



TECHNOLOGY MEDIATED INSTRUCTIONS AND FUTURE ACADEMIC ACHIEVEMENT OF NCE BUSINESS AND ENTREPRENEURSHIP EDUCATION STUDENTS

Abdulkadir Umar Zango

Department of Business Education
Faculty of Vocational and Technology Education
Sa'adatu Rimi University of Education, Kano State.
+2348029805463
abdulkadir4rl@gmail.com

&

Auwal Said Mahmoud PhD MABEN/0516

Department of Business Education
Faculty of Vocational and Technology Education
Sa'adatu Rimi University of Education, Kano State.
+2348038696108
auwalsaidmahmoud@gmail.com

Abstract

This study investigates the technology mediated instructions and future academic achievement of NCE business and entrepreneurship education students. Three research objectives, research questions and null hypotheses were raised, asked and tested in order to guide the study. The study adopted descriptive survey research design. The population of the study was three hundred and thirty-two (322); male and female offered NCE business and entrepreneurship education students in business education department 2022/2023 academic session and same number serves as the sample size of this study. The instrument used for data collection is the Available, Levels of Utilisation and Significance of Technology Mediated Instructions and Future Academic Achievement of NCE Business and Entrepreneurship Students' Questionnaire which was designed by the researchers. The instrument was run into face and content validity by three experts in the field of business education. The reliability of the instrument was established using pilot-test and calculation of data using Cronbach method yielded correlation coefficient of 0.937. Regression analysis was used to analyse the data at 0.05 level of significance. It was conclude that technology mediated instructions impacted on the future academic achievement of NCE business and entrepreneurship education students in Sa'adatu Rimi University of Education, Kano State. The findings of this study revealed that this implies that availability of technology tools had significant impact on the future academic achievement of business and entrepreneurship education students in Sa'adatu Rimi University of Education, Kano State. This implies that lecturers' utilization of technology tools had significant influence on the future academic achievement of business and entrepreneurship education students in Sa'adatu Rimi University of Education, Kano State. Based on the findings, the study was recommended among others that the Kano State government should ensure that adequate funds are budgeted for the provision of technology tools to improve the business and entrepreneurship students' academic achievement in Sa'adatu Rimi University of Education Kumbotso Kano State.

Keywords: *Academic Achievement, Business Education, Entrepreneurship Education, and Technology.*

Introduction

Technology-based educational interventions might play a crucial role in achieving the goals of education, since they encompass the design, development, and implementation of products, services, and processes through the application of scientific knowledge to meet a need, provide new solutions, or add value. They provide students with access to cutting-edge technologies and digital tools, which can be used to enhance the learning experience, promote collaboration and creativity, and improve student outcomes (Zhou et al., 2020). Properly, technology-based intervention strategies are integrated into the educational field, such as those conducted by Reyneke *et al.* (2018) who implemented the interactive online homework system and the flipped classroom, which positively affected the success rates of statistics students in college. Sandwich-model technology-based intervention strategy was conducted by Katsioudi and Kostareli



(2021) who combined with personal response systems on students' learning, engagement, and satisfaction through a randomized trial in a large biomedical/medical sciences undergraduate class.

A technology-based model contemplates the design, development, and production of products, services, Davies *et al* (2008), sees technology in business education as the effective implementation of educational technology to accomplish intended learning outcomes. We consider educational technology to be any tool, piece of equipment, or device electronic or mechanical that can be used to help students accomplish specified learning goals. Educational technology includes both instructional technologies, which focus on technologies teachers employ to provide instruction, and learning technologies, which focus on technologies learners use to accomplish specific learning objectives. Technology in education has made educational material accessible to anyone around the world. Broadband internet technology has facilitated the growth of online education, which has helped students from developing countries get a chance to access valuable educational material.

Also, busy people who would like to upgrade on their academic level, have found online education very flexible, because they can attend lessons during their free time after work. Integrating technology into classroom instruction means more than teaching basic computer skills and software programmes in a separate computer class. Effective technology integration must happen across the curriculum in ways that deepen and enhance the learning process. In particular, it must support four key components of learning: active engagement, participation in groups, frequent interaction and feedback, and connection to real-world experts. Effective technology integration is achieved when the use of technology is routine and transparent and when technology supports curricula goals. Technology also changes the way teachers teach, offering educators' effective ways to reach different types of learners and assess students' understanding through multiple means. It also enhances the relationship between teachers and students. When technology is effectively integrated into subject areas, teachers become advisers, content experts, and coaches. Technology helps to make teaching and learning more meaningful and fun.

Chuchan (2019) opined computer education as a part of school and college curricula. Considering the wide range of applications of computer technology, it is necessary for each one of us to computer-friendly. Considering the advantages of Internet technology, it is important for each of us to gain basic knowledge of Internet access and web research. We live in a technology-age and hence, it is important for us to be abreast with the latest inventions in the field. With education, we acquire knowledge of the functioning and use of different pieces of technology. And with the application of technology, we can educate ourselves better. This is the influence technology and education have on each other. Education boosts use of technology and technology aids education.

Zango (2020) defines business education as a programme of instruction which consists of two parts (1) Office education, a vocational programme of office careers through initial, refresher and upgrading education and (2) General business education a programme to provide students with information and competences which are needed by all in managing personal business affairs and in using the services of the business. Adeshina (2017) sees business education as a training system that encourage the beneficiary to acquire skills into the world of work. He further goes ahead that business education encompasses with attitude, knowledge and skills needed by all citizens in order to function effectively in managing their personal business and economic system. Bupo (2019) viewed that business education is a programme of study geared towards the acquisition of knowledge and skills needed in the world of work and in the educational spectrum. Furthermore, Ohada and Onuoha (2017) added that being a core aspect of general education, Business Education is that type of education that is predicated on equipping its target audience with distinctive skills, knowledge, aptitude and attitudes requisite for occupational competence in the areas of education and business.

Technology for business education is promoting individual learning and mobile learning, both teachers and students are benefiting from this new technology for education. Some of the barriers in education have been broken down by this new technology for education; students can learn from anywhere, teachers can easily reach their students from anywhere. Technology is helping to change education in a positive way; it is part of the modern world. New technology for business education is improving grades for students and it prepares them for the future. The integration of computers and communications offers unprecedented opportunities to the education systems with its capacity to integrate, enhance and interact with each other over a wide geographic distance in a meaningful way to achieve the learning objectives. It has the potential to transform the nature and process of the learning environment and envision a new learning culture. Interactivity, flexibility and convenience have become the order of the day in the Information and Communication Technology (ICT) supported environment. ICT opens up opportunities for learning because it enables learners to access, extend, transform and share ideas and information in multi-



modal communication styles and format. It helps the learner to share learning resources and spaces, promote learner centred and collaborative learning principles and enhance critical thinking, creative thinking and problem-solving skills for solving Business education problems. For business education to be relevant in this technology age, teaching and learning of the programme must embrace the current trend by the use of technology. Business education is an educational programme that equips an individual with functional and suitable skills, knowledge, attitude and value that would enable him/her operate in the environment he/she finds himself/herself. This means that business education is not static. Therefore, any worthwhile programme has to move with time.

Rudhumbu *et al.*, (2016) viewed entrepreneurship education as it encompasses those aspects that focus on values, beliefs and attitudes as these play a critical role in shaping one's attitude towards entrepreneurship, entrepreneurship intentions or inclination. As a matter of behaviour entrepreneurship education relates to specific skills such as identifying and seizing opportunities, making informed decisions and developing social skills to be able to communicate well with stakeholders. As a matter of creating specific situations, it also relates to influence of entrepreneurship in the creation of new ideas, new firms and enterprises. If people are to be interested in entrepreneurship and entrepreneurship education, the main focus of entrepreneurship education should therefore be the development of skills of how to start and run a business not knowledge how to plan for it. Entrepreneurship education should be a form of empowerment that not only to develop but also support entrepreneurial activities, behaviours and mind-sets. Primarily the establishment of different programmes on entrepreneurship education aims at producing graduates who were able not only to identify opportunities but to turn those opportunities into businesses and entrepreneurship education programme had given them enough knowledge and skills to successfully start their own businesses.

Academic achievement of college students is an important factor affecting the achievement of higher education goals (Zhu, 2016). Academic achievement is a direct manifestation of learning effectiveness and a valid indicator to evaluate the effectiveness of teaching and education in higher education as well as the overall development of students. Academic achievement is used as an outcome variable to investigate how to motivate higher vocational college students to learn while promoting academic achievement. Li and Chai (2018) all define academic achievement as a definition of a learner's the performance of teaching and learning assessments, such as final examination results, achieved by the person in school.

Statement of the Problem

Academic achievement of students in Nigerian institutions has been of much concern to all and sundry. Over the years, some educators have argued that entry standards are the most important determinants of success in higher institutions; others maintain that non-academic factors must also be considered. This implies that there is considerable evidence that the views and expectations about success held by students are not always consistent. Nigerian school curriculum was geared towards 3R's (Reading, Writing and Arithmetic) which were deficient in vocational skill acquisition for self-reliance among graduates in Nigeria (Ibibo & Abdulrahman 2017). This study indicated that the introduction of alternative to practical and students' over dependent on commissioning out practical works for experts at the expense of their personal engagement in the production process hampered their skill acquisition in their various fields of learning for business and entrepreneurship education development. In this modern word, technology also plays a vital towards the academic achievement of the students.

In view of the above that this research investigated the technology and future academic achievement of NCE II business and entrepreneurship education students in Sa'adatu Rimi University of Education, Kano State.

Research Questions

The following questions were asked to guide the study:

1. To what extent the availability of technology mediated instructions and future academic achievement of NCE business and entrepreneurship education students?
2. To what extent the level of utilisation of technology mediated instructions and future academic achievement of NCE business and entrepreneurship students?
3. What is significance of technology mediated instructions and future academic achievement of NCE business and entrepreneurship students?



Research Hypotheses

The following null hypotheses were tested in the study at 0.05 level of significance:

1. There is no significant influence between availability of technology mediated instructions and future academic achievement of NCE business and entrepreneurship education students.
2. There is no significant influence between the levels of utilisation of technology mediated instructions and future academic achievement of NCE business and entrepreneurship students.
3. There is no significant impact between technologies mediated instructions and future academic achievement of NCE business and entrepreneurship students.

Methodology

The study was a descriptive survey design. This design was suitable for this study because it allows extensive gathering of information, it is convenient and flexible. It also enables the researchers to reach out the entire population of the study. The population for the study is three hundred and twenty-two (322) NCE business education students 2021/2022 academic session offered BED 227 and since the population is less than thousand the entire population was used as sample for the study. A structured questionnaire was designed by the researchers as the instrument used for data collection. The questionnaire was divided into sections according to the three specific purposes and research questions. Responses to items in the questionnaire were based on a four-point Likert-type rating scale, ranging from strongly agree (SA) (4 points), to agree (A) (3points), Disagree (D) (2 points), and strongly disagree (SD) (1 point).

The questionnaire was administered by the researchers to the NCE business and entrepreneurship education students. The mean and standard deviation were used to answer the research questions while regression analysis was used to test the hypotheses at 0.05 level of significance. A mean of 2.50 was used as the benchmark for decision making for each item. Thus, any item with a 2.50 and above was considered as accepted by the respondents, while any item with a mean below 2.50 was considered as unaccepted by the respondents.

Results

Research Question 1

To what extent the availability of technology mediated instructions and future academic achievement of NCE business and entrepreneurship education students?

Table 1: Mean Score of Respondents on Availability of Technology mediated instructions and Future academic achievement of NCE business and entrepreneurship students.

S/N	Items	Mean	Standard	Decision
1	Computers are available for business and entrepreneurship students	2.86	0.53	Agree
2	Data Projectors are available in the department	2.88	0.55	Agree
3.	Internet is available for business and entrepreneurship students	2.94	0.61	Agree
4	Business and entrepreneurship student have smartphone	2.93	0.61	Agree
	Cumulative mean	2.90	0.58	Agree

Source: Field Study, 2023.

Table 1 shows that mean responses from the students on item 1 to 4 were found to be greater than the index 2.50 for agree, this can also be seen in the cumulative mean value found to be greater than the index score for agree (2.90>2.50) with the standard deviation of 0.58. The analysis therefore indicated that technology tools are available on the future academic achievement of NCE business and entrepreneurship students, Sa'adatu Rimi University of education, Kano State.

Research Question 2

To what extent the level of utilisation of technology mediated instructions and future academic achievement of NCE business and entrepreneurship students?



Table 2: Mean Score of Respondents on Utilization Technology mediated instructions and Future Academic Achievement of NCE business and entrepreneurship students.

S/H	Items	Mean	Standard Deviation	Decision
5	Students are always allowed to operate the Computers by themselves	2.89	0.59	Agree
6	Lectures used data projector while teaching the students.	2.90	0.64	Agree
	Internet is accessible to Business and entrepreneurship students	2.80	0.58	Agree
7	Smartphones are used to do Business and entrepreneurship assignment	2.92	0.47	Agree
Cumulative mean		2.88	0.57	Agree

Source: Field Study, 2023.

Table 2 shows that mean responses from the students on item 5 to 8 were found to be greater than the index 2.50 for agree, this can also be seen in the cumulative mean value found to be greater than the index score for agree (2.88>2.50) with the standard deviation of 0.57. The analysis therefore indicated that lectures utilized technology tools on the future academic achievement of NCE business and entrepreneurship students, Sa'adatu Rimi University of education, Kano State.

Research Question 3

What is significance of technology mediated instructions and future academic achievement of NCE business and entrepreneurship students?

Table 3: Mean Score of Respondents on the Significance of Technology mediated instructions and Future Academic Achievement.

S/H	Items	Mean	Standard Deviation	Decision
9	My skills improve because of the constant practice with computer	2.92	0.46	Agree
10	The students can understand the lesson very well if images are displayed using data projector	2.80	0.60	Agree
11	Students can access the updated and latest information	2.83	0.53	Agree
12	Smartphone can accelerate my learning capabilities	2.80	0.62	Agree
Cumulative mean		2.84	0.55	Agree

Source: Field Study, 2023

Table 3 shows that mean responses from the students on item 9 to 12 were found to be greater than the index 2.50 for agree, this can also be seen in the cumulative mean value found to be greater than the index score for agree (2.84>2.50) with the standard deviation of 0.55. The analysis therefore indicated that technology tools are significant on the future academic achievement of NCE business and entrepreneurship students, Sa'adatu Rimi University of education, Kano State.

Hypotheses

The null hypotheses were tested as follows:

Null Hypothesis One: There is no significance influence between the availability of technology mediated and the future academic achievement of NCE business and entrepreneurship education students,

Table 4: Regression Analysis on significant influence between the availability of technology mediated instructions and the future academic achievement of NCE business and entrepreneurship education students,

Summary Model	B	Standard Error	T	Rical	R ²	Adjusted R	Sign
Availability of technology tools							
(Constant)	2.206	0.158	13.965	0.208	0.430	0.400	0.000
Academic achievement	0.206	0.053					
P<.05							



The result from the Regression Analysis presented in table 4 revealed a constant Beta value (availability of technology tools) 2.206 with t-value of 13.965 against the coefficient value of 0.206 (future academic achievement). The r^2 value was 0.430 and adjusted r - of 0.400 with p-value of 0.000. The result indicated that, availability of technology tools had a variance of 43% (r^2 0.430 x 100). This means that for any increase in availability of technology tools, there was an increase in the level of academic achievement of students by 43% significant impact. This implies that availability of technology tools had significant impact on the future academic achievement of business and entrepreneurship education students in Sa'adatu Rimi University of Education, Kano State. Hence, the null hypothesis was rejected.

Null Hypothesis Two: There is no significant influence between the level of utilization of technology mediated instructions and the future academic achievement of NCE business and entrepreneurship education students.

Table 4: Regression Analysis on influence between the levels of utilization of technology mediated instructions and the future academic achievement of NC business and entrepreneurship education students,

Summary Model	B	Standard Error	T	Rical	R ²	Adjusted R	Sign
Utilisation of technology tools	2.496	0.085	29.452	0.210	0.440	0.410	0.000
(Constant)							
Academic achievement	0.103	0.027					

P<.05

The result from the Regression Analysis presented in table 5 revealed a constant Beta value (lecturers' utilization of technology tools) 2.496 with t-value of 29.452 against the coefficient value of 0.103 (future academic achievement). The r^2 value was 0.430 and adjusted r - of 0.400 with p-value of 0.000. The result indicated that, availability of technology tools had a variance of 44% (r^2 0.440 x 100). This means that for any increase in availability of technology tools, there was an increase in the level of future academic achievement of students by 44% significant impact. This implies that lecturer's utilization of technology tools had significant influence on the future academic achievement of business and entrepreneurship education students in Sa'adatu Rimi University of Education, Kano State. Hence, the null hypothesis was rejected.

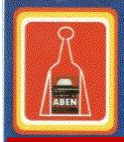
Null Hypothesis Three: There is no significant impact between technologies mediated instructions and future academic achievement of NCE business and entrepreneurship education students.

Table 6: Regression Analysis on significant impact between technologies mediated instructions and future academic achievement of NCE business and entrepreneurship education students.

Summary Model	B	Standard Error	T	Rical	R ²	Adjusted R	Sign
Significance	1.692	0.145	4.778	0.632	0.399	0.397	0.000
(Constant)							
Academic achievement	0.744	0.060					

P<.05

The Regression Analysis presented in table 6 to determine the significant impact of technology tools on future academic achievement of business and entrepreneurship education students in Sa'adatu Rimi University of Education, Kano State. The result revealed a constant Beta value (significant impact of technology tools) 1.692 with t-value of 4.778 against the coefficient value of 0.744 (future academic achievement). The r^2 value was 0.399 and adjusted r - of 0.397 with p-value of 0.000. The result indicated that, technology tools had a variance of 39% (r^2 0.399 x 100). This implies that technology tools had significant impact on the future academic achievement of business and entrepreneurship education students in Sa'adatu Rimi University of Education, Kano State. Hence, the null hypothesis was rejected.



Discussion of Findings

The findings of the study in research question 1 revealed that four items with mean scores ranging from 2.86 to 2.94 were rated as agreed. This implies that there are available technology tools impacted on the future academic achievement of NCE II business and entrepreneurship education students in Sa'adatu Rimi University of Education, Kano State. This is in line with the findings of Higgins et al (2019) and Saal et al (2021), found that the availability of computers at school and using computers in the classroom positively impacted to the achievement of students.

The findings of the study on research question 2 revealed that all the respondents rated all the items as agreed on the utilization of technology tools with the mean scores ranging from 2.8 to 2.92. This implies that students agreed that lecturers are utilizing technology tools and technology have impact on the future academic achievement of NCE II business and entrepreneurship education students of Sa'adatu Rimi University of Education, Kano State. This study is in line with the studies of Jennifer et al (2016), Murillo-Zamorano et al., (2019), Xiao et al (2021) and Carstens et al (2021) who found that integration of computers in the classroom positively influences the interaction between students and increases learning and teaching.

Result in table 3 ranging from 2.80 to 2.92 revealed that technology tools are significant to the future academic achievement of NCE II business and entrepreneurship students, Sa'adatu Rimi University of education, Kano State. The result agrees with the studies of Dr. CHuchan et al (2018) and Wilder et al (2016) who found that technology has significant impact on future academic achievement of students.

Conclusion

Based on the findings of the research work, the following conclusions were drawn:

Technology mediated instructions impacted on the future academic achievement of NCE business and entrepreneurship education students in Sa'adatu Rimi University of Education, Kano State. This implies any additional increase of technology tools, there was an increase in the future academic achievement of NCE business and entrepreneurship education students in Sa'adatu Rimi University of Education, Kano State.

Lecturers are utilizing technology mediated instructions impacted on the future academic achievement of NCE business and entrepreneurship education students of Sa'adatu Rimi University of Education, Kano State. This indicated that any increase in the lecturer's utilization of technology tools, there was an increase of future academic achievement of business and entrepreneurship education students.

The result was also concluded that technology tools are significant to the future academic achievement of NCE business and entrepreneurship students, Sa'adatu Rimi University of education, Kano State.

Recommendations

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

1. The Kano State government should ensure that adequate funds are budgeted for the provision of technology tools to improve the business and entrepreneurship students' academic achievement in Sa'adatu Rimi University of Education Kumbotso Kano State.
2. Lecturers should have utilised technology mediated instructions adequately do to improve the future academic achievement of NCE business and entrepreneurship students at the Sa'adatu Rimi University of Education Kumbotso Kano State.
3. Lecturers of business and entrepreneurship education should use Technology mediated instructions properly due to improve the academic achievement business and entrepreneurship students in Sa'adatu Rimi University of Education Kumbotso Kano State.

References

- Adeshina, T. J. (2017). *Understanding Business Education*. Esonaj Publishers Sabon Gari Zaria.
- Bupo, G. O. & Ohada, N. C. (2019). Students' perception of business studies trainee-teachers and classroom conduct in Port Harcourt secondary schools. *International Journal of Innovative Education Research*, 7(1), 73-82.
- Cao, Y., Gao, J., Lian, D., Rong, Z., Shi, J., Wang, Q. & Zhou, T. (2018). Orderliness predicts academic performance: behavioural analysis on campus lifestyle. *Journal of the Royal Society Interface*, 15(146), 20180210.



- Carstens, K. J., Mallon, J. M., Bataineh, M., & Al-Bataineh, A. (2021). Effects of technology on student learning. *TOJET: The Turkish Online Journal of Educational Technology*, 20(1), 105-113.
- Dr. CHuchan A. Monserate (2018). Impact of Technology on the Academic Performance of Students and Teaching Effectiveness. *International Journal of Interdisciplinary Research and Innovations*: 6(1), 47-87.
- Ekpoh, U.I. & Edet, A.O. (2011). Entrepreneurship Education and Career Intentions of Tertiary Education Students in Akwalbom and Cross River States, Nigeria. *International Education Studies*, 4(16), 127-139.
- Higgins, K., Huscroft-D'Angelo, J., & Crawford, L. (2019). Effects of technology in mathematics on achievement, motivation, and attitude: A meta-analysis. *Journal of Educational Computing Research*, 57(2), 283-319.
- Ibibo, E. O., and Abdulrahman, Y. M. (2017). Entrepreneurship Education Practice in the North Central Nigeria: A panacea for the Problem of Youth Restiveness and Unemployment. *Journal of Education in Developing Areas* 25(3), 618-622.
- Iqbal, A., Melhem, Y. & Kokash, H. (2012). Readiness of the university students towards entrepreneurship in Saudi private university: An exploratory study. *European Scientific Journal*, 8(15), 109-131.
- Katsioudi, G., & Kostareli, E. (2021). A sandwich-model experiment with personal response systems on epigenetics: Insights into learning gain, student engagement and satisfaction. *FEBS Open Bio*, 11(5), 1282-1298.
- Liu, X., Gao, X., & Ping, S. (2019). Post-1990s college student's academic sustainability: the role of negative emotions, achievement goals, and self-efficacy on academic performance. *Sustainability*, 11(3), 775-782.
- Manzano-Sanchez, H., Outley, C., Gonzalez, J. E., & Matarrita-Cascante, D. (2018). The influence of self-efficacy beliefs in the academic performance of Latina/o students in the United States: A systematic literature review. *Hispanic Journal of Behavioral Sciences*, 40(2), 176-209.
- Murillo-Zamorano, L. R., Lopez Sanchez J. A. & Godoy A. L. (2019). How the flipped classroom affects knowledge, skills and engagement in higher education: effect on students' satisfaction. *Computer and Education* 141.
- Ohaka, N. C. & Onuoha, D. N. (2017). Students' perception of business studies trainee-teachers and classroom conduct in Port Harcourt secondary schools. (Unpublished B. Sc Project) department of Business Education, Faculty of Education, Rivers State University Port Harcourt.
- Reyneke, F., Fletcher, L., & Harding, A. (2018). The effect of technology-based interventions on the performance of first-year university statistics students. *African Journal of Research in Mathematics, Science and Technology Education*, 22(2), 231-242.
- Rudhumbu, N., Sivotwa, D., Munyanyiwa, D. & Mutsau, M. (2016). Attitudes of Students towards Entrepreneurship Education at Two Selected Higher Education Institutions in Botswana. *Academic Journal of Interdisciplinary Studies*.
- Saal, P. E., Ryneveld, L. V., & Graham, M. A. (2021). Comparing the relationship between using educational technology in mathematics and student achievement in South Africa and Germany. *Journal of Research on Technology in Education*.4 (2) 213-224
- Wilder, S., & Berry, L. (2016). Emporium Model: The Key to Content Retention in Secondary Math Courses. *The Journal of Educators Online*, 13(2). doi:10.9743/jeo.2016.2.5
- Xiao, F., & Sun L. (2021). Profiles of student's ICT use and their relations to background, motivational factors, and academic achievement. *Journal of Research on Technology in Education*. 54(3), 456-472.
- Zango, U. A. (2020). New technology in business education in Nigeria: issues and trends. *Nigerian Journal of Business Education*, 7(1):134-142.
- Zhou, L., Rudhumbu, N., Shumba, J., & Olumide, A. (2020). Role of higher education institutions in the implementation of sustainable development goals. In G. Nhamo, & V. Mjimba (Eds.), *Sustainable development goals and institutions of higher education*. 87-96.
- Zhu Shengying. (2016). A review of college students' academic achievement research. *Teaching and education (Higher Education Forum)* (27), 36-38.