disadvantages of Blended Learning

In the paper Blending learning combines learning technologies with traditional learning methods. Priscila (2020) opined that like any learning method, blended learning comes with unique benefits among which are the following:

1. Well-suited for large groups;
2. Better preparation and feedback;
3. Great for the non-technology fans;
4. Employees set their own pace;and
5. Reduction in costs

What are the disadvantages of blended learning?

1. Temporary increase in the workload (transition phase);
2. Lack motivation;
3. Basic technology knowledge; and
4. Plagiarism and credibility problem

Graham (2006) observed three main reasons why the blended learning is recommended:

- a) Boosting up the effectiveness of education;
- b) Increased access and convenience; and
- c) Greater cost-effectiveness.

According to MyCENTA Learning, (2022) the internet has a wide array of software and other resources that you can use in your classroom to implement blended learning. Often you can get lost in the sea of the internet while on the lookout for the best app to use in your classroom. Below are some examples: <http://www.learn.centa.org>

1. Khan Academy;
2. Google classroom;
3. YouTube;
4. Topps;
5. Scratch;
6. Android Studios;
7. PowerPoint; and
8. Xseed

Strategies for Implementing ICT in Education and Blended Learning in Nigeria

To effectively harness the power of the new information and communication technology to improve learning some strategies must be put in place. According to Ratheeswari (2018) the following conditions must be met.

- I. Students and teachers must have sufficient access to digital technologies and the internet in their classrooms, schools and for teachers' usage.

- II. High quality, meaningful, and cultural responsive digital content must be available for teachers and learners.
- III. Teachers must have the knowledge and skills to use the new digital tools and resources to help all students' academic standards.

Challenges in the use of ICT in Teaching and Blended Learning in Nigeria

In the process of integrating ICT in teaching and blended learning in Nigeria, the followings are some of the challenges to be faced:

High cost of accessing internet, non availability of ICT facilities, inadequate internet skills for integration, inadequate information sharing, shortage of trained technical personnel, Unreliable electricity supply, inadequate supply of computers and poor telephone connectivity. Others include lack of policy framework on the parts of government, inadequate infrastructure, inadequate trained ICT teachers and high cost of internet bandwidth. According to Buabeng-Andoh (2012), one of the challenges encountered in the use of ICT in teaching and by extension in blended learning is the breakdown of computers which causes interruption in the use of ICT in teaching and learning. These, if not properly provided for can hamper the success of implementing ICT in Education and Blended learning in secondary schools in Nigeria. The teachers are in the forefront of ICT in Education and blended learning in Nigeria are expected to introduce reforms into Nigerian education system but unfortunately they went through the old system of education lacking any ICT exposure (Thomas, Babatope and Jonathan 2013), It becomes a difficult problem for these set of teachers to acquire adequate mastery of skills and content that are embedded in ICT. Some difficulties in using ICT in teaching and learning according to Dean (2020) are counted as follows:

1. Lack of software: Only experienced teachers can develop teaching instructions software and apps. Where the computer software developers are not experienced teachers, education instructional software will be in shortage or lacking. Software developers need to collaborate with experienced teachers and educators to dive into all areas of teaching and learning and to come up with software that would support ICT instructions in education, teacher centered and student friendly and content driven.
2. Lack of sufficient training: Before the advent of ICT in Education, teachers in secondary schools lacked sufficient training in the field of computer science and technology. One of the findings of Beggs (2000) was that one of the top three barriers to teacher's use of ICT in teaching was the insufficient amount of service training for teachers. Furthermore, Gomes (2005) relating to various subjects concluded that lack of training concerning technology use in specific subject areas were obstacles to using new technologies in classroom practice.
3. Lack of learning equipment, tools and resources: Learning is all encompassing. Learning, without learning equipment, tools and resources is tantamount to not learning at all. The use of equipment in learning, as side the understanding of the stimulus by the learner, makes the experience memorable and stay for long duration and could be recalled as the need for it arises by the teachers and even the benefactors i.e. the students.
4. Teacher's reluctance to new technology: Some teachers had developed cold feet with regards to ICT in Education. This explained their negative attitude to innovation and refused to follow the tides. Palak and Wall, (2009) conducted a mixed study to investigate

whether teachers who frequently integrate technology and work in technology – rich schools shift their beliefs and practice towards a student-centered paradigm. The result showed that their practices did not change; neither student-centered nor teachers centered beliefs are powerful predictors of practice. However, teachers' attitude toward technology significantly predicts teacher and student technology use, as well as the use of a variety of instructional strategies ($p < 0.05$).

5. Lack of knowledge: The teachers in most of these secondary schools lack the knowledge of ICT to impart the students in a blended educational setting. According to Asiha and Sanijy, (2019) they must have a skill with particular application changes with respect to technology up-gradation and interpretation into existing curriculum. Same is applicable to school administrators such as the school principals; a good leadership quality is required in ICT programmes as it plays a key role in integration of ICT in Education.
6. Lack of skilled personnel: For ICT in education and blended learning to be effective and efficient in educational settings, there is need for skilled personnel such as technical support specialists. Their requirements actually depend upon the factor of what and how the technology is used and general requirements such as installation process, maintenance of equipment, various operations, network administration and network security etc.

Advantages of ICT in Education and Blended Learning in Nigeria.

The advantages of ICT in Education and Blended learning in secondary schools in Nigeria cannot be underscored. Information Communication Technology creates a room to explore new things, provides a conducive climate for the teaching-learning process to take place and also offers teachers the opportunity to play flexibility and enjoy effective ways of communication, collaboration, processing and solving complex problems. This in turn, provides students the condition to develop their cognitive skills and through this the teacher can facilitate learning in class room contact by the use of the model to facilitate out of class learning. According to Makanda (2015), teaching using a computer as a tool raises students' enthusiasm, interest and creativity. ICT use in teaching has an effect on several teaching approaches such as collaborative learning and activity learning which have been associated with positive impact of learning outcome. Kamau (2014) opined that the use of ICT in education improves teaching and learning at all levels of education.

Benefits of ICT in Education and Blended Learning in Nigeria

Information and Communication Technology in education and blended learning can provide a considerable benefit in supporting learning. ICT in education and improving students' literacy. The effective use of ICT can upgrade the students' literacy and numeracy. For instance, Microsoft Word can motivate the students to learn writing skills. They can enjoy and get excited typing many new words using the computer. It can also improve students' speaking and listening skills. This is because they may work collaboratively with their peers, teachers, parents and other adults. The use of ICT in education and blended learning not only can support the cognitive development of the students but also increase their motivation to learn and their interaction in learning.

Another important benefit of ICT in education and blended learning is in the process of transferring knowledge not only from teacher to students, but from students to students. This indicates that teachers will not only be a source of all knowledge anymore, rather, they will be

advisors, supervisors, and instructional providers for their students' learning process. The teacher will always have authority to direct what their students should learn by using teaching instruction as well as creating a learning environment. Implementing ICT in education and blended learning means the teachers should be learning models. The teachers should model the use of ICT in education and blended learning as a medium to find knowledge and scaffold the students.

Aside from using ICT in Education and Blended learning for scaffolding their students, teachers should use ICT for their personal development. Using ICT in education demands teachers to have technical skill and knowledge aside from their content subject knowledge. Thus a teacher who uses ICT in education and Blended learning has more duty, mastering their content subject, learning and always updating their technological skills. According to Jo, S.F. (2013), ICT therefore provides both learners and instructors with more educational affordances and possibilities. More specific benefits of using ICT in education are described. The merits of ICT in education have been extolled in the literature. The use of ICT has been found to:

1. assist students in accessing digital information efficiently'
2. support student-centered and self-directed learning;
3. produce a creative learning environment;
4. promote collaborative learning in a distance-learning environment;
5. offer more opportunities to develop critical (high-order) thinking skills;
6. improve teaching and learning quality; and
support teaching by facilitating access to course content

Conclusion

This study has revealed that resources for the implementation of Information and Communication Technology (ICT) in Education and Blended learning among secondary schools in Nigeria were inadequately provided and utilised in secondary schools for ICT in education and blended learning to thrive and flourish in Nigeria.

Recommendations

It is recommended that:

1. Ministry of Education both states and federal level should sign a memorandum of understanding through the federal government with the Nigerian Communication Commission (NCC) and private network providers such as MTN, GLO and ETISALAT to provide the secondary schools with master of the arts internet and cutting age technology equipment as parts of their corporate and social responsibilities.
2. For effective maintenance and training of the technical personnel. These private network providers should engage their technical personnel to train the schools staff on how to maintain these equipment and step down training to students.

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CHARACTER STRENGTHS AND SUBJECTIVE WELL-BEING OF BOARDING STUDENTS IN SECONDARY SCHOOLS IN SOUTHWESTERN NIGERIA

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Abstract:

The study determined the subjective well-being of secondary school students in boarding schools in southwestern Nigeria and assessed the character strengths of the students. It investigated the relationship between character strengths and subjective well-being of the students. The study adopted the descriptive survey research design. The population for the study comprised boarding secondary school students in Southwestern Nigeria. The sample for this study consisted of 1513 boarding secondary school students. The sample was selected using multistage sampling procedure. Three states were selected using simple random sampling technique. From each state, (Two Federal unity schools and one private boarding school) were selected. From these schools, Senior Secondary one and two (SS1&2) were purposively selected, from each class, 84 students were proportionally selected from arms of sciences, commercial and art classes. Two instruments namely Subjective Well-being Scale (SWS) and Character Strengths Inventory (CSI) were used to elucidate information from the students. The findings of the study showed that the majority (80%) of boarding students experienced a high subjective well-being. Boarding secondary school students possess character strength of appreciation of beauty and excellence (66.3%), gratitude, (78%), humour (67.3%), judgment (59.6%), fairness (42.9%), leadership (66.8%) and so on. There was a significant relationship between character strength and student's subjective well-being ($r = 0.196$; $p < 0.05$). The study recommended among others that teachers should encourage student's participation in exercises designed to increase character strengths such as moral talks which results in increased subjective well-being.

Keywords: Character strength, Boarding secondary school students, Subjective well-being

Introduction

Secondary school students form a part of the young age group in Nigeria, and giving attention to their well-being is essential in the development of the nation. Boarding schools students' well-being remains paramount for effective acquisition of skills, especially academic skills. Well-being of students in boarding schools is considered more important as the students live in the school environment, away from their parents and close family members.

Well-being as a concept is multifaceted, embracing many aspects of human functioning such as physical, material, psychological, social and so on (Tov, 2018). It is assumed that the well-being of any individual can determine to a great extent what his or her attitude to life and relationship with others around them will be. Well-being can be measured externally and objectively or internally and subjectively. It is often measured objectively using observable social indicators such as level of income or poverty, number or quality of house, educational attainment,

access to and use of public services and other indicators which differ from one culture to another (Ngamaba, 2017). Noticeably, children's well-being is apparently measured objectively by parents and other adults based on provision of what they considered needed and which could be different from what the children consider as their needs. This probably explains why children still exhibit unexpected negative behaviour despite the so-called good life provided for them by their parents and other caregivers (Luthar & Latendresse, 2007).

Measuring the children's well-being subjectively which involves measuring well-being according to the individual involved could be more appropriate. As a popular adage says "he who wears the shoes knows where it pinches". Oftentimes, well-being is measured objectively using observable factors which could be misleading. Though, the school is assumed to play a critical role in promoting students well-being by providing basic amenities and security. It is apparent that the observable social indicators such as food and shelter are not adequate. Atueyi (2019) reported the challenges encountered by students in federal government colleges especially in southwestern Nigeria, to include inadequate electricity and water supply, poor quality of feeding and decrepit infrastructure. While in the hostels, the students seemingly faced a myriad of other challenges such as insufficient or undesired meals, peer or senior students' victimisation, unwanted schedules, homesickness, allergies and many more. All of these could directly or indirectly affect the students' subjective well-being and in turn lead to negative emotions such as depression, anxiety, violent behaviour and even suicide ideation and suicide.

Documented evidence in Nigeria revealed that younger individuals committed suicide more frequently than was the case in the past. According to Nwafor, Akhmu, and Igbe (2013), the youngest victim among the sample they studied in Benin City was only 15 years old. Offia and Obiorah (2014) reported that the youngest case in the study they conducted in the Niger Delta area was 16 years old while a preponderance (66%) of all the victims were between 10-29 years of age. Ugwuoke (2016) in a study found in Enugu State, that four cases of suicide were reported among secondary school students. Therefore, it is imperative to investigate the level of subjective well-being of secondary school students, especially those in boarding schools.

In view of the above, subjective well-being is conceptualised as the self-report of life experiences as a whole and experiences at particular aspect of life such as family, school, work and so on. It focuses on people's feelings, life satisfaction, happiness and their emotions (Roth, 2014). Subjective well-being has three components: positive affect (including emotions such as happiness, joy or contentment), negative affect (such as anxiety or despair), and life satisfaction (Cunsolo, 2017). The life satisfaction construct is regarded as a cognitive aspect of subjective well-being while the positive and negative affects refer to the emotions and moods. The level of subjective well-being, whether high or low, will depend on the frequency of the positive and negative affects and the assessment of life satisfaction. Subjective well-being relates to the notion that how individuals experience a set of objective circumstances may be as important as those circumstances themselves and that individuals are the best judges of how their lives are going (Organisation for Economic Co-operation and Development, OECD, 2017). Self-assessment of happenings seems to be more accurate than making assumptions on behalf of the person at the receiving end. *Moreover the assessment of children's well-being through the lens of the parents or adults has been faulted (Frattore, Mason & Watson, 2012).* This probably resulted in measuring the subjective well-being of children and adolescents.

In the school, boarding students are exposed to culture, positive and negative relationships and experiences that can contribute in shaping their own identity and subjective well-being. In-

spite of the inadequate time and rapport boarding school students enjoy from their parents, it is assumed that character strengths built over the years could affect the level of subjective well-being of boarding students. Character strengths can be conceptualised as a collection of positive personality traits that are morally valued and these traits are exhibited in one's thoughts, feelings, and behaviour (Park & Peterson, 2009). Character strengths can also be regarded as good character, strength of character that is exhibited spontaneously. Good character is valuable and preached by every culture in Nigeria. It is one of the qualities for choosing leaders into positions of power. In Southwestern Nigeria, that is predominantly Yoruba, good character is valued and demanded. It is taught and learnt in Yoruba language where different adages and proverbs teach good character and way of life amongst other things. Right from childhood, children learn good moral conduct from parents and significant others such as courtesy, respect for elders and the opinions of others. Parents and caregivers model different virtues and characters for the children to consciously or unconsciously imbibe. In school, good character and best behaviour are demanded from the students. It forms the basis for school rules and regulations. These characters are instilled in the students, through reinforcement and punishment.

In the meantime, there is a shift in focus on developing good character and virtues in students. The school is too busy measuring students' academic abilities and progress of learning, giving little or no attention to the assessment of students' character and behaviour which is probably one of the reasons for heightened moral decadence being experienced now. It is established that strength of the "heart" like love, gratitude and other virtues that connect people together are more strongly associated with well-being than are strength of the "head" that are necessarily individual in nature e.g creativity, critical thinking and excellence (Park & Peterson, 2009). It is expected that good character and virtues could guide children's thoughts, emotions, behaviour and choices made towards achievement of life goals and eventually help in the achievement of academic excellence.

Character strengths (CSs) have caught the attention of researchers across the globe (Park, Peterson & Seligman, 2004). Studies have shown correlation of different character strengths with subjective well-being and life satisfaction. In a study conducted by Toner, Haslam, Robinson, and Williams, (2012) character strengths was found accountable for 41% of variance in Australian adolescents' life satisfaction scores and 53% of the variance in their happiness scores, using the measures of Personal Well-being, Index-School Children and Authentic Happiness Index respectively. Specific strengths such as love and zest have been found to predict subjective well-being (SWB) and more specifically satisfaction with life (SWL). For example, in three large studies among adults, Park *et al.* (2004) found that hope, zest, gratitude, love and curiosity were strongly associated with life satisfaction while modesty, appreciation of beauty, creativity, judgment and love of learning were found to weakly associate with life satisfaction of students. In another study, Toner, *et al* (2012) examined the structure of character strengths among adolescents aged between 15 and 18 in Australia. They obtained five strength factors including temperance, vitality, curiosity, interpersonal strengths and transcendence. Temperance, vitality and transcendence were found to be independently associated with well-being and happiness. Specifically, hope, caution, zest, fairness and leadership predicted both life satisfaction and happiness. Curiosity and love also predicted greater happiness while fairness further predicted greater life satisfaction.

Similarly, Noronha and Martins (2016) found that hope, vitality, gratitude, love, curiosity, perseverance and social intelligence strengths were positively correlated with life satisfaction.

Abasimi and Gai (2016) found a strong positive relationship between overall character strengths and satisfaction with life. Creativity, perspective, love, teamwork, prudence, and gratitude were each significantly correlated with satisfaction with life. Prudence, humor, modesty, self-regulation and love each made unique and significant contributions in explaining life satisfaction. In a 2017 study of high school students, Abasimi, Gai and Wang (2017) found Judgment, zest, love, kindness, prudence and humor independently significantly correlated with subjective well-being. Shoshani and Slone (2012) also identified a relationship between subjective wellbeing and character virtues and strengths in Israeli and Australian adolescents.

Statement of the Problem

In the wake of severe economic hardship and insecurity, addressing the topic of student's subjective well-being seems especially important given the challenging circumstances facing the student's, especially those students who study away from home. Boarding school students experience pleasant and unpleasant situations that could influence their emotions and life satisfaction and in turn affect their mental health and academic performance. It is essential to measure well-being from the students point of view (subjectively) as subjective well-being brings to the fore the individual experiences and personal perspective (Park, Jung & Han, 2022). Moreover, empirical investigations of boarding school student's subjective well-being in Nigeria are still scarce. Most of the studies on subjective well-being in Nigeria focused on undergraduates' life satisfaction and happiness which is an aspect of subjective well-being (Afolabi & Balogun, 2017, Oladipo, Olapegba & Adenike, 2012) also, different researchers have examined different variables such as emotional intelligence, self-efficacy, psychological security (Afolabi & Balogun, 2017) climate change awareness and pro-environmental behaviour (Chukwuorji, Iorfa, Nzeadibe and Ifeagwazi, 2017) There is need to understand other factors that can affect subjective well-being of boarding secondary school students.

Research Objectives

The specific objectives of the study were to:

- i. determine the subjective well-being of secondary school students in boarding schools in Southwestern Nigeria;
- ii. assess the character strengths of secondary school students in boarding schools in the zone; and
- iii. investigate the relationship between character strengths, and subjective well-being of secondary school students;

Research Questions

From the above objectives, the following research questions were asked:

1. What is the subjective well-being of secondary school students in boarding schools in Southwestern Nigeria?
2. What are the character strengths of the students?

Research Hypothesis

The following hypothesis was formulated and tested

1. There is no significant relationship between students' character strengths and their subjective well-being

Methodology

The study adopted the descriptive survey research design. The population for the study comprised all boarding secondary school students in Southwestern Nigeria. A sample of 1513 boarding school students was selected using multistage sampling procedure. From the state, three states were selected using simple random sampling technique. From boarding schools, two federal unity schools were selected using stratified random sampling technique with school type as stratum, and one private boarding school was purposively selected based on at least 10 years of consistent practice of boarding system. From each school, Senior Secondary School one and two (SS 1&2) were selected purposively because students in these classes are in their mid-adolescence and are matured enough to report their feelings. Finally, 84 secondary school students were selected from each class using systematic sampling technique. These students were proportionally selected from one arm each (Science, Commercial and Art) of SS 1&2 classes based on the total number of students in each class.

Two instruments namely: Subjective Well-being Scale (SWS) and Character Strengths Inventory (CSI) were used to elicit information from the students. The SWS was a 15 item scale containing items such as “I often feel sad” and “I would like to change many things in my life” the items in SWS were adapted from The Positive and Negative Affect Scale for Adolescent (PANAS-A) (Diener *et al.* 2010) and Student Life Satisfaction Scale (SLSS) (Huebner, 1991). The scale was a four-point Likert type ranging from “strongly agree” (4 points) to “agree” (3 points) “to disagree” (2 points) and “strongly disagree” (1 point). The CSI comprised 24 items containing items such as “I notice and enjoy watching people who are talented or very skilled at what they do.” The items in CSI were also adapted from Value in Action Inventory of Strengths VIA-IS by Peterson & Seligman, 2004. The inventory was a three-point Likert type ranging from “very much like me” (3 points), to “like me”(2 points), and “not much like me”(1 point). The instruments were pilot tested by experts in psychology and test and measurement who confirmed the content validity. The instruments yielded reliability coefficient values of 0.64 and 0.85 respectively.

Results

The questions asked were answered and the hypothesis formulated was tested.

Research Question One: What is the subjective well-being of secondary school students in boarding schools in Southwestern Nigeria?

In order to answer this research question, scores of items on SWS were cumulated accordingly such that items on positive and negative affect and life satisfaction were cumulated separately. Students that scored above mean score on positive affect and also scored above mean score on Life Satisfaction were adjudged as experiencing high subjective well-being, while those that scored above mean score on negative affects but below mean score on life satisfaction were adjudged as experiencing low subjective well-being. The results are presented in Table 1.

Table 1: Subjective Well-Being of Secondary School Students in Boarding Schools
Descriptive Statistics

Subjective Well-Being Indicators	N	Range	Min	Max	Mean	SD
Positive Affect	1512	12.00	4.00	16.00	19.41	2.96
Negative Affect	1512	12.00	4.00	16.00	9.52	2.71
Life Satisfaction	1512	9.00	5.00	22.00	13.62	2.56

As shown in Table 1, the maximum scores of respondents on subjective well-being indicators (positive affect, negative affect and life satisfaction) are 16, 16 and 22 respectively while the minimum scores are 4,4 and 5 respectively. To determine the subjective well-being of the respondents, scores of respondents were categorised into two, (high and low) subjective well-being. To categorise the scores of the respondents, the mean and standard deviation were calculated. Therefore, Students that scored above mean score of 19.41 on positive affects and also scored above mean score of 13.62 on Life satisfaction were adjudged as experiencing high subjective well-being, while those that scored above mean score of 9.52 on megative affects but below mean score of 13.62 on life satisfaction were adjudged as experiencing low subjective well-being.

Thus, the categorised scores were subjected to descriptive statistics using frequency counts and percentages. The results are presented in Table 2.

Table 2: Subjective Well-Being of Secondary School Students in Boarding Schools

Categories of Student's Subjective Well-being		
Subjective Well-being (Categories)	Frequency (f)	Percentage (%)
High Subjective Well-being	1209	80.0
Low Subjective Well-being	303	20.0
Total	1512	100.0

As shown in Table 2, majority (80.0%) of the secondary school students in boarding schools experienced high subjective well-being while 20.0% of the students experienced low subjective well-being. In other words 80% of the students experienced more frequent positive emotions, less frequent negative emotion and high life satisfaction while 20% experienced more frequent negative emotions, less frequent positive emotion and low life satisfaction.

Research Question Two: What are the character strengths of the students?

In order to answer this research question, students' responses to the 24 items on Character Strengths Inventory (CSI) were analysed using frequency and percentage. Then, these 24 items were scored and classified into six distinct character strengths of wisdom and knowledge (items 3, 4, 13 and 14); courage (items 2, 8, 16 and 22); humanity (items 11, 17, 18 and 23); justice (items 5, 12, 20 and 21); temperance (items 6, 9, 19 and 24), and transcendence (items 1, 7, 10 and 15). Students were then classified into the aspect of character strengths where he/she had the highest score. The results are presented in Table 3.

Table 3: Descriptive statistics of Character Strengths of Secondary School Students in Boarding Schools

Character strengths	N	x	SD	Frequency (f)	(%)	Rank
Wisdom and Knowledge	1512	9.91	1.64	281	18.6	3
Courage	1512	9.35	1.78	197	13.0	5
Humanity	1512	9.78	1.60	225	14.9	4
Justice	1512	10.09	1.53	289	19.1	2
Temperance	1512	9.19	1.81	123	8.1	6
Transcendence	1512	10.70	1.51	397	26.3	1
Total				1512	100.0	

As shown in Table 3, 18.6% of the secondary school students in boarding schools exhibited wisdom and knowledge. This implies that they possess character strengths of creativity, curiosity, love and love of learning. In addition, 13% exhibited courage which covered strengths of bravery, honesty, hope, and sense of purpose. Humanity that covered the strengths of kindness, perseverance, perspective, and teamwork was exhibited by 14.9% of the students while 19.1% reportedly exhibited justice which covered the strengths of fairness, leadership, self-regulation and social intelligence. Fewer students exhibited temperance as their character strength, which covered the strengths of forgiveness, humility, prudence and zest (8.1%) while another 26.3% exhibited transcendence character strengths which covered the strengths of appreciation of beauty and excellence, gratitude, humor and judgment. It is shown from this result that more of the students were identified with transcendence character strengths than any other while the character strengths exhibited least among the students is temperance which comprises forgiveness, humility, prudence and zest.

Hypothesis: There is no significant relationship between students’ character strengths and their subjective well-being. In order to determine the relationship between the students’ character strengths and their subjective well-being, the information gathered from the Subjective Well-being Scale (SWS) and Character Strengths Inventory (CSI) Character Strengths Inventory (CSI) were cross tabulated and subjected to Pearson product moment correlation analysis. The results are presented in Table 4

Table 4: Pearson Product Moment Correlation Coefficient of Students’ Character Strengths and Subjective Well-Being

S\N	Items	N	R	P
1	SCS	1512	0.196**	< 0.05
2	CSI	1512		

*significant at 0.05 level

Table 4 shows that the number of students is 1512 for both Students’ Character Strengths SCS and Character Strength Inventory CSI and r value is 0.196 which is significant at 0.05 level (r= 0.196; p <0.05). Thus, the hypothesis is rejected since there is a significant relationship between students’ character strengths and subjective well-being.

Discussion

The study ascertained the level of subjective well-being of boarding secondary school students as well as the character strengths of the students. It also established the relationship between the subjective well-being and character strength of the respondents.

Research question one revealed that most of the secondary school students in boarding schools in Southwestern Nigeria had high subjective well-being. This result indicates that, majority of these students self-reported more frequent positive affect, less frequent negative affect and high life satisfaction which is in line with Okwaraji, Nduanya, Okorie and Okechukwu (2017) and Manzoor, Siddique, Riaz, and Riaz (2014) who found high level of subjective well-being among students in Nigeria and Pakistan respectively. In this researcher’s opinion, a plausible explanation for the high subjective well-being reported by the students in this study, regardless of the unfavourable situation of the country and at the hostel, coupled with the storm and stress of adolescence may be associated with the claim that Nigerians are generally happy people. In the

2023 Global Happiness Ranking, Nigeria ranks 95th happiest nation in the world and 6th in Africa. (Awosoji, 2023) This result could also be related to resilience. According to Camfield (2012) resilience is the capacity of an individual to endure and develop in contexts of adverse experiences and conditions. It is likely that these students have acclimatized to the situation in the hostel which could even be similar or better than that of their home. Furthermore, other factors such as pleasant experiences and interesting school activities may moderate the effects of the unpalatable ones and enhance their subjective well-being. 80% of the respondents had high subjective well-being while 20% had low subjective well-being. This result runs contrary to the findings of Okwaraji, Aguwa & Shiweobi-Ese (2016) who found low level of life satisfaction among students. It is established that low subjective well-being is associated with depression, anxiety, mental health disorder and suicide thoughts (Abdel-khalek & Lester, 2017). Therefore, the category of students who had low subjective well-being cannot be overlooked. Prompt attention should be given to them to forestall depression and suicide attempt in the future

The findings of the second objective of this study showed that the majority of the students possessed character strengths of transcendence which encompassed strengths of appreciation of beauty and excellence, gratitude, humor and judgment. This pattern of finding is close to that of Abasimi *et.al.*, (2017) who found character strengths of judgment, zest, love, kindness, prudence and humour among high school students. This finding is not out of place, as it further explains why the students had high subjective well-being. Diessner, Rust, Solom, Frost and Parsons (2006) described transcendence strengths as possession of a combination of cognitive strategies and social problem-solving strategies (for example, assertiveness training) which leads to optimism. Obviously, the top character strengths of the students are those learnt earlier in life. Children are taught both at home and in school, virtues that convey appreciation of beauty and excellence, gratitude, humor, judgment among other virtues that form their character strengths. These virtues are taught at home and in school through modeling, by parents, siblings, teachers and other caregivers. In Southwestern Nigeria that are predominantly Yoruba's, a lot of virtues are taught through proverbs and educative poems which eventually culminate in transcendence strength and in turn improve subjective well-being.

The only hypothesis of this study revealed a significant relationship between character strengths of boarding secondary school students and their subjective well-being. This finding indicates that the students' cultivated virtues determined their emotions and satisfaction with life, and that the character strengths of the students correlated with their subjective well-being. This is not surprising because previous studies have documented similar findings. For instance Toner, *et.al.*, (2012) and Abasimi and Gai (2016) found strong positive relationship between character strengths and adolescents' life satisfaction and happiness. Therefore, one could say that, the substantial effect of character strengths on boarding secondary school students' subjective well-being is established. It could also be seen from the result of this study, that boarding secondary school students with character strengths of transcendence, wisdom and knowledge and justice possessed high subjective well-being.

Conclusion

The study investigated character strength and subjective well-being of boarding secondary school students. The results of this study pointed towards a paradigm shift to focus more on the strengths of all school students, and the ways to tap and develop these. The present study established the fact that a large percentage of secondary school students in boarding schools in

Southwestern Nigeria had high subjective well-being. The study concluded that students' subjective well-being correlated with their character strengths.

Recommendations

Based on the findings of this study, the following recommendations are therefore made.

1. All stakeholders should work together to ensure that the high subjective well-being of boarding secondary school students' is maintained through periodic assessment of their subjective well-being.
2. Counsellors should then investigate few students with low subjective well-being and provide necessary intervention for such students in order to boost their positive affect and increase their life satisfaction
3. Teachers should encourage student's participation in exercises designed to increase character strengths such as moral talks which results in increased subjective well-being
4. Guidance counsellors and teachers in boarding schools should take a more targeted strategy towards identifying and developing student's character strengths and design effective interventions for improving their interpersonal relationships and general education. Through guidance counselling, reinforcement, role playing and so on.

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THE IMPACT OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) AS A MEDIUM OF INSTRUCTION ON MATHEMATICS TEACHING AND LEARNING IN PRIMARY SCHOOLS IN THE OSHODI-ISOLO LOCAL GOVERNMENT AREA

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Abstract

The ubiquity of technology in today's world affects society in several ways and in many sectors; education is no exception. In many ways, technology has profoundly changed education. For one, technology greatly expands access to education, unlike in medieval times. This study explored the effects of the use of information and communication technology (ICT) tools in teaching and learning mathematics in primary and secondary schools in Lagos State. In the study, 64 teachers, (26 from public schools and 38 from private schools were selected to participate in the survey. 154 students from both public and private schools, cutting across upper primary schools, junior secondary schools, and senior secondary schools also participated. The Analysis of Variance (ANOVA) and Correlation methods were used for statistical analysis with respect to three hypotheses formulated and evaluated using the F-and Correlation statistics based on the subject matter. The first premise is based on teachers' perceptions of the effectiveness of ICT tools in teaching and learning. The first hypothesis, based on the extent of use of ICT tools in teaching and learning mathematics, yielded comparative F-statistics of $F = 2.599215 < F = 3.238096$, the second on the extent of use of ICT tools in teaching and learning mathematics yielded comparative F-statistics of $F = 1.09596 < F = 3.31583$, and the third on the correlation between the use of ICT tools. The result suggests a number of implications for policy intervention to improve the educational sector across the landscape of Nigeria.

Keywords: Mathematics, Technology, Performance, Teaching, Learning.

Introduction

Studies have repeatedly shown that a country's educational quality impacts its level of development (Omiyale, A.D. 2020). It does not take much analysis to show that education levels in developing and developed countries are significantly different. It is easy to suppose that a fruitful development strategy would be to enhance the population's education levels, based on decades of research about human capital and centuries of widespread attention to education in more developed nations (Hanushek & Wößmann, 2007). According to Harmon, Oosterbeek, and Walker (2000), more educated countries develop faster because education allows the workforce to design new technologies and adapt old ones to local industries.

The World Bank (2007) stated that educational quality—measured by what people know—has substantial effects on individual incomes, income distribution, and economic growth. As a result, education must be approached holistically.

The importance of the dynamics of education and function in the advancement of a country and societal transformation cannot be overstated. To remain relevant to changing societal demands, learners' personal needs, and new national development agendas, educational programs must continue to evolve. For growth and development, education is required. Human mind growth and development enable all developmental achievements, from improved health care delivery and agricultural innovations to efficient public administration and private sector growth, as well as incomprehensible advances in science and technology culminating in the ubiquitous display of various technologies that have changed the course of human lives.

According to Hussaini (2019), no country is said to be ready for economic growth, progress, development, and sustainability without focusing on substantial investment in human capital. Education improves the quality of life and leads to broad social benefits for individuals and society. Education raises people's productivity and creativity and promotes entrepreneurship and technological advances. In addition, it plays a very crucial role in securing economic and social progress and improving income distribution. Employers are looking for a new workforce: people equipped with the skills to flourish in the 21st century.

The prevalence of technology affects society in so many positive ways, and that includes the education sector. People all over the world are surging through the most profound revolution in human history. The impact of technology is personal, national, global, and in many ways, unlimited. Today's students not only have computers to help them with their schoolwork, but they also have easy access to research tools while teachers use technology to enhance the impact of their lessons. Schools in different parts of the world connect; students can "meet" their counterparts through video conferencing without leaving the classroom; students can use the internet to virtually attend web seminars ("webinars") put on by museums and other educational institutions.

The advent of technology in the educational field has made the process of learning and knowledge sharing more interactive. Perhaps, the greatest impact of technology on education is the change in our outlook toward the world. The remarkable shift in thinking from local to global can be attributed to technology.

It is disheartening to learn that, despite giant leaps in the educational sector of developed countries, education continues to suffer a significant setback in the majority of the world's developing countries. The Sustainable Development Goal 4 (SDG 4) is very ambitious. It seeks to ensure inclusive and equitable quality education for children across the world by the year 2030. Achieving this target in most developing countries is important, particularly in Nigeria, where the state of education is daunting. Increased investment in education is essential to address the challenges in Nigeria's education system, such as limited access to education, substandard quality, and gender disparities. The government must prioritize education and implement comprehensive reforms to improve the overall quality of education, attract and retain qualified teachers, reform the curriculum, provide conducive learning environments, engage stakeholders, and empower girls.

Statement of the Problem

The importance of Mathematics in the development of any country cannot be overstated. Ilori (1994) emphasised the relevance of mathematics for national growth and prosperity. In his words, "Wherever one belongs in a society, he or she utilises knowledge of mathematics in one form or another." Not to mention an engineer, businessman, industrialist, banker, financier, or

finance minister; a planner in a parastatal, commissions, departments, agencies, or even unskilled laborers must calculate his wages, make market purchases, and adjust his expenditure based on his income. Whoever earns and spends uses mathematics. "Counting, notation, multiplication, addition, division, subtraction, measuring, weighing, selling, buying, and many more are simple and fundamental processes of mathematics that need immense practice."

However, the teaching and learning of mathematics as a subject has been plagued with lots of difficulties over the years. Many students struggle with mathematics at some points. It is not uncommon to hear students complain that they hate mathematics because "it's too hard." But why do so many students seem to share this opinion? What makes mathematics so difficult for students to learn? Several factors have been attributed to this challenge, ranging from the abstract nature of the subject to anxiety, a poor foundation, a lack of adequate study materials, and the use of learning aids, among others. The pervasiveness of technology and its transformative effects in every field in which it is used serve as the impetus for this study,

Research Questions

The research problem is to investigate the effect of ICT on the teaching and learning of mathematics in primary schools, with the following questions:

1. To what extent are ICT tools used in teaching and learning Mathematics in primary schools in Oshodi-Isolo Local Government Area?
2. What are teachers' and learners' perceptions of the use of ICT tools in the teaching of Mathematics?
3. Is there any linear relationship between the use of ICT tools in learning mathematics and the performance of students in mathematics in both private and public schools?

Literature Review

Since mathematics is linked to so many other professions and sciences, it has traditionally received considerable emphasis in education. Mathematics is an important part of the school curriculum. It is a required subject at all levels of the educational system, from primary to junior secondary to senior secondary. Furthermore, student achievement in mathematics has been an issue of contention and is considered a vital concern in many countries. The enviable position of Mathematics in school curricula is due to its strategic role in scientific and technological development as well as national development. Mathematics promotes self-reliance by assisting students in thinking through and solving issues on their own (Adedayo, 1997).

However, many children develop a phobia for mathematics as a result of misunderstanding, non-understanding, and failure during previous lessons. Children that have a bad attitude toward mathematics experience performance issues because of their fear. Mathematics teachers are sometimes accused of producing poor-quality work from their students. Cooney (1994). A variety of challenges have afflicted the teaching and learning of mathematics over the years. Several scholars have attempted to identify obstacles that impede smooth mathematics teaching and learning, ranging from the attitude of students towards the learning of mathematics to the use of unqualified teachers or non-mathematics specialists to teach the subject in many Nigerian schools, the failure to relate to real-life situations, the lack of learning facilities, e.g., mathematics laboratories in schools, the lack of adequate mathematics textbooks, the lack of teaching aids, the overcrowding of the mathematics syllabus, inadequate methodology, and the

lack of passion for the subject, among others. (Okafor & Anaduaka, 2013, Oyebanji & Idiong, 2021, Abdullah, 2021).

The current traditional way of teaching in most schools is teacher-centered (Orijl & Dls, 2022, Onwe, John & Uwaleke, Chidebe, 2018). The teacher is expected to do every activity while the students are reduced to mere listeners. Pupils' participation in classroom activities has a significant positive impact on their learning. It forms the basis for motivation, which is a critical element in student success and learning. According to Akey (2006), engaged students learn more, retain more, and enjoy learning activities more than students who are not engaged. In subjects like mathematics, students benefit more from active participation, and they can learn more by doing than by listening only to the teacher. Technology provides this verifiable platform.

Although technology has been used as a medium of instruction for teaching and learning since the 1940s, it has not been widely adopted. In 1959, the Western Nigerian government established television and wireless radio stations with the objectives of entertaining, informing, and educating the masses. Between 1959 and 1962, ICT centres were established by all ministries of education in Nigeria with assistance from the United States of America (Nyikyaa Afacurtis, 2012)

According to De Witte, Kristof, and Nicky Rogge (2014), psychologist Skinner was one of the first proponents of using technology in the classroom. In the 1950s, Skinner published several papers (Skinner, 1954, 1958) in which he explains his belief that the use of technology in teaching and learning (he used the term "teaching machines") might benefit the learning efficiency of pupils. In the 1980s, widespread interest in computers as an instructional tool emerged in education, catapulting what became known as computer-aided instruction (CAI). CAI refers to instruction or remediation presented on a computer and used by students to practice academic skills (Bitter & Pierson, 1999; Fitzgerald et al., 2008). It typically takes the form of drill-and-practice programs, tutorials, or simulations and can be used alone or as a supplement to traditional instruction (Woodward & Rieth, 1997; Soe, Koki, & Chang, 2000).

In recent years, there has been a surge in the demand for the use of various technologies for the teaching and learning of mathematics, such as computers, the internet, overhead projectors, slide projectors, A-V materials, hand-held calculators, printed materials, films and motion pictures, sound and video recorders, improvised materials, etc. Technology is essential in the teaching and learning of mathematics; it improves the way the subject should be taught and enhances students' understanding of basic concepts. (Ittigson, & Zewe, 2003). Technologies such as mathematics software, scientific calculators, spreadsheets, and statistical packages have become commonplace in many classrooms. This is in sharp contrast to the traditional mathematics classroom, which was dominated by pen and paper. BECTA (2003) asserts that technology has "changed the nature of teaching and learning in mathematics."

Educational technology shows great potential for facilitating mathematics instruction and improving students' mathematics learning outcomes (Cheung & Slavin, 2013). According to research reports from various surveys, the strategic use of technological tools can support both the learning of mathematical procedures and skills as well as the development of advanced mathematical proficiencies such as problem-solving, reasoning, and justifying (e.g., Gadanidis & Geiger, 2010; Kastberg & Leatham, 2005; Nelson, Christopher, & Mims, 2009; Pierce & Stacey, 2010; Roschelle, et al., 2009, 2010; Suh, Bitter & Pierson (2005), as cited in Eyyam & Yaratan (2014)

Hawley, Fletcher, & Piele (1986) observed that the overall mathematics achievement of third and fifth-grade students who used computer-assisted instruction (CAI) was higher than that of their peers who did not use computers to practice mathematics. It was observed that CAI was a factor in the improved mathematics achievement of disabled junior- and senior high school students during a study carried out by Bahr & Rieth (1989). Additional meta-analyses conducted during the 1990s found positive influences for some aspects of CAI, such as drill and practice of mathematical processes (Christmann & Badgett, 1997; Sivin-Kachala, 1998). CAI has been identified as a platform for students’ active learning.

Mautone, DuPaul, & Jitendra (2005), as cited by Kenya Williams (2015), documented improved problem-solving and on-task behaviors for three second- through fourth-grade students with attention-deficit hyperactivity disorder (ADHD) who used computer software during mathematics.

Methodology

The study adopted the descriptive research design. Simple random sampling was used to select ten (10) primary schools in the Oshodi-Isole Local Government Area. Five public primary schools and five private primary schools were selected from which six mathematics teachers were selected each from the selected schools totaling 60 participants with each of the streams from primary 1–6 equally represented. The sample is divided into two groups: the first group focused on the private primary schools in Oshodi-Isole Local Government Area, while the other group, used as the control group, focuses on the public primary schools in the study area.

Results

A total of 64 teachers, 26 from public schools and 38 from private schools, with varying levels of education and years of experience, were selected to participate in the survey. 154 students from both public and private schools, cutting across upper primary schools, junior secondary schools, and senior secondary schools, also participated in the survey. The survey includes a wide range of questions aimed at determining the impact of the use of ICT tools in mathematics teaching and learning.

Research Question 1: What are teachers’ and learners’ perceptions of the use of ICT tools in mathematics teaching and learning?

Teachers’ Perception of the Effectiveness of ICT Tools in Teaching & Learning Mathematics

Anova: Single Factor

SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Column 1	14	41.65	2.975	0.17210
Column 2	14	36.49	2.60642	0.13865
Column 3	14	39.39	2.81357	0.24082
			1	5

ANOVA

Source of Variation	SS	Df	MS	F	P-value	F crit
Between Groups	0.95579	2	0.47789	2.59921	0.08716	3.23809
Within Groups	7.17059	39	0.18386	5	2	6
Total	8.12638	41				

Reject H_0 : if $F_{cal} > F_{tab}$ i.e., F- values $> F_{crit}$ at 5%. Since $2.599215 < 3.238096$, we accept H_0 : The implication of accepting H_0 is that teachers did not have a low perception of the effectiveness of ICT tools in the teaching and learning of Mathematics.

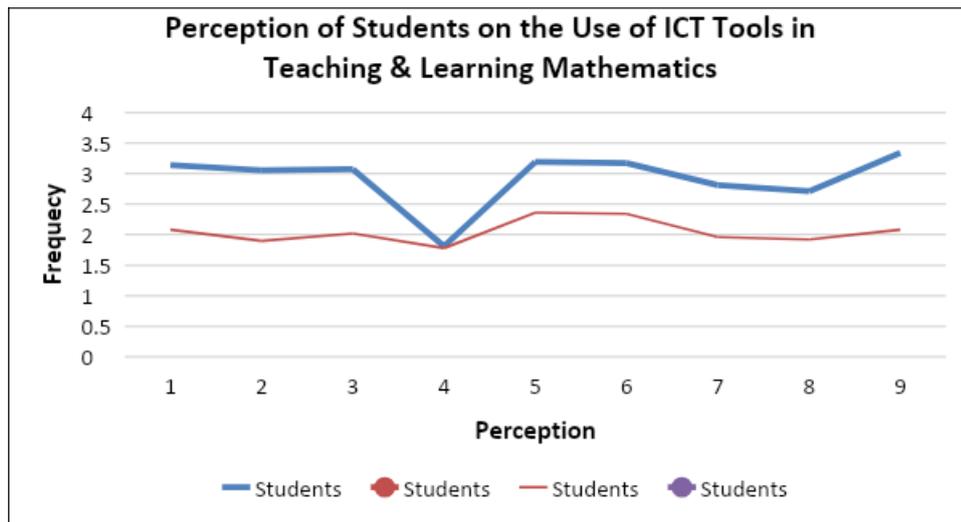


Figure 1: Students' perception of the effectiveness of ICT tools in learning Mathematics

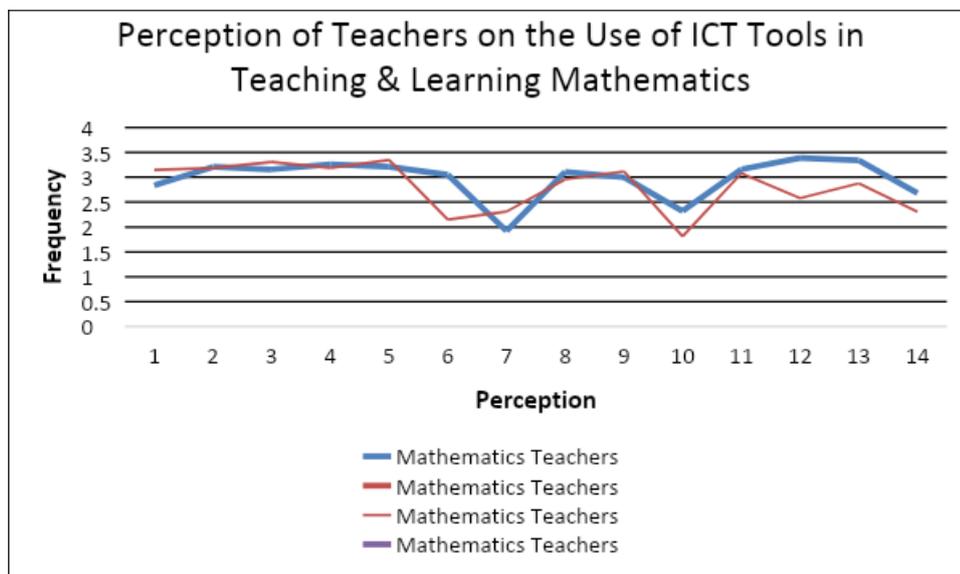


Figure 2: Teachers’ perception of the effectiveness of ICT tools in learning Mathematics

Research Question 2: To what extent are ICT tools used in Mathematics teaching and learning in primary schools in Oshodi-Isolo Local Government Area?

The Extent of Use of ICT Tools in Teaching and Learning of Mathematics

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
Column 1	11	28.5	2.59090	0.27498
Column 2	11	25.13	2.28454	0.20340
Column 3	11	26.27	2.38818	0.25277

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	0.53422	2	0.26711	1.09596	0.34722	3.3158
Within Groups	7.31172	30	0.24372			
Total	7.84595	32				

Reject H_0 : if $F_{cal} > F_{tab}$ i.e., F- values > F crit at 5%. Since $1.09596 < 3.31583$, we accept H_0 : The implication of accepting H_0 is that ICT Tools are not used extensively in the teaching and learning of Mathematics.

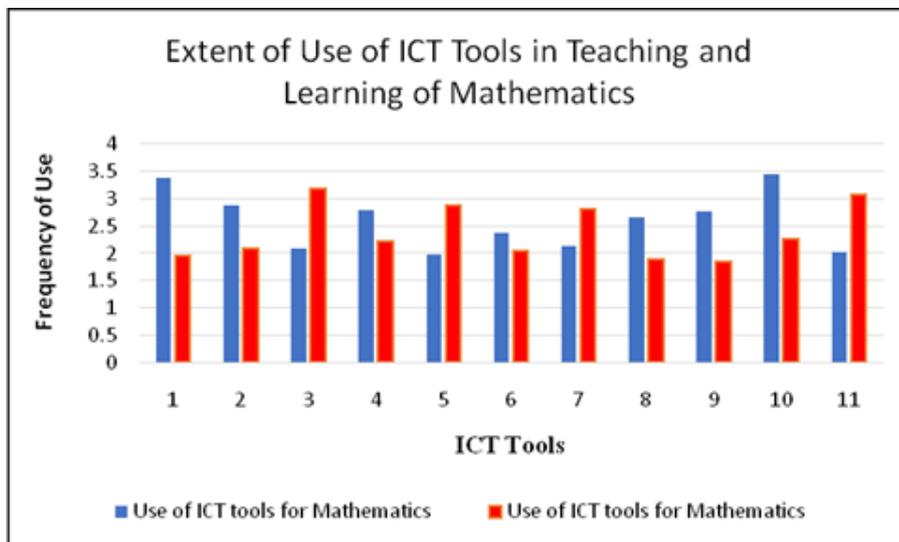


Figure 3: Extent of Use of ICT Tools in Teaching and Learning of Mathematics

Hypothesis:: There is no significant relationship between the use of ICT Tools in learning Mathematics and the performance of students in Mathematics in both private and public schools.

Relationship between the use of ICT Tools in learning Mathematics and performance of students in Mathematics in both private and public schools.

	<i>Effectiveness of ICT Tools in Learning Mathematics</i>	<i>Private Schools</i>	<i>Public Schools</i>
Effectiveness of ICT Tools in Learning Mathematics	1		
Private Schools	0.997378735	1	0.65863509
Public Schools	0.682490215	5	1

The magnitude of the correlation coefficient indicates the strength of the association. A correlation of 0.997378735 shows a very strong relationship between the use of ICT tools in learning mathematics and the performance of students in mathematics. Therefore, the null hypothesis is rejected, i.e., there is a linear relationship between the use of ICT tools in learning mathematics and the performance of students in mathematics in both private and public schools.

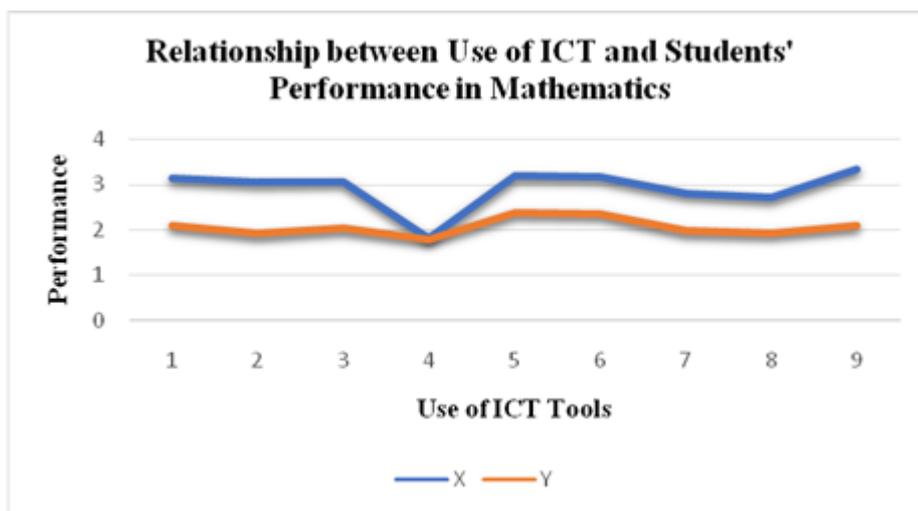


Figure 4: Relationship between use of ICT and Students' Performance

Discussion of Findings

The study showed that although teachers have a high perception of the effectiveness of ICT tools in the teaching and learning of mathematics, these tools are not used extensively in the teaching and learning of mathematics. The study further showed that there is a linear relationship between the use of ICT tools in learning mathematics and the performance of students in mathematics.

Conclusion

The study has critically examined the effects of integrating technology in the classroom, especially applications of ICT tools for teaching and learning mathematics. The findings revealed that increased use of ICT tools for teaching and learning mathematics improved student performance. The study also revealed that, in spite of government policies on the integration of technology in education, little has been achieved so far.

Recommendations

The findings of this research are expected to be a wake-up call to policymakers, administrators, and governments at various levels on the need to focus more on the development of education across various levels in Nigeria by developing technologically driven policies that will positively impact education sectors in Nigeria. The suggested ways to achieve this goal are massive deployments of ICT tools in schools and building capacity through training and retraining of teachers.

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INFLUENCE OF MOTIVATIONAL STYLES ON SCHOOL ADJUSTMENT OF UNIVERSITY UNDERGRADUATES IN OSUN STATE, NIGERIA

by

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Abstract

This paper examined the influence of motivational styles on school adjustment of university undergraduates in Osun State. It also ascertained the level of adjustment among university undergraduates in Osun State. These were with a view to providing information on the ability of motivational styles to influence school adjustment of university undergraduates in Osun State. These were with a view to providing information on the ability of motivational styles to influence school adjustment of university undergraduates in Osun State. The sample was made up of 1200 newly admitted undergraduates who were purposively selected from three universities in Osun State, Nigeria using stratified, purposive and simple random sampling techniques. Two instruments; Students School Adjustment Scale (SSAS) and Motivational Style Scale (MSS) were used to collect data. The results revealed that 56.6%, 29.5% and 13.9% of university undergraduates in Osun State demonstrated low, moderate and high levels of school adjustment respectively. The results also showed that 46.8% of the students had social activity orientation, 26.6% had learning style and 26.6% had goal setting motivational styles. The results further showed that there was a significant influence of motivational styles on school adjustment of undergraduate students ($\chi^2 = 270.477$, $df = 4$, $p = 0.000$). The study concluded that motivational styles had the ability to influence university undergraduates' school adjustment in Osun State.

Keywords: *Influence, Motivational styles, School adjustment, Undergraduates*

Introduction

Gaining admission into the university is a stressful and challenging stage of life for adolescents as they move from the dependent life of secondary school and home, (i.e. the correction and direction of the teachers and parents) to the independent life in the university which is new and strange. However, adjustment with university life is considered one of the main indicators of success in life as it is an indicator for the students' ability to face the problems resulting from fulfilling their academic, social and emotional needs. Through achieving adjustment with university life, the students will be able to form a kind of good relationship with others and have a positive self-esteem in the university leading them to enhance their academic achievement. This is in line with Lakhani, Jain and Chandel (2017) who viewed school adjustment as the process of adapting to the role of a student and to various aspects of the school environment. Failure to adjust can cause academic and social-emotional problems. According to them, effective school adjustment depends on factors like social wellness, emotional behavior, and academic skills which help students participate in the school environment

Also, entering the institution of higher learning may be a source of strain and acute challenge. In particular, university is a new environment that triggers different reactions among first year students (Mudhovisi, 2012). According to researchers, for the fresh undergraduate, life can be exciting and frustrating. This is because the increased personal freedom can be wonderful and exciting since there is no involvement of parents and the students are faced with the newly found freedom. Also, students' adjustment to the university environment/situation may pose a great challenge to many undergraduates. This is because the university environment is different from the secondary school they are coming from (that is different lecture rooms for different courses, larger classes, hall of residence being far from lecture rooms, meeting different people from different areas and backgrounds and so on). Therefore, the student has to reconstruct his or her personal relations in a new environment and this often causes mental and physical distress (Tao, Dong, Pratt, Hunsberger & Percer, 2000).

It has also been researched that a well-adjusted person is the one who can get along socially, physically and emotionally in the society in which he lives. For instance, such a person is able to earn his living; feed, clothe and house himself, make friends and keep them. Therefore, it is necessary for individuals to adjust to any situation to live a fruitful and meaningful life. Previous studies conducted by Bilal and Habis, (2012) and Adeniyi, Adediran, & Okewole, (2014) found out that most fresh undergraduates had moderate levels of academic adjustment. In contrast to Ifeoma, (2012) showed that the majority of first year students had a high level of academic adjustment. The students with moderate school adjustment may perform averagely but not excellently, while those with a low school adjustment might perform worse at learning tasks and this will only produce outright academic failure. Therefore the importance of students' school adjustment cannot be underestimated.

On the other hand, it is known that failure to adjust properly to the university environment may lead the students to withdraw/drop out from the university or delay them from graduating at the appropriate time, leading them to pro-social activities, crossing to other department, even committing suicide or becoming emotionally unstable which is a major concern to parents, school management, society and the students. For these reasons, fresh students need to be assisted to develop skills that will enable them to overcome the challenges they may encounter at the university. One way by which such students can integrate to the new environment is by adjusting themselves to the campus life.

However, it is now believed that how one becomes energised that is motivational styles such as goal setting, learning orientation and activity orientation are drivers that assist individuals to exert energy in achieving their set down goals. Hence for students to adjust properly to the university situation or environment, motivational styles such as goal settings, activity orientation and learning orientation have to be taken in to consideration.

In this study, goal setting is the way by which an individual is conscious of what he/she desires to achieve at a particular time. It is the determination of an individual to acquire a plan. Research reveals that goal setting involves the development of an action plan designed to motivate and guide a person or group toward a goal. Goals are more deliberate than desires and momentary intentions. Therefore, setting goals mean that a person has committed thought, emotion, and behaviour toward attaining the goal. In doing so, the goal setter has established a desired future state which differs from their current state thus creating a mismatch which in turn spurs future actions.

In addition, students who continually make goals that are based on their academics have the opportunity to improve their academic achievement at any level in school. It was also opined that when students create goals, it could increase their motivation to learn because they can take ownership of their learning. Setting goals keeps the students focused on desired outcomes and provides a clear direction for success. According to Locke and Latham (2020), goal setting is the process of establishing an outcome (a goal) to serve as the aim of one's actions. According to them, setting goals makes the direction of learning clear to the students and the teachers, increases students' motivation and achievement levels, works best if they are specific and require a moderate amount of challenge and works best for high-ability students if they are co-constructed.

Studies have shown that goals setting are categorized as either long-term or short-term. Long-term goals are the goals one desires to achieve over the years while short-term goals are the goals one desires to achieve within a short period. The implication of this is that students who set a long-term goal may likely to have good grades which will help them to adjust to the university environment and achieve the desired goals but the ones who set a short term goal (as we have some students who only want to pass the course not minding if it is E grade) may not likely to adjust as this will affect their cumulative grade point average (CGPA). Such students may get frustrated when the CGPA becomes microscopic since a good CGPA helps one in securing a good job in a prestigious organization after graduating. However, in many studies, it is unclear to what extent goal setting influences students' adjustment in school. It is therefore important to look in to the relationship between goal setting and school adjustment.

Also, another drive that is believed to help students in adjusting properly to university is learning style. Learning style is the way by which an individual acquires knowledge. Also, it is defined by researchers as a description of the attitudes and behaviour which determines an individual's preferred way of learning. They further added that 'learning style is not conceived of as an unchangeable personality attribute, but as the result of the temporal interplay between personal and contextual influences'. This definition of learning style seeks to be flexible and integrative in comparison with earlier approaches, strongly emphasizes metacognitive knowledge and self-regulation. It is concerned with both declarative and procedural knowledge, including self-knowledge. It deals not only with cognitive processing, but also with motivation, effort and feelings (and their regulation).

However, Sternberg (2001) conceptualised 'learning styles' as how an individual prefers to learn by reading, for instance, or by attending lectures. Learning styles can provide learners with a much needed 'lexicon of learning' – a language with which to discuss, for instance, their own learning preferences and those of others, how people learn and fail to learn, why they try to learn, how different people see learning, how they plan and monitor it, and how teachers can facilitate or hinder these processes. Through dialogue with a tutor knowledgeable about the relevant literature, the students' repertoire of learning styles can be enhanced in the hope of raising their expectations and aspirations.

In addition, some studies have indicated that academically successful students have moderate adjustment and stronger learning style preferences than low achievers and that student success is being affected by the degree to which a student engages in the school experience. For this reason, Fabian (2000) noted that when students exhibit a range of adjustment patterns associated with cooperation, initiating interaction or assertion, and self-control, they are more likely to perform well in relation to their immediate environment. Engaging in the process of

learning how to learn must include awareness of how self-learning styles and how material is processed. Instructors, then, can enhance a students' awareness by calling their attention to different ways to approach a given subject (McClanaghan, 2000). Therefore a significant challenge, then, is to assist students in perfecting their natural learning style while providing the incentive to develop less dominant styles they will need in the workforce and other areas of their lives.

Another motivational style considered in this study was social activity orientation style. Based on the research by sociologists, one of the agents of sociology is friend or peer which is researched to have great influence on students' adjustment. This agent is believed to either mark or mar the students' achievement. Therefore, social activity orientation on the other hand is the way by which learners take part in school activities because of their rapport with the people in their environment. Their selection of any activity is essentially based on the amount and kind of human relationships it would yield. Researchers are increasingly studying the role of friendships on school adjustment. Some researchers support the proposition that friendships support children in the school environment and assist with their adjustment (Newman, 2000). Students with a friend in the classroom can use their peers as a source of support to deal with problems and avoid being lonely. Friends show consistent similarities on many motivational measures including perceptions of competence, importance of meeting academic standards, and preference for challenges (Altermatt & Pomerantz, 2003).

With respect to friendship quality, research shows that adolescents whose friendships have a positive quality display greater achievement, they are believed to be more popular, hold higher self-esteem, have fewer emotional problems, have better attitudes toward school, and adjust positively to the university. Interestingly, the number of friends is weakly correlated with school adjustment. Berndt and Keefe (1996) also reported longitudinal data showing that friendships with positive qualities increase academic involvement (motivation). In summary, there is good evidence that peers play a dynamic role in students' school adjustment.

Objectives of the Study

The specific objectives of this study were to:

- a. investigate the level of school adjustment of undergraduates in universities in Osun State;
- b. examine the motivational styles (goal-settings, learning styles and social activity) being used by undergraduate students; and
- c. assess the influence of each of the motivational styles (goal setting, learning styles and social activity) on school adjustment of undergraduate students.

Research Questions

The following questions were raised:

1. What is the level of school adjustment of undergraduates in universities in Osun State?
2. Which of the motivational styles is mostly being used by university undergraduates?

Hypotheses

The following research hypotheses were postulated

H₀ 1. There is no significant influence of motivational styles (goal setting, learning styles and social activity) on school adjustment of undergraduate students.

H₀ 2. There is no significant contribution of each of goal setting, learning styles and social activity on school adjustment of undergraduate students.

Methodology

The study adopted a descriptive survey design. The population of the study consisted of all newly admitted and direct entry university undergraduates in Osun State, Nigeria. Three universities were selected in the state for the study. A Federal and a State University were purposively selected because they were the only Federal and State Universities as of the time of the study while a Private university was randomly selected from the three private universities in the state using a balloting system. The sample size consisted of 1,200 students who were selected randomly using simple random sampling technique.

Two research instruments were used to collect data for the study. These were Students' School Adjustment Scale (SSAS) and Motivational Styles Scale (MSS). SSAS was designed for the study to measure students' adjustment in schools. The instrument was adapted from Sinha and Singh, (1975) and was used as a tool for measuring extent of adjustment. This tool measures three areas of adjustment viz. Social, Emotional and Academic adjustment. The original inventory contains 60 items, out of which 20 items measure Social adjustment, 20 items measure Emotional adjustment and 20 items measure Academic adjustment. 24 items were finally used out of the 60 items. The items were rated using a Four-point Likert Scale of "Strongly Agree", "Agree", "Disagree" and "Strongly Disagree" which were coded 4,3,2 and 1 respectively.

MSS was self-developed. The scale consisted of 26 items which sought information on the three areas of student's goal settings, social activity orientation and learning orientation. Items in this scale were carefully generated from the relevant literature to reflect the construct of interest. In order to ensure the construct and content validity of the scale, a copy of the scale was adequately scrutinized by the supervisor, experts in the field of Psychology of Education and Test and Measurement. Their contributions to the scale include providing the appropriate words that captured the intended construct and re-wording of some of the items to avoid ambiguity in expression. The scale format took on a four point Likert scale ranging from "Strongly Agree" to "Strongly Disagree". The minimum and maximum scores obtainable were 18 and 72 respectively while the mean score was 42. On the scale, the higher the score, the higher the level of motivational style experienced by the respondents. The instruments were pilot tested on 30 university undergraduate students. The reliability of the instruments was investigated using the Internal Consistency Approach based on Cronbach's Alpha. Data obtained from the two instruments yielded correlation coefficient of 0.95 for SSAS and 0.91 for MSS. Frequency count, percentage and Chi-square were used to analyse the data collected.

Results

Research Question 1: *What is the level of school adjustment of undergraduate students in Osun State University?*

Table 1: Showing level of School Adjustment of Undergraduate Students in Universities in Osun State

Level	Frequency	Percent (%)
Low	598	56.6
Moderate	311	29.5
High	147	13.9
Total	1056	100.0

Table 1 shows that 56.6% of the students demonstrated low level of school adjustment, 29.5% of them demonstrated a moderate level while 13.9% of the undergraduates demonstrated a

high level of school adjustment. It is shown in this result that more than half of the sampled students demonstrated a low level of school adjustment while less than 30% and 14% respectively demonstrated high and moderate level of school adjustment.

Research Question 2: *Which of the motivational styles is mostly used by undergraduate students?*

Table 2: Showing simple Percentage Analysis of the Motivational Styles used by University Undergraduates in Osun State

Motivational Styles	Frequency	Percent %
Goal setting	281	26.6
Learning style	281	26.6
Social Activity	494	46.8
Total	1056	100.0

Table 2 shows the motivational style used by undergraduate students in Osun State Universities. From the table, results showed that 26.6% of the university undergraduates used goal setting motivational style, 26.6% of the students used learning orientation motivational style as well while 46.8% of the students used activity orientation motivational style. The result showed that the motivational style that is commonly used is social activity orientation.

Hypothesis 1: There is no significant influence of motivational styles (goal setting, learning styles and social activity) and school adjustment of university undergraduates.

Table 3: Chi-square Analysis of Influence of Motivational Styles on School Adjustment of University Undergraduates in Osun state

Motivational styles	School Adjustment			Total	χ^2	df	P
	Low	Moderate	High				
Goal setting	81	93	107	281	270.477	6	0.000
Learning style	228	46	7	281			
Social activity	281	172	33	494			
Total	598	311	147	1056			

Table 3 shows the chi-square result of the influence of motivational styles on school adjustment of university undergraduates. It can be observed that a Chi-square test indicated a significant influence of motivational styles on the school adjustment of students, [$\chi^2 = 270.477$, $df = 6$, $p < .05$]. Since the p-value is less than .05 thresholds, the stated null hypothesis was rejected. This result concludes that there is significant influence of motivational styles on the school adjustment of students. The results also reveal that out of all the motivational styles that were used in this study, only activity orientation had the highest influence on school adjustment among university undergraduates in Osun State.

Discussions

The primary goal of this study was to determine if some motivational styles (goal setting, learning styles and social activity) could influence undergraduates’ school adjustment. The results of the first research question showed that most of the undergraduates in Osun State universities possessed a low level of school adjustment while just a few of the students possessed a high and moderate level of school adjustment. There was evidence from the results that the students had

little or moderate level of adjustment which could result in total avoidance of these tasks. Low aspirations and weak commitment to academic goals cannot be far-fetched among these students. Research also holds that without a successful adjustment, during transition to college, the student may drop out. Consolvo (2002) argued that nearly 30-40% of students drop out without obtaining a college degree, and many of these students never returned to college to complete degrees. However, individuals who are able to succeed at handling their independence and new found freedoms are able to make new relationships while obtaining a new relationship (Holmbeck & Leak, 1999)

Another major finding of this study was in variance to one of the hypotheses raised that there was a significant relationship between learning style and school adjustment. The results showed that learning style had a positive and a significant influence on students' adjustment in school. In this result, the rate at which a student is influenced by their learning style determines the level of his or her school adjustment. From this result, we can suggest that the more a student gets from his or her learning, the more influence it has on his or her school adjustment. This indicates that the value for learning could either make or mar a student's academic performance thereby determining the level of the adjustment he/she is likely to possess in school. The finding is in line with Beder (1997), Ngwenya (2004), Pascarella and Terenzini (1991) who indicated that first year students had difficulty adjusting to the different styles of teaching compared to school. Contrary to the above, one male respondent reported that all lecturers were good and made him feel free in class and perform well. Thus, it contradicts Beder's (1997), Ngwenya's (2004), Pascarella and Terenzini's (1991) finding.

This research also shows a significant relationship between goal settings and undergraduates' school adjustment. It implies that the level of school adjustment can be explained based on the goal they set. It was discovered that students with a long term goal could be more positive to their academics than students with a short term goal. This is because a student with a long term goal tended towards adjusting well to school situations while a student with a short term goal tended towards not adjusting well to school situation. But from the results, the goal a student set did have a relationship with the level of his/her school adjustment. According to Latham (2004), goal setting has been found to inspire individuals and is a critical key to self-management. In many cases, goal setting creates an alternative purpose for work and provides the challenge that enables individuals to overcome even the most physically exhausting tasks (Latham, 2004). This probably suggested that subsequent researchers might need to focus more on goal settings as factors that may influence school adjustment.

It is therefore noteworthy that social activity stands out of the three independent variables tested. Social activity had the strongest influence on students' school adjustment of all the motivational styles that were tested in this research. It is therefore important to emphasise that students with social activity stand a better chance of adjusting in school.

Conclusions and Recommendations

The study concluded that there was no significant influence of motivational styles (goal setting, learning styles and social activity) on school adjustment. The results also indicated that there was an influence of motivational styles (goal setting, learning styles and social activity) on school adjustment. However, the influence of the three variables on school adjustment was significant. This revealed that the influence of goal setting, learning orientation and activity orientation predicted students' adjustment in school. This means that for the level of students'

school adjustment to change from low to high, motivational styles (goal setting, learning styles and social activity) is necessarily.

Among the three independent variables tested, social activity had the strongest influence on students' school adjustment in this research.

In view of the above, it is recommended that freshmen orientation should be made mandatory for all fresh students so as to understand the university learning environment and what it takes to be in the university. Also, the lecturers should make themselves available at all times for the students, especially those having issues adjusting with their courses. Counseling services should be made available for the students at all levels. It is also recommended that each department should identify adjustment problems early enough in the student's first semester in order to have some chance for a successful intervention. This may include providing mid semester grade reports early in the semester and having advisers or other staff follow up with all students who fall below a certain cutoff point in grade point average.

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EDUCATIONAL INFRASTRUCTURE IN NIGERIA: PAST, PRESENT AND FUTURE CHALLENGES

by

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Abstract

Educational infrastructure is key in the provision of sound and balanced education as it remains an important factor in determining the quality of learning and graduates being turned out by various institutions. School remains the prominent place where formal education is successfully organised in terms of programmes and space, however, most public and some private schools lack basic infrastructure, such as laboratories, libraries, electricity and quality learning environment. Meanwhile, the educational system can only survive with the provision of adequate infrastructure and availability of needed personnel. The paper has examined the meaning of infrastructure and its components. Provision of educational facilities plays a very important role in making quality education available in schools for Nigerian citizens. The continuous change of learning environments with societal needs and the corresponding infrastructure since the establishment of the first school till now as well as the effect of technological interventions will continue to play a major role in the provision of educational facilities in the future. There are schools in Nigeria sited in adequate environments conducive for learning with suitable and modern educational facilities such as computers, whiteboard, television sets with appropriate accessories among others while there are some sited inadequately without appropriate facilities which make learning difficult for students. The underfunding of education, lack of political will and shortage of personnel which are challenges facing the future provision of educational infrastructure were highlighted. The need for the government to ensure the maintenance of existing infrastructure and the provision of modern teaching gadgets are also recommended.

Keywords: Educational infrastructure, Past, Present, Future, Challenges

Introduction

Educational infrastructure consists of buildings such as classrooms, laboratories, workshops, offices and equipment which are crucial elements of learning environments in educational institutions. Educational infrastructure comprises learning infrastructure and facilities in the school. Infrastructural facilities in school include study tables, chairs, furniture and basic utilities such as water, electricity, study halls, laboratories, workshops, and games equipment. The provision and quality of educational infrastructure which has to do with appropriate educational planning and design with a focus on both child and youth development is of utmost importance (Barret et al, 2019). The quality of this infrastructure according to Akash (2018) involves the building of spacious and well-ventilated classrooms, well-equipped laboratories and libraries, availability of playgrounds, assembly areas and well-maintained sanitation facilities. A good quality school infrastructure should be comfortable for students, teachers and administrators with spaces for rehearsals, practices, development of talents, entertainment, sports and culture.

The building of an educational institution is to provide learning spaces and learning environments for teaching of students under the direction of teachers. Schools are social institutions which can and should serve to provoke and create a better society (Cole, 2016). A

school building is one of the components of infrastructure that supports the teaching and learning process (Herwan, et al., 2018). There is a direct relationship between school infrastructure and educational performance (Yangambi, 2023). According to Rivera (2016), it is essential for authorities to observe the significant role of infrastructure and other educational inputs in the improvement of the quality of education when investing in the industry.

The improvement of education systems to ensure that all children and youths have the opportunity to go to school and acquire knowledge and skills they need to lead healthy and productive lives is the responsibility of governments and societies around the world. The availability of a proper educational infrastructure cannot be over emphasized since it provides adequate teaching facilities with a motivating atmosphere to impart knowledge to the students by teachers. It also provides an encouraging learning environment for students irrespective of their level of education with a very low drop-out rate; students in such an environment consider their school or institution as their second home (Rishi, 2021).

Informal education dates back to the first human beings that inherited the earth. Accumulated knowledge, skills, values and traditions have to be passed from one generation to the other for survival through individuals within the family unit. With population growth and formation of societies, the concept of school was born out of the need for a small group of adults to teach a large group of children. The curriculum content of instruction then only covered teaching of skills and religious values without teaching specific subject areas as it is done now. The type of educational infrastructure provided then cannot be compared to what is on ground now. The sudden outbreak of COVID-19 towards the later part of the year 2019 brought another dimension to human history and activities including the education industry where things have to be done differently. The use of technological instruments such as computers, hand phones, laptops helped in the replacement of the physical organisation of educational programmes in classrooms with virtual or online classes using Wi-Fi or data connection provided by GSM service providers such as MTN, GLO and Airtel to mention just a few. The more advanced or sophisticated the world becomes, the more the change that will be witnessed in the education industry as well as the quality and suitability of infrastructure that will be needed. The way teaching and learning is done has to change, embracing technology and concepts such as life-long learning to ensure that students are better equipped for the fast-changing world of today (Marr, 2023). The transformative period of more dynamic, innovative and learner-centric trends in the field of learning and development with the integration of advanced technologies like Artificial Intelligence (AI), Machine Learning (ML), Virtual Reality (VR), and Augmented Reality (AR) is here (Kujawa, 2023).

The paper examined the provision of educational infrastructure in Nigerian schools in the past, what is presently available as well as what is expected in the future. The various challenges that may likely be encountered were highlighted with useful suggestions on how they could be tackled.

Concept of Educational Infrastructure

Infrastructure is the prerequisite for the development of any economy which has to do with transport, telecommunications, energy, water, health, housing and educational facilities (Srinivasu & Srinivasa, 2013). Infrastructure is a basic organisational and physical structure that is required to run a business smoothly. Infrastructure is the basic facilities and system serving a country, region or community. Infrastructure can be classified as soft or hard which are essential to the

economy and quality of the society. Hard infrastructure has to do with physical systems such as roads, highways and bridges needed to run a modern and industrialized nation, while soft infrastructure represents human capital and institutions necessary to maintain an economy equipped with service delivery capacity to the population in the areas of healthcare, financial institutions, government offices, law enforcement and education. The education system is part of the basic infrastructure of a nation. Educational infrastructure such as buildings and equipment are crucial elements of learning environments in schools. High-quality infrastructure among other things facilitates better instruction, improves student outcomes, and reduces dropout rates (Teixeira, Amoroso & Gresham, 2017). School infrastructure according to Bordia (2022) is the system of buildings and amenities that make up a school complex. School infrastructures are school buildings, playgrounds, public amenities, libraries, laboratories and other facilities that contribute to a positive learning environment.

A good school infrastructure is essential in providing students with the best possible learning environment and opportunities to reach their potential. It creates an atmosphere for success because of the availability of classrooms that are well-equipped with modern technology, resources to outdoor play areas, good quality furniture and access to extracurricular activities. The availability of good playgrounds and recreational facilities can help reduce stress, improve social skills and strengthen emotional well-being through physical activities.

Educational infrastructure provides educational spaces for students which help to identify their practical well-being in school (Fernandez, 2020). The quality of school buildings can significantly enhance or impede the learning process for children. Their performance is improved in schools with well-designed buildings and pleasant surroundings as a result of better attendance and concentration, motivation and self-esteem.

Origin of Educational Infrastructure in Nigeria

Schools were established as far back as 1642 but the modern version was founded by Horace Mann in 1837 when he became the Secretary of Education in Massachusetts. He set up a system of professional teachers for students with an organized curriculum of basic content. The provision of educational infrastructure in Nigeria started with the introduction of formal education by the Christian Missionaries Society (CMS) with the building of the first primary school in 1843. The school started at the site of the first story building in Nigeria in Badagry. Shortly after this, the first Baptist Primary school was also founded in Badagry. More primary schools were built by different Christian missionaries such as the Wesleyan Methodist and the Catholic in addition to those mentioned above between 1842 and 1870.

The crude but simple, functional and effective instructional space was a classroom where pupils sat on long plank made wooden benches with no back. In some cases, the school was built at the centre of the village. The school building was a big house with or without floors. The classroom was big with a chalkboard used by teachers to write. The teacher's table was placed in a corner in front of the classroom. A wooden blackboard on the floor also stands in front of the class. There was always a big field in the school compound where pupils/students played during break time. Provision of toilets (which were usually pit latrines) and urinary was made. Sheds were built for food vendors since they were responsible for selling food to pupils/students.

There was no cluster of schools because of enough distance from one to the other. This was because of adequate monitoring by government officials from the Ministry of Education. It may not be unlikely to have pupils/students of different grades learn in the same classroom. This

may be as a result of lack of space and/or teacher. The school building patterns differ from one country to the other depending on the culture and understanding of people in charge as well as the amount of funds available. In Nigeria, the main focus when the first primary school was founded was the ability to read and write since the missionaries were interested in the ability of Nigerians to read the bible. There was also the need for communication between the missionaries and the locals.

Current Situation of Educational Infrastructure in Nigeria

The purpose of building and equipping present schools is to develop children from pre-primary school to university level who are living through the 4th industrial revolution and the current changing teaching and learning environment. There was an awakening by citizens to be educated from cradle to old age as a result of the introduction of formal education by the missionaries. This may be due to the perceived better way of life of the educated few in the society with white-collar jobs compared to the traditional way of life of the non-educated. This led to the birth of a period when all the concerned in the society such as the government, individuals (proprietors and proprietresses), and communities developed keen interest in the education industry as opined by Oparinde (2005). There was a boom in the industry just like the boom experienced in our national life as a result of the oil boom in the 70s. This led to an increase in the number of schools built by the government, individuals and various communities all over the country.

Schools were built in accordance with their instructional needs in tandem with what is going on in other parts of the world especially the happenings in the developed countries of the world with better systems of education. The present school in Nigeria has witnessed a lot of changes when compared to the schools of the past in line with the school plant planning process. The engagement of services of experts in the field of architecture for the school site planning and construction is receiving attention, especially for government and community schools. This may not be the case for many private schools where proprietors/proprietresses convert a house or an abandoned building to a nursery/primary school with a secondary at the same time.

The instructional spaces such as classroom buildings, library, laboratory, art room, and hall are built in a modern way unlike what happened in the past in some schools. Modern teaching gadgets such as computers, overhead projectors, speakers, microphones, whiteboard and markers now replace black board and chalk which are being used to aid medium of instruction in the classroom. In addition to these in some schools, there is the introduction of close circuit television (CCTV) cameras placed in all classrooms linked to the office of the head of school for monitoring the happenings in the classroom such as teachers and pupil behaviours. The use of CCTV cameras is also extended to all other areas of the school for the security of all members of the school community. It should be noted here that some private schools are more equipped with these modern teaching and monitoring gadgets than government and community schools.

Some schools also make provision for learning spaces inside the classrooms such as nature study corner, a safe space or calm-down spot where students self-regulate and manage their emotions in what is known as a collaboration space. Some schools have built-in lockers (which can be locked with a padlock) in the classrooms where pupils in the primary schools and students in the secondary keep their belongings. From observation, the construction of classrooms in some private schools is not made to the prescribed specifications as approved by the local town planning authority.

The provision of administrative spaces or administrative blocks which is a building where the personnel charged with the governing of affairs of the school adds its beauty to the modern school in contrast to the school of the past where all the other spaces form part of the instructional spaces. The administrative spaces in the present school have other rooms apart from the office of the head of school and health clinic since there are other administrative members of staff working with him/her. There are offices for the vice-principal or assistant head teacher, guidance counsellor, health officers, school bursar/accounts clerk, the clerical officer, the computer operator or typist, the office assistant and a staff room for teachers. The size of an institution determines the size of its administrative spaces. The administrative spaces of a tertiary institution cannot be built like the ones for a primary or secondary school, though there are some private tertiary institutions whose administrative spaces are smaller than those of some private primary or secondary schools or university primary schools.

The yearly increase in the number of schools in Nigeria is affecting the provision of some essential spaces within its system. A good example is circulation spaces. This is a result of the conversion of any available building to a school by individuals leading to the presence of three to four schools instead of one in a distance of few kilometres. The government, community and some standard private schools still maintain this circulation space. The change in government with its attendant change in educational policy also affects these spaces. This results in the building of structures which were not in the school plant plan at the beginning. A good example is the disarticulation of schools during a particular era in a state in Nigeria where a school compound was made to house three or four schools. Provisions have to be made for additional classrooms, administrative blocks, and conveniences with their attendant effect on the circulation spaces of the former school. However, the corridors, lobby, staircases and other spaces are still being maintained in some schools where available.

There are many private schools with modern boarding facilities. The government schools still use the long rooms as dormitories but the private schools use small rooms as hostels for accommodation. It is made more comfortable with the necessary conveniences attached to the rooms. These schools are equipped with modern toilet facilities, in fact there are some schools with toilet facilities suited for different ages. Many schools have solved the water shortage problem with the provision of boreholes. The building of what is known as “VIP toilets” is replacing the pit toilets or latrines in government schools in the urban areas though it is not unlikely to still find pit toilets or latrines in the rural community schools.

There is a school feeding programme in many states which does not require cooking in the school but serving of already cooked food in a shed for primary school pupils to be eaten in the classroom. However, there are government schools with boarding facilities and private schools with modern gadgets for cooking in the kitchen which enables the students to be served food to be eaten in the dining hall. In addition to the kitchen service, some private schools provide restaurant services which allows for more choices for students in the hostel and those that come from home. The employment of kitchen and restaurant staff with an expert in that area to oversee what is going on has become the practice of some schools. Housemasters and housemistresses are also employed to monitor what goes on in the hostel.

Schools attach a lot of importance to their environment. Lawns and parks are carefully provided to provide beauty for the school compound. Beautiful flowers are planted around lawns, parks and the field to give the aesthetic look the school deserves. It should be noted that many private schools do not have parks, fields and courts due to lack of space. A school in a flat meant

for accommodation will not have a field, court, or lawn. However, many standard private schools employ gardeners, gatemen and other non-teaching staff such as cleaners, pickers, electricians, plumbers to help in maintaining the various buildings and spaces in the school.

The siting of schools near market places, highways, industries, airports, private homes and makeshift buildings is still a major problem in some developing countries like Nigeria. The good intention of some state governments to educate children of illiterates who are mostly traders is not always achieved as a result of noise or other distractions which prevent students from paying rapt attention to what is being taught in the class.

Educational Infrastructure of the Future

The provision of educational infrastructure in the future will make learning available for everyone at all times and everywhere be it at home, school or at work. Education will be personalised and relevant with immersive experience coupled with peer learning when and where applicable. The vision of the school of the future is to make the world a classroom by replacing the obsolete traditional education with one that teaches students the needed skills of problem-solving, critical thinking and effective communication to succeed in the 21st century according to Shirley Grover, Principal, the school of the future Philadelphia (Adrienne, 2006).

The concept of a school of the future which combines innovative teaching methods with the latest technology was created with the help of software giant Microsoft. The Microsoft designed school of the future for the District of Philadelphia's capital programme which was opened on September 7, 2007, in Philadelphia, Pennsylvania United States for grades 9 to 12 students (Gallard, 2006). The instructional needs (expressed in its goal) of the above school were to make available educational facilities which will make learning more continuous, more relevant and more adaptive. It is to remove dependency on time and space so that students can use resources at school, home and other sites such as zoos, museums of art and historical centres to bring learning to life. The building had classrooms fitted with smart boards that linked resources with instructional materials. The auditorium or hall which is the largest space and least used will become a performance centre that can be converted into smaller classrooms as the needs arise. The Microsoft-designed school according to Lewin (2006) serves as a promise to the next generation of education. Indeed, a lot has happened since the opening of the school of future in Philadelphia.

The introduction of modern gadgets such as computers, laptops, tablets etc. has started shifting the focus from the traditional way of teaching to the modern one. The assessment of many (if not all) educational programmes from the internet is a pointer to what is expected in the very near future. The inclusion of research and development into the daily curriculum to improve student achievement will stimulate the teachers and students to constantly investigate and discover new instructional practices. Education of the future which will be provided by this school according to Dawson (2017) will involve a radical restructuring of how learning takes place not just in schools and universities, but throughout life. He opined that teaching and learning in classrooms will be enhanced through the use of new tools, technologies and methodologies. The outbreak of COVID-19 pandemic in late 2019 and early 2020 that threw the world off balance attests to the view expressed above. The technologically advanced nations of the world quickly adjusted the teaching and learning process with little or no loss of time in academic calendars with online teaching while it took a while for the less technologically advanced ones before knowing

what to do. Teaching and learning were done through different online outlets such as google classroom, zoom, and WhatsApp.

The Digital Classroom which provides eLearning is already in existence. It uses electronic communication for instruction. The eLearning is self-paced and good for independent learners who can learn without oversight. It provides web-based education arranged in modules for people without a strong commitment who are interested in enhancing skills they already have. According to Bresnick (2020), activity-based learning will be guided by the following principles; lecturer acting as a guide, maintenance of open communications between lecturer/teacher and students, encouragement of student interactions, flexibility and creativity and the exploration of interactive online tools.

Virtual learning provides instruction online for students. It can be in the form of a class with an instructor in real time on a virtual conference platform. The form it takes can vary depending on the educational institution. Virtual instruction uses a learning management system (LMS). Learning can be done through video which may be pre-recorded or with an instructor teaching online at a designated time. It is hoped that the use of virtual classrooms will positively impact the future of learning according to Arden (2021) as a result of benefits such as flexibility, accessibility, teacher feedback, personal safety, a boost in technical skills and lower costs. Blended learning which is a combination of traditional classroom teaching and online learning is also an option in making education available for different categories of people.

Technological advancements will continue to impact education both positively and progressively. Future learning experiences according to Tarud (2021) will be shaped in large part by latest technological advancements in the field of education technology (EdTech). There is a gradual move from the present use of smart boards or interactive whiteboards, assistive learning technologies for students with disabilities (which involves modified keyboards with larger buttons, cursors that can be manipulated with a mouth or foot, speech-to-text technology and easy-to-read fonts) and cloud technology to the yet to be harnessed augmented reality (AR) technology and virtual reality (VR) technology in the future. The VR technology which helps create a completely immersive virtual environment that allows users to interact with their environment as if they were there is already being used in a few classrooms. This is unlike AR technology where devices are developed by google. Virtual Reality technology will engage a student's imagination and creativity through creative unique learning experiences.

The instructional space or building in the school of the future will be built in line with the latest trend in education which is to learn with brain and body (LEARN BNB). The learning environment and teaching methods will engage the entire body not only the brain. It will involve physical activity that will result in better learning as well as technology that touches the interior design that provides enough flexibility for the increase in dynamic and movement in the room. School buildings according to Yates (2021) will be vibrant and dynamic with flexible seating. Schools will look like co-working spaces for kids consisting of maker spaces and engineering spaces which will enable them to use their hands to manipulate items and learn. There will be no classrooms and no typical school furniture like the traditional school but new technologies like Extended Reality/Augmented Reality (XR/AR), voice control devices and a computing device for each student to work or engage with.

Some nations of the world are already operating the schools of the future while the Nigerian educational system is struggling with the provision of adequate infrastructural needs of the existing schools. The building of Makoko Floating School for Makoko/Iwaya waterfront

community in Lagos in 2015 (Collins, 2015) was an example of the provision of educational infrastructure in an adaptive form to meet their educational needs. The structure had been intensively used for two years to monitor its performance and evaluate its safety before students started using it in November 2015. The innovative pilot project was to address the community's social and physical needs in view of the impact of climate change. The school was built on water to primarily cater for the educational needs of the community with funds from NLE, Heinrich Boli Foundation and United Nation Development Programme (UNDP)/Federal Ministry of Environment's Africa Adaptation Programme (AAP). The school structure however collapsed due to deterioration from a lack of proper maintenance and collective management in June 2016.

Some educational institutions in Nigeria are already putting up structures equipped with modern gadgets in line with the technological approaches of developed countries. There are private universities with e-library. The use of computers by children in pre-primary and primary schools and students in secondary schools is being witnessed in some private schools though the proportion may be small when compared with the total number of schools at each level of education. These schools take care of other educational spaces apart from instructional spaces. Most government-owned school buildings will soon be outdated and there will be the need for replacement if Nigeria wants to measure up to other countries of the world.

The springing up of mushroom schools with inadequate number of classrooms without adequate planning within a distance of a hundred meters apart will have to disappear if Nigeria wants to educate its ever-increasing number of pupils and children. The need to build schools befitting for the 21st century should be the concern of both the school planners and more importantly the government of the day. Education should be given priority when planning a budget for the nation. There is the need to build on the gain made in engaging students through virtual learning during the COVID-19 pandemic when students at all levels of education were taught from the comfort of their homes through the various online channels in Nigeria. Some students in public schools were taught through the radio and television stations of their states. All these efforts are showing that the current instructional space using classrooms with no modern gadgets will soon become obsolete.

The construction and building of the school of the future with built-in modern gadgets will require a lot of funds. The availability of Wi-Fi everywhere for assessing online classes is key to the success of running this virtual classroom as judged from countries where this is almost a norm. The fee being paid in private schools is very high and if care is not taken many Nigerian children will be unable to go to school if the government does not provide funds to build 21st century schools. This is the time to engage all the experts and planners to put the necessary machinery in place to move Nigeria to the school of the future like it was done in Philadelphia with the help of Microsoft and other schools in this category.

Challenges of Educational Infrastructure in Nigeria

As important as education infrastructure is to the quality of learning and graduates, most public schools lack basic infrastructure, such as a laboratory, library, electricity and quality learning environment. Existing infrastructures in some public schools are in deplorable condition, others are below acceptable standards and, in few cases, non-existent. In some of these schools, there is a lack of functional public sanitary facilities; hence, the 'bush' serves that purpose in such schools. These and many more are the challenges faced by many schools in respect of education facilities. Some of these challenges are explicitly explained below:

Funding: The inadequate budgetary allocation or underfunding of education is a major challenge in the provision of adequate infrastructure in the education industry. The gradual shift from the traditional classroom to a virtual one will require a lot of funds. The availability of Wi-Fi all over the country for students to access online materials and be part of online classes is very important. The goal of future educational infrastructure is to make the world a classroom so that everybody will have access to education irrespective of age, class, discipline and location.

Lack of maintenance culture: This is a common challenge in most (if not all) in all sectors in Nigeria. The lack of maintenance of educational infrastructure has led to the dilapidation of some school structures such as classrooms, laboratories, offices and toilets. Many public schools' doors, windows and walls are in a deplorable state due to lack of maintenance.

Lack of political will and politicization of education: The practice of politicians not matching their words with action is another challenge in the provision of educational infrastructure. Many promises made by politicians during campaigns are not fulfilled on assumption of office. The lack of continuity in the area of educational policy from successive parties always has a negative effect in providing necessary educational facilities. This results in payment of lack or inadequate attention to the provision of educational infrastructure and maintenance of existing ones.

Recruitment and training of personnel: There is a shortage of personnel (teaching and non-teaching) in the education sector just like all others. Most of the personnel on ground are not familiar with the use of modern teaching gadgets. Training of personnel to improve their output on how to teach using these gadgets is not given due priority either as a result of lack of funds or political will by the government of the day.

Corruption: Misallocation of funds meant for education has a serious effect on the provision of adequate educational infrastructure in schools. The diversion of monies meant for the purchase of educational materials into private bank accounts by contractors in collusion with government officials is going to be a big challenge if not checked just like what is happening now (Pius, 2022).

Security Challenges: Many public schools in Nigeria are not adequately secured. There are no fences around the schools, no gates and security personnel to keep miscreants away. These security lapses make it easy for thieves to break into school compounds to steal educational materials when nobody is around. The covering provided by darkness at night as a result of lack of security lights around the school premises is a big security lapse which allows the miscreants to do what they like with little/ no challenge. In some areas, community members engage in destruction of educational facilities such as wooden chairs and tables for cooking as a result of absence of security personnel to challenge them.

Lack of responsibility and control: The lack of central control for the educational sector is a big challenge. The management of primary education by the various tiers of government and commissions in Nigeria is a demonstration of lack of central control. The running of public primary schools in Nigeria resulting in its administration and management by three tiers of government can be likened to a sheep owned by many that nobody seems to be directly responsible

for its upkeep (Ogwo, 2023). Its administration is controlled by the State Universal Basic Education Board (SUBEB) in the various states while the funding which is the most important aspect is the joint responsibility of the federal, state and local governments

Conclusion

There is a gradual change in the provision of educational infrastructure since the beginning of formal education to what it will look like in the future. The introduction of modern gadgets in different classrooms (digital, virtual, sit-in or combination of virtual and sit in)) with time has started affecting the designing and building of schools and this will continue. The maintenance of these buildings is very important in Nigeria. Conscious effort should also be made by planners to ensure that new schools are built taking into account all the necessary gadgets that will facilitate learning suited for the 21st century and beyond.

Recommendations

Technological advancement keeps driving development in all aspects of human endeavour including education all around the world. Educational buildings and facilities will continue to play a major role in providing programmes that will make students achieve the expected academic results which will prepare them for skills to get a job. The maintenance of school buildings will continue to be important as well as the facilities in them. Modern gadgets such as computers, smartboards, laptops, tablets among other things will require the services of experts for their maintenance should be given a serious attention by the government or proprietors/proprietresses as the nation focuses on educating her citizens in the future.

The problem of lack of funds affecting the educational sector should be attended to by the government at all levels by improving on the percentage of the budget allocated to education. This is because the services of more experts with technological backgrounds who would be saddled with the purchase and maintenance of modern gadgets necessary for teaching and learning will be needed.

New teaching and non-teaching staff will be needed to operate the new technological gadgets for teaching in the future since technology is dictating the pace of development in all human endeavours including education. The staff on the job will have to be constantly trained. Regular training will have to be done to be on the same pace with other nations around the globe. This may involve exchange programmes between personnel in Nigeria and other nations of the world.

There is still a lot to be done by the government if Nigeria is to transit from the present school system to that of the future. There is the need to equip the present government school buildings with computers, laptops and other educational gadgets as well as building new ones from scratch to meet the educational needs of the citizens for them to be able to compete with their counterparts all over the world especially those in developed countries since the world has become a global village. The Nigerian government at all levels should provide Wi-Fi in schools for teachers to teach and for students to learn. This will also help in assessing online educational programmes around the globe. This is even very important since learning in the future will become virtual with few physical classrooms.

The bringing of embezzlers (no matter the status or calibre) of funds allocated for the provision and maintenance of educational infrastructures to justice is very important. This will help curb the practice when these offenders are made to face the wrath of the law.

The security of expensive modern technological gadgets used in schools is of utmost importance. The need for the setting up of a special security squad or outfit by the government or communities to protect or watch over educational infrastructures is long overdue. This will help checkmate the incessant breaking into schools by hoodlums who steal educational materials and destroy school properties.

The various tiers of government should be assigned specific responsibilities in clear terms to solve the problem of instability in the control and management in the education sector especially the primary level since its quality serves as the framework on which the quality of other levels is anchored. Various government agencies should be assigned specific managerial duties for proper monitoring of educational programmes.

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ASSERTIVE DISCIPLINE AS PREDICTOR OF TEACHERS' MANAGEMENT OF CLASSROOM BEHAVIOUR IN SECONDARY SCHOOLS IN OSUN STATE

by

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Abstract

The study investigated the level of teachers' management of classroom behaviour among secondary school teachers in Osun State. It also examined the predictive ability of teachers' assertive discipline on the management of classroom behaviour in the study area. The population for the study comprised 6736 secondary school teachers in Osun State. The sample size comprised 480 respondents, selected using a multistage sampling technique. One instrument titled "Assertive Discipline and Teachers' Management of Classroom Behaviour (ADTMCB)" was used to elicit information from the respondents. Data collected were analysed using percentages and frequency counts, mean, standard deviation, linear and multiple regressions. The hypothesis was tested at a 0.05 level of significance. The results showed that 343 (71.5%) of the secondary school teachers demonstrated a moderate level of classroom behaviour management, followed by 79 (16.5%) of them who demonstrated a low level of classroom behaviour management while 58 (12.1%) of them demonstrated a high level of classroom behaviour management. The study concluded that there was a significant predictive ability of teachers' assertive discipline on their management of classroom behaviour ($R=.364$, $R^2=.133$, $F=73.132$; $p<0.05$).

Keywords: Assertive Discipline, Teachers' Management of Classroom Behaviour

Introduction

Teaching a student with different needs, behaviour and attention spans such as a student with Attention Deficit and Hyperactivities disorder (ADHD), learning disability, emotional and behavioural disorder, and slow learners and so on can be challenging. Be that as it may, when a positive learning culture is made, the students would learn in light of the fact that they would realize what is generally expected of them. Successful classroom managers are in every case prone to have arranged principles and techniques that they would deliberately and cautiously show the students. They tend to structure instructions for the students and get them engaged meaningfully to gain their maximum attention to make sure the students are successful. In contrast, teachers who tend to have difficulties with managing the behaviour of their students and disciplines in the classroom are likely to be ineffective in the classroom.

This implies that teachers who have an interest in promoting and fostering effective learning in their classes are not likely to neglect students' behaviour in the classroom. They are probably going to ensure that their students have fundamental tendencies that would empower them to think, feel and act appropriately-----`. Fundamentally, for instructors to have the option to viably deal with their classroom behaviour, they need to have adequate and all the more critical certainty; and foster capacities in classroom management (Omoteso, 2011).

Assertive discipline is very important in secondary school, especially in Osun State where there seem to be over-populated classrooms, a non-conducive school climate, inadequate instructional materials, shortage of teachers and negative attitudes of students towards school and teachers. More so, assertive discipline is needed to manage and control the behavioural problems which may be as a result of the insufficient number of basic materials such as teachers' and students' seats (Adeogun, 2001); which could hinder productive teaching and learning in Osun State secondary schools. Discipline is a process of presenting somebody to an understood guideline, that there's a wide arrangement that conducive atmosphere is essential in school for a persuading assisting learning with taking care of to be put in put (Galabawa, 2001). With decisive discipline, rules and direct longings are unmistakably communicated and dependably carried out. At the point when educators orchestrate discipline courses of action, imagine students' positive and negative lead in the wake of preparation school rules; it may offer help them to create ideas for outrageous unfortunate activities. It could also promote systems that enhance participation and motivation among the students. This action, by implication, helps teachers to achieve their classroom objectives.

It should be noted that there are two types of disciplines; which are positive and negative disciplines (Sunday-Piaro, 2018). Positive discipline is also known as assertive discipline, firm discipline, self-discipline and preventive discipline. This type of discipline provides a reward to students to remain devoted to a set of values. It improves an individual's control over their obligation to follow school rules and authorities, as well as time management, respect for school property, and establishing positive relationships with teachers. Negative discipline on the other hand involves forcing an individual to blindly obey orders or to obey orders without reasoning (Sunday-Piaro, 2018). This study focused on how teachers' management of classroom behaviour could be achieved and be more effective through assertive discipline, as more emphasis is being laid on discipline rather than punishment. More so, the benefit of promoting positive changes in the students' environment, to ameliorate the child's behaviour without being offensive is of great importance as touching assertive discipline. More importantly, secondary school teachers that practice assertive discipline are more likely to achieve the teachers' management of classroom behaviour goals; as the students understand and follow rules, both within and outside the classroom, without using physical or emotional violence on them.

Statement of Problem

A learning environment characterised by noise making and other sdistracting actions by students' would lack meaningful teaching and learning, and could affect the students' academic performance. This implies that academic achievement, credibility and positive learning outcome may not be achieved if the teaching-learning process is void of a good teachers' management of classroom behaviour. This is due to the waste of time in correcting the misbehaviour that resulted from poor classroom behavioural management skills, which could amount to a reduced level of academic engagement in the classroom (Adeyemo, 2012). For assertive discipline, it is good that a teacher is firm and respectful in stating the class rules, expectations and consequences for any violated action.

Purpose of the study

The main purpose of this study was to assess out the teachers' management of classroom behaviour among the secondary school teachers in Osun State, and its predicting factors. The specific objectives are to:

- (a) investigate the level of teachers' management of classroom behaviour among secondary school teachers in Osun State; and
- (b) ascertain the assertive discipline on the management of classroom behaviour among the secondary school of teachers

Research Question

The following question was answered in this study.

- (i) What is the level of teachers' management of classroom behaviour among the secondary school teachers in Osun State?

Hypothesis

The following hypothesis was tested:

- (i) There is no significant predictive ability of assertive discipline on teachers' management of classroom behaviour among the secondary school teachers

Methodology

The study adopted the descriptive survey research design. In view of the way that all optional teachers could not be reached, the review was directed utilizing tests from the number of inhabitants in educators in the chosen secondary schools; and the outcomes got from this were utilized to sum up for the whole populace.

Population

The population for the study comprised secondary school teachers in Osun State, Nigeria, totaling 6736 as at the commencement of the 2019/2020 session (Statistics provided by the Ministry of Education and State Universal Basic Education Board (SUBEB). There are six states in the Southwestern geo-political zones in Nigeria, which are Ekiti, Lagos, Ogun, Ondo, Osun and Oyo States. Osun State, which is one of these six states in the focus of this study. Also, Osun State comprises 30 Local Governments Area which is divided into three senatorial districts namely: Osun Central, Osun East and Osun West.

Sample and Sampling Technique

The sample size comprised 480 respondents, selected using a multistage sampling technique. The sample size represents 0.4% of the population of secondary school teachers in Osun State, Nigeria; and was considered appropriate and adequate for the study given the sample size formula developed by Barlett. II, Kotrlik, Haggins (2001) specified a minimum of 440 at a 95% level of confidence level relative to the population of the teachers which is 1000. The three senatorial districts in the state were used and two Local Government Areas (LGAs) were selected from each of the three districts using a simple random sampling technique, giving a total of six LGAs. From each LGA, four secondary schools were selected using a simple random sampling technique (making 24 schools) and from each school, 20 teachers were selected using a systematic sampling technique of proportion across departments, making a total of 480 teachers.

Research Instrument

In carrying out this study, an adapted instrument entitled, "Assertive Discipline and Teachers' Management of Classroom Behaviour (ADTMCB)". The instrument (ADTMCB) is a combination of different questionnaires packaged together as one and was used to collect data

from the teachers. Section A of the questionnaire elicited responses on the demographic variables of the respondents such as the name of the school, the class taught, religion, sex and years of experience. Section B comprised 38 items Likertscale adapted from the scales of Yasar, 2008, entitled “Teachers’ Management of Classroom Behaviour Approaches”; while Section C consisted of 15 items on Assertive discipline adapted from Díaz, González, Jara-Ramírez, Muñoz-Parra (2018); entitled “Validation of a Teachers’ management of classroom behaviour Questionnaire for Pre and In-service Teachers of English”.

Procedure for Data Collection

The system for information assortment for the review began with a visit by the analyst to the chosen schools in each of the senatorial districts to administer the research instruments. In each of the schools, the researcher discussed with the principals and the head teachers the essence of the research to sensitize him or her on the importance of the research and also to solicit support and assistance in the administration of the instruments. Prior to the visit, a letter of introduction was collected from the researcher’s Head of Department (H. O. D.) and given to the principals, vice principals in some cases and head of departments in each selected secondary school.

Techniques for Data Analysis

Data collected were analysed using descriptive and inferential statistics. The demographic variables were analysed using descriptive statistics such as frequency and percentage; while research question one was analysed using frequency counts, percentage and Relative Significance Index (RSI). Also, the hypothesis one was tested using standard deviation, linear and multiple regressions.

Results

Research Question

Research Question 1: What is the level of teachers’ management of classroom behaviour among the secondary school teachers in Osun State?

To answer this research question, two approaches were adopted. In the first instance, teachers’ responses to 38 items measuring Teachers’ Management of Classroom Behaviour subscale of ADTMCB were scored such that Frequently response was allotted 4, Occasionally, 3, Rarely 2 and Never was allotted 1. These responses were subjected to a descriptive analysis of frequency and percentage. Also, to determine the level of teachers’ classroom behaviour management, the responses were then scored and cumulated. The minimum and maximum scores obtainable from this inventory were 38 and 152 while the mean and standard deviation scores were 119.6 and 15.37 respectively. Since a high score indicates a high level of teachers’ management of classroom behaviour, scores of 38 to 1SD below the mean score (38-105) were adjudged as low level of classroom behaviour management, scores of 106 through 135 (106 to mean+1SD) as a moderate level of classroom behaviour management while scores of 136 through 152 were adjudged as high level of classroom behaviour management. The result is presented in Table 1.

Table 1: Level of Teachers’ Management of Classroom Behaviour among the Secondary School Teachers in Osun State

Level of Management Classroom Behaviour	Score range	Frequency (f)	Percentage (%)
Low	38-105	79	16.5
Moderate	106-135	343	71.5
High	136-152	58	12.1
Total		480	100.0

Table 1 shows the level of teachers’ classroom behaviour management among the secondary school teachers in Osun State. The result shows that 16.5% of the secondary school teachers in Osun State demonstrated a low level of classroom behaviour management, 71.5% demonstrated a moderate level of classroom behaviour management while 12.1% of the teachers demonstrated a high level of classroom behaviour management. As shown in the result, it can be observed that the majority of the secondary school teachers in Osun State demonstrate a moderate level of classroom behaviour management.

Research Hypothesis

Hypothesis One: There is no significant predictive ability of assertive discipline on teachers’ management of classroom behaviour among the secondary school teachers

To test this hypothesis, teachers’ responses to 15 items on the Assertive Discipline subscale of ADTMCB were scored such that responses like Often response was allotted 4, Sometimes, 3, Rarely 2 and Never was allotted 1. These responses were first subjected to a descriptive analysis of frequency and percentage. Then, responses to each of the constituting items were cumulated to form a composite measure for assertive discipline behaviour that can be used as a predictor for the criterion variable of teachers’ management of classroom behaviour. The result is presented in Table 2.

Table 2: Regression Analysis of the Predictive Ability of Assertive Discipline on the Teachers’ Management of Classroom Behaviour of the Secondary School Teachers

R= 0.364 R ² = 0.133 Adj. R ² = 0.131 F= 73.132*	Unstandardized		Standardize	T	Sig.
	Coefficients		d		
	B	Std. Error	Beta		
(Constant)	83.292	4.296		19.387	.000
Assertive Discipline	.769	.090	.364	8.552	.000

Dependent Variable: Teachers’ management of classroom behaviour score

*Predictor: (Constant), Assertive discipline, * p<.05 (p =.000)*

Table 4.4 shows that the predictive ability of assertive discipline on the teachers’ management of classroom behaviour yield a coefficient of regression (R) of .364 and a correlation square (R²) of .133. These values are statistically significant at 0.05 probability level (R=.364, R²=.133, F=73.132). The assertive discipline variable could account for 13.3% of the observed variance in teachers’ management of classroom behaviour. Therefore, it can be concluded that there was a

significant predictive ability of assertive discipline on the teachers' management of classroom behaviour of the secondary school teachers ($R=.364$, $R^2=.133$, $F=73.132$).

Discussion

The main finding of this study uncovered that most of the secondary school teachers in Osun State demonstrated moderate level of classroom behaviour management. This implies that teachers were effective in classroom management in Osun State secondary schools beyond a low level; though not at a high level. Thus, on the average, the teachers did not only communicate their expectations to the students in the class but also created a conducive environment while teaching. This in turn could enhance students' learning and encourage them (students) to put more effort in trying their possible best in their academics, yielding positive and excellent academic performance. This result is therefore in agreement with the finding of Wigwe (2013) who reported that secondary school teachers in Rivers State employed a reasonable level of preventive and maintenance-oriented approaches in the management of students' classroom behaviour.

On the other hand, this result is in contrast to the finding of Owan and Ekpe (2018); which revealed that classroom coordination adequacy of instructors in Calabar South Local Government Area was for the most part exceptionally low. This, thusly, gives the idea that, even at the moderate level (however a more significant level is expected) of successful classroom management by the instructors in Osun state public secondary schools, viable and useful educating learning would in any case be improved in the schools. This suggestion implies that whenever educators are focused on successful administration of classroom conduct, great instruction is guaranteed by creating steady, mindful and agreeable associations with and among the students.

Moreover, this study found out a significant predictive ability of assertive discipline on the secondary school teachers' management of classroom behaviour. This was buttressed by the submission of Marzano (2003), that early attention to classroom management at the beginning of the school year is a critical ingredient of a well-run classroom. It was also buttressed by Oliver, Wehby and Daniel (2011), that the use of antecedent strategies as packaged interventions (e.g., precision requests, posting of rules, teacher movement), reinforcement strategies (e.g., mystery motivator, token economy), and punishment strategies to respond to inappropriate behaviour (e.g., response cost) have been used effectively to reduce disruptive behaviour (Di MartiniScully, Bray, & Kehle, 2000). This is to say that, for a teacher to be effective in classroom behavioural management, he or she should be able to make correct decisions on classroom discipline. Once a teacher cannot manage indiscipline in the classroom, there would be limitations in the teachers' effectiveness in almost all areas of the teaching-learning process in the classroom. Therefore, for a teacher to be outstanding there is a need to indulge or inculcate the very vital component of assertive discipline, which should start from his or her first day in the class.

Conclusion

Classroom behaviour management is a very important issue in the teaching-learning process. Thus, effective classroom behaviour management depends on the teachers. The class could be seen as being effectively managed only when the environment is seen obviously as being conducive for the learners. To this effect, this study has revealed that teachers in public secondary schools in Osun state demonstrated classroom behaviour management at a moderate level. This study also established that assertive discipline significantly predicted the classroom behaviour management practices among the secondary school teachers in Osun state.

Recommendations

Sequel to the findings of this study, the following recommendations were therefore made:

1. Workshops should be arranged by the state and federal government annually to update the teaching skills and methodology of the teachers. This would therefore promote an enabling environment for the teachers to improve on their weak areas as far as classroom management is concerned.
2. Sufficient staff welfare should be in place in schools compulsorily. Frequent remuneration should be given to the teachers in the classroom at all levels, to increase their level of devotion and dedication to work, especially classroom duties and behaviour management.
3. More emphasis and priority should be given to Classroom behaviour management content in the colleges of education and other tertiary institutions, as this will go a long way in improving the teaching standard in classes.
4. Teachers should live an exemplary life for students to see the necessity to behave well during classroom activities. Also, teachers should work to instil a sense of self-discipline in their students and teach them how to self-monitor themselves. They should intensify assertive classroom discipline to encourage better academic performance of the students; Feedback and reinforcement should be adopted during classroom activities while punishment should be minimal.

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ANALYSIS OF GOVERNANCE SYSTEM OF PUBLIC UNIVERSITIES IN SOUTHWESTERN NIGERIA

by

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Abstract

The study investigated the governance structures and analysed decision-making processes of public universities in Southwestern Nigeria. It also examined the influence of politics on governance of public university education. The study employed the descriptive survey research design. The population of this study comprised all the 10,891 academic staff in 17 public universities in Southwestern Nigeria. The sample for the study consisted of 1,671 academic staff. Proportional sampling technique was used to select academic staff from each university per state in the geopolitical zone. The six sample universities were one Federal University per State established before 1985, where otherwise, one State University was used. The instrument for data collection was self-developed questionnaire titled "Political Economy of Nigerian Public Universities Questionnaire" (PENPUQ). Data collected were analysed using Chi-Square (χ^2). The results showed that 725 (51.9%) in importance category and 783 (56.1%) in functional level of respondents agreed that committee system are the governance structures in public universities in Southwestern Nigeria. The results also indicated that decision-making processes within the political structure of public universities were characterized by strong leadership at both departmental 743 (53.2%) and faculty levels 999 (71.6%) while central council 999 (71.6%) plays paramount role at university level. The Chi-Square (χ^2) findings ($\chi^2 = 3.17$, $df = 10$, $p = 0.98$) indicated that politics did not significantly influence the governance of public university education. The study concluded that the interplay between politics and process of governance of public university education in Southwestern Nigeria within the timeframe are compromises negotiated among competing groups.

Keywords: *Education, Governance, Influence, Politics, Public, University.*

Introduction

Generally, governance and politics connote power, authority, control and influence. A university presents itself as centre in objectivity, pluralism as well as uniformity. The reality seems to negate such idealist perspective, arguing training agencies are in essence very similar to any other organisation in the society and therefore depicts university as political phenomenon. In other words, a university system can be viewed as a political institution. Pfeffer (1992) argued that institutions, vast entities, and governments are fundamentally political entities. Such political perspective of the governance of university cuts across the politics and policies of university.

The political entity of university system entails political manoeuvres among internal and external members which suggest practicality in individual members. The understandings of organisational politics as to the extent of spreading individual interests about organisations appear significant. Such political behaviour often leads to an outcome in the form of allocation of values

or resources. Shenhar and Haberfeld (1992) noted that in a university system, inconsistency in determining merit as well as ordering cognitive outcome as well as features that makes the university rife with internal politics.

Decisions on education policies and decision-making processes are often a political phenomenon in most organisations and in a country at large; a consequence of explicit and implicit values, interests, preferences and assumptions of the members as a whole. For instance, Blasé and Blasé (2002) pointed out that decision-making processes in most organisations were dominated by value preferences and strategic exchanges between and among school participants.

Public university education in Nigeria is provided at both the federal and state levels and its governance and funding have been debatable issues. As a result of proliferation of universities since the era of Second Republic in Nigeria, there had been several political initiatives to reorganise, restructure or reform university education governance. These initiatives were made with a view to achieving an ideal democratic community within the institutions.

The legal authority to make decisions within universities rests with each university governing council, Senate, and other Statutory Committees such as Congregation, Faculty Boards, and Committees. These bodies are established by Statutes or Acts of the National Assembly referred to as university statute, for example, Obafemi Awolowo University Law and a host of others. In practice, each university has its own governing council separate from other universities despite being controlled by the same federal or state governments. These bodies collect academic information, develop strategic plans, and coordinate activities for the university systems. In order to carry out these assignments, the governance structures either mar or support the system.

Babalola and Emunemu (2006) asserted that university governance does not only cover the internal relationships, power relations, and decision-making within universities, but also relates to the interactions between universities as well as between universities and state authorities. Analysis of the consequences of varying governance structures among universities at different times or periods are deserving of close scrutiny, especially in respect of the administrative structure and processes. Generally, public university education in Nigeria is organized and developed at both federal and state levels and its governance issues have been debated over the years. The governance system occurs in a distinctively and decidedly political context, that is, at the intersections of legislative institutions (National/ State Assembly), the National Universities Commission (NUC), electoral cycles, and internal politics within the universities. The social situation could result to perhaps, occasional resistance to decisions on appointment of governing council members as well as institutional arrangement for governance, and funding crisis, which are recurring socio-political problems associated with Nigerian universities.

Generally, university education is regarded as instrument for social and political development of any society. University administrators need to perceive political trends, demands, and expectations on the school system goals and functions; make the process and structure of the school administration reflective of the socio-political context; be capable of contributing to political policy-making through effective representation or memorandum of their school system needs, goal, and functions; have a good network of information systems within and outside of the school, from and to the appropriate governmental agencies and political leadership; make his/ her plans, schedules and programmes contingent as well as responsive to the social and environmental demands; and be wary of being drawn into the murky waters of political partisanship. More so, education is partly influenced by political considerations. Brembeck (1997) concluded that while schools are not themselves political institutions, they are products of the political process.

Governance in higher education and particularly university education is often misconstrued. In this study, governance is “the process for distributing authority, power and influence for academic decisions among campus constituencies”. The kind of governance refers to shared governance or committee-based system. In same vein, Ogundimu (1980) claimed that the committee system is merely a smokescreen through which an appearance of democratic governance is presented to the outside world.

Using case studies, Mortimer and Sathre (2007) analysed issues pertaining, group structure areas in itinerary pertaining to academy as force relate with big issues, often brought on by external forces. Mortimer and Sathre (2007) examined relations among the broad context of internal institutional governance and concluded that shared governance assisted the academy to share authority effectively. A recent study was that of El Amine (2021) from a political model in university at 10 countries using a historical approach. El Amine (2021) reported that nine out of 10 oldest public universities since inception till 2016 belong to participatory approach, while the tenth represents the Napoleonic model. In line with this study approach, the shared or committee system of university governance is quite similar to the Nigerian university system. It incorporates different stakeholders such as labour unions to be involved in decision-making processes.

Also, Gornitzka, Maassen and de Boer (2017) analysed governance at comprehensive universities in Europe. The study reported an interior participatory form of structure; foreign engagement at governance; extent in concentration. In a related Nigerian context, Adelokun (1988) investigated the relationship between the inter-relationships between a university system on the one hand and morale of staff on the other in Obafemi Awolowo University (OAU), Ile-Ife and University of Ilorin, Ilorin. He reported that there is a clique of professors in each of the universities and perhaps in others too which has a lot of negative influence on the morale of staff. Also, Adelabu and Akinsolu (2009) examined how institution plays role in political education of students. The study surveyed 1000 students at OAU, Ile-Ife using disproportionate stratified random sampling technique. The study indicated learners being modified at the university environment. Furthermore, more old than new are influenced; and male counterparts are more politically socialized than female counterparts. Lastly, the core agents of students’ socialization are curriculum, the students union and the lecturers. Therefore, these researchers concluded university as an arena of political education for students.

Simon and Okwo (2014) investigated staff perception of the influence of political factors on the appointment of members of governing councils, vice-chancellors and other principal officers in federal and state universities in the North Central States of Nigeria. The study utilized proportionate stratified random sampling technique to select 1,120 respondents made up of 767 staff of federal universities and 353 staff of state universities. The study showed that partisan politics, ethnic and sectional considerations, religious affiliation, favouritism, the quota system and catchment area policy significantly influenced appointment of members of governing councils, vice-chancellors and other principal officers in federal and state universities in North Central States of Nigeria.

However, a bias of political model to university governance is that the importance of long-term decision-making patterns may not have recognised ways in which institutional structures shape and constrain political efforts. Generally, political system is beyond definitions, using force and generally, interactions within several individuals and agencies responsible for making, executing or resisting decisions concerning the university system.

It is against aforementioned background, this study seeks to assess the governance system of public universities in Southwestern Nigeria. Specifically, the study objectives were to examine the governance structures of public universities in Southwestern Nigeria as well as the decision-making processes within the political structures of universities in the study area. Also, the study investigated the influence of politics on governance of public university education in Southwestern Nigeria.

Research Questions

The following research questions were raised to guide the study:

- a. What are the governance structures of public universities in Southwestern Nigeria?
- b. What are the decision-making processes within the political structures of universities in the study area?

Hypothesis

The null hypothesis was:

Ho1: There is no significant influence of politics on governance of public university education in the area.

Method

The study design was a descriptive survey research meant to examine the governance structures and decision-making processes of public universities in Southwestern Nigeria. The population of this study comprised all the 10,891 academic staff in 17 public universities in Southwestern Nigeria. The sample for the study consisted of 1,671 academic staff. Proportional sampling technique was used to select academic staff from each university per state in Southwestern Nigeria. More so, convenience sampling technique was adopted to choose academic staff that is not below the rank of Senior Lecturer. The six sample universities were one Federal University per State established before 1985, where otherwise, one State University was used. The distribution of respondents showed that 1,396 respondents were participants in this study. From these participants, 912 (65.3%) were males and 484 (34.7%) were females, while 300 (21.5%) participants were Professors, 360 (25.8%) were Readers/ Associate Professors, 736 (52.7%) were Senior Lecturers. Two hundred and ninety five (21.1%) participants had also served between 0 and 5 years, 370 (26.5%) participants had put in between six and 10 years, 545 (39.0%) participants had served between 11 and 15 years, and 186 (13.3%) participants had served more than 16 years. Lastly, 260 (18.6%) participants were from University of Ibadan (UI), 273 (19.6%) participants were from University of Lagos (UNILAG), 291 (20.8%) participants were from OAU, 189 (13.5%) participants were from Federal University of Technology, Akure (FUTA), 199 (14.3%) participants were from Ekiti State University (EKSU) and 184 (13.2%) participants were from Olabisi Onabanjo University (OLABISI).

The instruments for data collection were self-developed questionnaire titled “Political Economy of Nigerian Public Universities Questionnaire” (PENPUQ). It was a researcher-designed questionnaire generated and adapted from review of related literature, such as Adelokun (1988)’s staff perception of administrative structure of higher education questionnaire, Adelabu and Akinsolu (2009)’s political education through university, among others and observations from a pilot study conducted during the standardization of instrument. The instrument was used to elicit information from the academic staff on the governance issues. The instrument was divided into

two sections, Sections A and B. Section A provided demographic information about the respondents (such as sex, rank of staff, years of experience and name of university). Section B consisted items relating to governance of university, decision-making processes, and political dimensions of governance patterns, dynamics of power and appointment or election process.

The study instrument was given to three experts who are experienced university administrators for content validity. These three respondents provided feedbacks on the design and wordings of questions. Substantial adjustments were made to the instrument. Fifty copies of PENPUQ were administered on two universities that are not part of the sample universities for the Study. Test-retest reliability investigation was conducted at four weeks interval to ascertain the degree of consistency of the instrument. The result obtained using Pearson correlation (r) coefficient was 0.86. This result indicated very high positive relationship among items of the questionnaire.

Results

Research Question 1: What are the governance structures of public universities in Southwestern Nigeria?

This question was raised to examine the governance structure in Southwestern Nigeria. Percentages were utilised on the responses of the participants based on their frequency distribution on the four items which constitute governance structures of universities. The frequency is in Table 1.

Table 1: Governance Structure of Public Universities

Constructs	N	Current	Former	Never
Status of Membership	1396	928 (66.5%)	427 (30.6%)	41 (2.9%)
Involvement Level	1396	High	Low	Not Sure
		455 (32.6%)	914 (65.5%)	27 (1.9%)
Importance of Committee System	1396	Important	Not Important	Undecided
		698 (50%)	671 (48.1%)	27 (1.9%)
Functional Level of Committee System	1396	Check & Balance	Legislative	Dormant
		613 (43.9%)	711 (51%)	72 (5.2%)

Source: Fieldwork (2023)

In Table 1, 1,396 participants responded to status of membership, 928 (66.5%) chose current member, 427 (30.6%) chose former member, and 41 (2.9%) stressed never. From 1,396 participants that reacted to involvement level, 455 (32.6%) opined high, 914 (65.5%) emphasized low, and 27 (1.9%) upheld not sure. Of 1,396 participants that acted on importance of committee system, 698 (50%) stressed important, 671 (48.1%) maintained not important, and 27 (1.9%) insisted on undecided. Out of 1,396 participants that responded to functional level of committee system, 613 (43.9%) affirmed check & balance, 711 (51.0%) upheld legislative, and 72 (5.2%) claimed dormant. Based on this finding, committee system had 50.0% in importance category and 51.0% in legislative functional level are the governance structures in universities in Southwestern Nigeria.

Research Question 2: What are the decision-making processes within the political structures of universities in the study area?

This question was designed to identify the various ways lecturers participate in governance of the university. Percentages were utilized to analyse the responses of the participants based on their frequency distribution on the eight items which constitute a decision-making process of universities. The frequency is in Table 2.

Table 2: Decision-making Processes of Public Universities

Constructs	N	Yes	No	Not Sure
Participation	1396	789 (56.5%)	550 (39.4%)	57 (4.2%)
Mode of Selection	1396	892 (63.9%)	387 (27.7%)	117 (8.4%)
Faculty Board	1396	811 (58.1%)	396 (28.4%)	189 (13.5%)
Faculty Representative	1396	684 (49.0%)	536 (38.4%)	176 (12.6%)
Selection Pattern	1396	396 (28.4%)	811 (58.1%)	189 (13.5%)
Decision-making (Department)	1396	207 (14.8%)	743 (53.2%)	446 (31.9%)
Decision-making (Faculty)	1396	999 (71.6%)	261 (18.7%)	136 (9.7%)
Decision-making (University)	1396	999 (71.6%)	370 (26.5%)	27 (1.9%)

Source: Fieldwork (2023)

In Table 2, 1,396 participants responded to participation, 789 (56.5%) ticked ‘Yes’, 550 (39.4%) chose ‘No’, and 57 (4.2%) were ‘not sure’. From 1,396 participants that responded to mode of selection, 892 (63.9%) opined ‘Yes’, 387 (27.7%) emphasised ‘No’, and 117 (8.4%) were ‘not sure’. Of 1,396 participants that acted on faculty board, 811 (58.1%) stressed ‘Yes’, 396 (28.4%) maintained ‘No’, and 189 (13.5%) were ‘not sure’. From 1,396 participants that responded on faculty representative, 684 (49.0%) affirmed ‘Yes’, 536 (38.4%) upheld ‘No’, and 176 (12.6%) were ‘not sure’. Of 1,396 participants that reacted on selection pattern, 396 (28.4%) insisted on central administration, 811 (58.1%) claimed faculty, and 189 (13.5%) upheld departmental level. From 1,396 participants that responded to decision-making processes at departmental level, 207 (14.8%) chose head of department, 743 (53.2%) ticked strong leadership, and 446 (31.9%) claimed democratically. Of 1,396 participants that responded to decision-making processes at faculty level, 261 (18.7%) chose strong dean, 999 (71.6%) ticked strong leadership, and 136 (9.7%) claimed democratically. From 1,396 participants that responded to decision-making processes at university level, 999 (71.6%) chose central council, 370 (26.5%) ticked strong leadership, and 27 (1.9%) claimed democratically. Based on this result, it is concluded that decision-making processes were characterised by strong leadership at both departmental (53.2%)

and faculty levels (71.6%) while the central council (71.6%) played paramount role at university level.

Null Hypothesis (Ho1): There is no significant influence of politics on governance of public university education in the area?

This null hypothesis was designed to investigate four areas: (i) the participants (governing council, vice-chancellor, deans, heads of departments, and faculty members) that participate around establishing budgets and making allocations across departments; (ii) active involvement in governance and decision-making in diverse ways; (iii) the varying ways by which power and influence is exerted; and (iv) the appointment or selection process of the participants. In testing the null hypothesis, χ^2 was used to determine the influence of the four areas (participation, political dimension, dynamics of power, and appointment process) on the six public universities at 0.05 probability level of significant. This is presented in Table 3:

Table 3: Influence of Politics on Governance of Public University Education

Areas	Grouping	UI	UNILAG	OAU	FUTA	EKSU		
OLABISI	Total	χ^2	df	p				
Participation 902 460 1396	Great	176	196	184	117	137	92	
	3.17 10 0.98							
	Low	77	73	94	68	56	92	
	Not at all	7	4	13	4	6	34	
	Total	260	273	291	189	199	184	
Political Dimension 890 482 24 1396	Minimal	155	205	178	141	119	92	
	7.24 10 0.70							
	Substantial	98	64	107	44	77	9	
	Not sure	7	4	6	4	3	0	
	Total	260	273	291	189	199	184	
Dynamics of Power 785 591 20 1396	Formal	126	149	144	84	98	184	
	7.01 10 0.73							
	Informal	134	124	138	97	98	0	
	Not Applicable	0	9	8	3	0		
	Total	260	273	291	189	199	184	
Appointment 70 627 699 1396	Low	14	13	16	24	3	0	
	0.21 10 13.18							
	Average	155	128	159	93	92	0	
	High	91	132	116	72	104	184	
	Total	260	273	291	189	199	184	

Source: Fieldwork (2023)

The summary table for the analysis of Chi-Square (χ^2) at 0.05 significant level (p value) for the six public universities and the four areas of politics and economics of funding is presented in Table 3. The findings produced no evidence of any influences among the six public universities

in terms of each of the four areas of politics on governance of public university education (Participation: $\chi^2 = 3.17$, $df = 10$, $p = 0.98$; Political Dimension: $\chi^2 = 7.24$, $df = 10$, $p = 0.70$; Dynamics of Power: $\chi^2 = 7.01$, $df = 10$, $p = 0.73$; and Appointment Process: $\chi^2 = 13.18$, $df = 10$, $p = 0.21$). Based on these results, it is concluded that ownership of university (Federal or State governments) did not significantly influence the politics on governance of public university education.

Discussion

Research Question One examined governance structures of public universities in Southwestern Nigeria. The findings in Table 1 using highest percentage of the responses indicated that committee system in importance category and in legislative functional level are the governance structures in universities in Southwestern Nigeria. This finding agrees with previous reports of Adelabu and Akinsolu (2009); Adelokun (1988); El Amine (2021); Mortimer and Sathre (2007); and Ogundimu (1980) on shared governance or committee-based system. These scholars noted that the broad context of internal institutional governance and shared governance structure assisted the university to share authority effectively. It refers to situations in which Administrators and Faculty share responsibility in the governance of university or an appearance of democratic governance in a university setting. The committee system is usually a vital means through which an appearance of democratic governance is presented to the entire university community. It also has to do with workplace politics in relation to the activities of University Labour Members. The committee system of governance has to do with the process for distributing authority, power, and influence in academic matters within the university system. The committee system is often referred to as shared governance of a social system of self-government wherein decision-making responsibility is shared among those affected by the decision. The success of such committee system requires commitment, time and focused effort from all participants including governing council members, administrators, professors and other lecturers, staff and students.

The governance structure has to do with the process of managing human and material resources within the university system. The governance system in Sample area has followed the British tradition. The governance structures are: (i) administration is clearly separated though related to management of university; and (ii) the management of university is clearly separated. Also, the governance structures can be divided into two: (i) management concerns strategic goals of university in terms of formulation of general policies, regulations and procedures. It is also in charge of budgeting, disbursement of funds, recruitment of staff, promotion and discipline of staff; and (ii) the administration is involved in governance in the areas of operation, that is, the implementation of the strategic plans of management and tactical enforcement of its policies. Olukoju (2020) noted that university administration comprises two divisions: the external- the Visitor and their representatives on the Governing Council, and the internal- Vice-Chancellor and other Principal Officers and Senate. The external division supervises the internal organs of the university. At the apex of the governance structure is the Visitor, usually President of the Federal Republic of Nigeria or representative. He/ She exercises oversight functions by dispatching Visitation Panels to review the activities of each institution at periodic intervals. University governance according to Olukoju (2020) implies the policy and practice of administration through the interaction of statutory entities. Governing Council exercises supervisory authority by making policies governing the finances, human resources, property and external relations of university. Senate is the supreme authority on academic matters that confers degrees and approves

examination results, among other academic functions. The day-to-day activities of university devolves on the Vice-Chancellor and other principal officers of university, Deans (or Provosts) of Faculty and College, and Heads of Departments. The Registrar is the departmental head of administrative staff on full-time basis. He/ She is responsible to the Vice-Chancellor in the day-to-day administration of the university. He/ She controls the in-flow of information in many bodies such as Senate, Council, Faculty Boards, Convocation and Congregation. Adelokun (1988) noted that the office of the Registrar is the most controversial of the principal offices. The Registrar is the Secretary to the following Committees: Finance and General Purposes Committee; Tenders Board; Selection Board for Vice-Chancellor; Selection Board for Deputy Vice-Chancellor; Selection Board for Principal Officers; Appointments and Promotions Committee; Development Committee; Honorary Degree Committee; Disciplinary and Appeals Committee; Business Committee of Senate; and a host of other Committees. Generally, university system operates on a committee system at the levels of the Department, Faculty, Senate and Council.

The purpose of Research Question Two was to identify the various ways faculty members participate in governance of the university. The findings derived from Table 2 using frequency distribution showed that decision-making processes were characterised by strong leadership at both departmental and faculty levels while the central Council plays paramount role at university level. These findings agree with the study of El Amine (2021). These scholars posit decision-making processes as a political phenomenon concerning the university system. The process of decision making involves interactions among people. The implication is that most academic decisions by a university are political. The university is much more like a political entity in its pluralism and in its recognition of the legitimacy of internal conflict. Members at both departmental and faculty levels have multiple conflicting values and objectives that are determined primarily by their self-interests. Members in various academic departments are knit together by some mutually understood purpose. Such general purpose does not constitute a goal embodying the self-interest. Rather, it avails the chance to sort out the differences among themselves. The differences might exist because members intend for the final decision to favour them or their departments in preference to others when occasion arises to choose. The position of members is determined by personal stake in the results. Generally, Faculty members operate at the tactical level of operation in terms of implementing administrative policies of the university.

The purpose of the Null Hypothesis was to analyse the influence of politics on governance of public university education. The findings as presented in Table 3 showed that politics and economics of funding did not significantly influence the development of public university education in the four areas of participation; political dimension; dynamics of power; and appointment process. This finding agrees with those studies of Gornitzka, Maassen and de Boer (2017); and Simon and Okwo (2014) that university is a political institution. This could not be surprising since political factors such as partisan politics, ethnic/ sectional considerations, religious affiliation, favouritism, the quota system, and catchment area policy are the determinants in appointment process of members of Governing Council, Vice-Chancellor and other principal officers in the Nigerian university system. The assumption that Faculty Members utilise force in acquiring resources appears to be premised on power as a potent means for converting order among members of any collectivity. This suggests that important decisions such as budgetary decision-making process could result into competitions between differentially-powerful organisational members and sub-units. The basic premise is that university leaders estimate financial outputs for appearance related to crisis as well as differentially powerful Faculty

Members. In some situations, managers may be criticised and sometimes opposed by powerful Faculty Members that hold divergent views about what constitutes a proper allocation of resources. This presupposes that most educational decisions are political decisions which are compromises negotiated among competing groups. It has to do with interplay of politics in budgetary allocation to Nigerian universities.

Conclusion

From this study, committee system in importance and functional levels categories are the governance structures in public universities in Southwestern Nigeria. Decision-making processes were characterised by strong leadership at both departmental level and faculty while central council played paramount role at university level. It posits decision-making processes as a political phenomenon where relations among individuals in the university system appear germane. The predominant internal budgetary processes were regular audit and budget practices. The internal budgetary process depicts a social structure, interest-articulation, dynamic process, the budget and budget execution of budget itself.

The test of Null Hypothesis indicated that politics and economics of funding did not significantly influence the development of public university education. This presupposes that most academic decisions are political decisions which are compromises negotiated among competing groups. The governance system of Nigerian universities has moved from choice based on objectivity to subjective reality of political affiliations and traditional allegiance or ethnic/religious considerations. This has ridiculed the quality of governance in the university system and has made it better than no segment of civil service.

Based on the conclusions of the study, the study recommended that university administrators need to find objective criteria on which agreement among contesting participants can be achieved. Also, it is being recommended that university stakeholders (academic administrators, and policy makers) need to be politically savvy in order to survive. Finally, the study recommended that university governance should be devoid towards petty and unacademic practices such as nepotism, dishonesty, intrigues, and other forms of subjectivity.

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