

# Entrepreneurship Education Technology-Mediated Learning Approach and Pedagogy for Preparing Wealth Creation of 21<sup>st</sup> Century Graduates in Universities

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## ABSTRACT

This study examined the how entrepreneurship century technology-mediated learning and effective entrepreneurship education for wealth creation in Universities in Imo State Nigeria. Two research questions and one hypothesis guided the study. Correlation research design was used. The population was 315 Academic Staff (208) and non-Academic Staff (107) who are directly involved in entrepreneurship education in the Federal University of Technology Owerri and Imo State University. Taro Yamane's formula was used to determine the sample size of 177 Staff (Academic Staff and non-Academic) who constituted 56% of the total population. The sample was made up of 117 Academic Staff and 60 non-Academic Staff selected through stratified random sampling technique. Data were collected with "Technology-Mediated Learning Questionnaire and Effective Entrepreneurship Education Questionnaire, with ten (10) items each. The instruments were validated by three experts. The coefficient values of 0.86 and 0.90 were obtained using Pearson Product Moment Correlation Coefficient ( $r$ ). The researchers were assisted by three (3) research assistants to administer 177 copies of the instrument to the respondents. Only 174 copies were gathered for data analysis. Pearson's Product Moment Correlation (PPMC) was used to find the coefficient  $r$ , in order to answer the research question and in the testing of hypothesis, the special  $z$ -test statistical tool was used to determine the significant difference of the variables at 0.05 alpha level. The findings revealed a positive significant relationship between technology-mediated learning and entrepreneurship education for wealth creation. The researchers concluded that technology enhances and encourages learning, making it more interesting to the learners in universities in Imo State. It was suggested that adequate technology should be provided for the teaching and learning of entrepreneurship education in order for the recipients to be able to create wealth.

**Keywords:** 21<sup>st</sup> Century, Technology-Mediated Learning, Entrepreneurship Education, Wealth Creation, Universities, Imo State

## INTRODUCTION

Teaching for effective learning constitutes a very important aspect of university operations. Teaching in this present age cannot be effectively carried out with full mobilization of the emerging technologies in education. For Nigerian universities to meet the demand of this 21<sup>st</sup> century, it is envisaged that they possess and make use of adequate technologies in the areas of teaching and learning. For Ilogu (2013), the 21<sup>st</sup> century is an age in which the internet, computers, television, digital cameras, spread sheets, etc. are used to support man's thinking, work and interaction in organizations, such as higher educational organizations. Wylie (2015) noted that the presence of mobile gadgets such as Netbooks, iPads, cell phones, iPods, e-readers and even PDAs that are increasingly becoming the tools of choice for today's educators.

Ekeh and Agbakwuru (2013) included audio-visual such as radio, television, cameras, fax scanning and printing machines, photocopiers and microphones as components of 21<sup>st</sup> century technologies in education. Alice (2008) added stressed computing devices such as the cellular phones, handheld gaming devices, PDAs, and laptops they take everywhere, plus the computers, TVs, and game consoles. Thus, Kpolovie and Akpelu (2017) posited that the use of educational software is a product of technology intended to alleviate the pressure and difficulties encountered in using the conventional face-to-face teaching approach that previously impeded the growth of education system in Nigeria. Ilogu (2013) argued that these technological products has can support the creation, storage, manipulation and communication of information, which use is very critical in universities and 21<sup>st</sup> century schools.

Technologies in education have changed the paradigm of the teacher-student interactional patterns in education. With this in mind, Black and Watties-Daniels (2006) pointed out that students expect to use and learn from cutting edge technology during their academic careers, utilising technology, from specified software programmes to the use of the Internet as a research medium, to enhance their learning. Kpolovie and Akpelu (2017) pointed out that technology-mediated learning encompasses the wide variety of uses of information and communication technologies (ICTs) in teaching and learning, such as electronic tools like overhead projectors, televisions and tape recorders, web-based dynamic, practical and systems, multimedia application, games based learning. Alice (2008) posited that technology-mediated learning takes interdisciplinary, integrated, project-based curriculum, utilising certain survival skills and many countries today's students are referred to as digital natives, and today's educators as digital immigrants; teachers and administrators are working with students whose entire lives have been immersed in the 21<sup>st</sup> century media culture.

Kpolovie and Akpelu (2017) posited that technology-mediated learning is a term that involves the application of Information and Communication Technology (ICT) in teaching and learning as well as the use of electronic tools, software and hardware components in the delivery of learning in a form that explain, clarify, elaborate, analyse and simplify learners' content and products in a manner that facilitates teaching and learning. For Shield (2016), technology-mediated learning incorporates different approaches to using computers in learning and teaching; such approaches include: computer-aided/assisted learning, computer-mediated communication, generic computer-based production and presentation tools and computer-supported research tools. Diener (2012) argued that the increased reliance on simulation classrooms has proven successful in learning skills with regard to the ability of technology-driven robotic devices to form and cultivate caring behaviors, or sufficiently develop interactive communication. Ramm, Thomson and Jackson (2015) included other benefits as the social learning experience, development of teaching skills, self-awareness and the opportunity to communicate both good and bad news. Furthermore, Conneely, Lawlor and Tangney (2011) pointed out that technology-mediated learning is a new model of classroom practice and a paradigm shift in teaching and learning is required to allow creativity, peer-learning, thematic learning, problem solving. Kpolovie and Akpelu (2017) cautioned that learning in the university must be technologically mediated with the most suitable educational software if any university is to successfully play the leading role expected of it in the ever-changing world of globalization, internationalization, and digitalization, by adapting its curriculum delivery to suit this information-driven age.

Wealth is seen as an important concept in the wellbeing of the members of the global society and as such, special attention has to be paid to it. For Brewer (2015) and Makulila (2012), wealth is physical, subject to the laws of nature, and rises or falls depending on how it is arranged in space and time. Fionne (2015) and Ruby (2003) similarly explained that wealth is a collection of things that are limited in supply, with transferable value and usefulness in satisfying human desires, which involves one getting money and assets to work for oneself based on one's investment goals as well as the timeframe of such goals. However, DiMenco (2013) argued that wealth creation was not the most likely objective for which most business owners probably started their enterprise but such was commenced out of a heartfelt belief that they could

provide a better product or service. Sanders (2012) and Oparah (2016) asserted that wealth creation is needed for lifting the standard of our living. Jensen (2001) explained that institutions of education etc. malignantly skew the distribution of income to the advantage of the propertied classes and to the extreme disadvantage of the working class and that institutional reform should be designed to eradicate the poverty of the working class. Lala (2006), Makulila (2012) and Brewer (2015) had the view that the strength of every economy is found basically in the growth potential of running businesses within the economy when the assets multiply and there is creation of sustainable wealth from within the assets/possessions in all the sectors of life. Thus, investment is directly linked with wealth towards the production of capital, which is needed to contribute to the growth of wealth in the society. Initiating income generation scheme can serve as a guide to low income entrepreneurs in the conversion of wealth for consumption to wealth for investment, and therefore the increase of wealth and the reduction of poverty.

Nigerian Educational Research and Development Council (NERDC) (2011) and Ukegbu et al (2012) perceived that wealth creation is the situation in which an unemployed person depends on his or her skills and abilities to manipulate available material resources to generate more wealth for him or herself. This means that wealth creation thrives with business ventures which unemployed persons can engage in by utilising their skills and abilities to manipulate his/her available material resources to create more wealth. NERDC further pointed out that some wealth creation projects include: carpentry, bricklaying, tailoring, baking, fashion-designing, hair-dressing, laundry services, shoe-repairing, shoemaking, poultry and livestock rearing, trading, basket-making, barbing, catering, creative art such as painting and sculpting, mechanic, vulcanizing and many others. Ukegbu et al further identified further dimensions of self-reliance projects capable of yielding wealth, such as: farming, trading, artwork, fashion designers, crafts and arts, small scale industries, services (like transport services, laundry services, vigilante group, legal services, medical services, counseling services and media/press services. Ikegbusi and Modebelu (2016) pointed out that improvement in job knowledge and skills performance result from training and development, major needs include increased productivity, morale and personal needs, all of which can be impacted by the university. For university graduates to effectively attain wealth creation there is the need for entrepreneurship education. Entrepreneurship is seen as a practical activity that converts a person's innate ideas, information or invention or a combination of these, into products and services that meet the consumer's demand.

However, universities remain a very important aspect of every nation's educational system in the attainment of useful skills that enable members of the society to create wealth and contribute to the well-being of the entire society. This accounts for the huge resources (human, financial and material) which the government commits to university education. However, the level of investment in universities for the education of citizens appears not to yield the expected level of result as many people who graduate from the university, do not possess the ability to create wealth. Universities in Imo State of Nigeria seem to have failed to fully utilise technology in the teaching and learning of entrepreneurship education for creation of wealth. Thus, one cannot precisely say the extent to which technology-mediated learning contributes entrepreneurship education resources contributes wealth creation in the universities. The researcher suspects that this situation is likely to be connected to the extent of the use of technology in the teaching and learning of entrepreneurship education. In view of the foregoing, this question becomes pertinent: What is the extent of the significant relationship between technology-mediated learning and effective entrepreneurship education for wealth creation in universities in Imo state Nigeria? The problem of this study is therefore whether technology-mediated learning contributes to effective entrepreneurship education for wealth creation in universities in Imo State, Nigeria.

**Purpose of the study:** This study is intended to investigate technology-mediated learning and effective entrepreneurship education for wealth creation in universities in Imo State. More specifically, it sought to find out the relationship between technology-mediated learning and effective entrepreneurship education for

wealth creation in federal and state universities in Imo State.

**Research Question:** What is the extent of the significant relationship between technology-mediated learning and effective entrepreneurship education for wealth creation in universities in Imo State?

**Hypothesis:** There is no significant relationship between technology-mediated learning and effective entrepreneurship education for wealth creation in federal and state universities in Imo State.

## METHODOLOGY

Correlation research design was used in the study. The area of study was Imo State. The population was 315 Academic Staff (208) and non-Academic Staff (107) who are directly involved in entrepreneurship education in the Federal University of Technology Owerri and Imo State University. Taro Yamane’s formula was used to determine the sample size of 177 Staff (Academic Staff and non-Academic) who constituted 56% of the total population. The sample was made up of 117 Academic Staff and 60 non-Academic Staff selected through stratified random sampling technique. The instruments for data collection were “Questionnaire on Entrepreneurship Education Resources Management” (QEERM), with contain ten (10) items and ‘Technology-Mediated Learning Questionnaire’ (TMLQ) with ten items as well. The instruments were validated by three experts in Educational Administration and Planning, Measurement and Evaluation from Michael Okpara University of Agriculture, Umudike. The reliability coefficients of the instruments were 0.86 and 0.90, respectively obtained through Pearson Product Moment Correlation coefficient (r), which were high enough, showing that the instruments were reliable, guaranteeing the use of instrument for the study. The researchers were assisted by four research assistants to visit the Universities selected for the study to administer the instrument to the respondents. 177 copies of QEERM were administered but only 174 were returned for data analysis. Pearson’s Product Moment Correlation (PPMC) was used to find the coefficient r, in order to answer the research question and in the testing of hypotheses, the special z-test statistical tool was used to determine the significant difference of the variables at 0.05 alpha level.

## FINDINGS

**Research Question:** What is the extent of the significant relationship between technology-mediated learning and effective entrepreneurship education for wealth creation in federal and state universities in Imo State?

Table 1: The extent of the significant relationship between technology-mediated learning and effective entrepreneurship education for wealth creation in federal and state universities in Imo State

Staff	N	$\sum x \sum y$	$\sum x^2 \sum y^2$	$\sum xy$	R
TML (x)	174	150	613	665	1.168
EFE (y)		146	563		

Key: TML = Technology-mediated Learning; EFE = Effective Entrepreneurship Education

Table 1 shows a correlation coefficient (r) of 0.734. This reveals that extent of the relationship between technology-mediated learning and effective entrepreneurship education for wealth creation is positively high, meaning that as technology-mediated learning in federal universities increases, so does effective entrepreneurship education for wealth creation increase. The analysis also reveals the strength of linear

association between technology-mediated learning in federal universities and technology-mediated learning in state universities as  $r^2 = .33$ . This implies that a reasonable proportion of technology-mediated learning in state universities is associated with technology-mediated learning in federal universities.

**Hypothesis:** There is no significant relationship between technology-mediated learning and effective entrepreneurship education for wealth creation in federal and state universities in Imo State.

Table 2 Significant relationship between technology-mediated learning and effective entrepreneurship education for wealth creation in federal and state universities in Imo State

University	N	$\sum x \sum y$	$\sum x^2 \sum y^2$	$\sum xy$	r-cal	r-crit	Df	Result
Federal	174	218	636	771	0.865	.195	172	Significant
State		183	538					

Table 2 shows that the calculated r-value of 0.865 is greater than the critical r-value of .195 at 172 degrees of freedom and 0.05 alpha level of significance. Hence, the null hypothesis is rejected. There is therefore a positive significant relationship between technology-mediated learning and effective entrepreneurship education for wealth creation in federal and state universities in Imo State. This implies that even though there is a relationship between technology-mediated learning and effective entrepreneurship education for wealth creation, such relationship is not significant.

## DISCUSSION OF FINDINGS

In Table 1, there is the indication that the extent of the relationship between technology-mediated learning and effective entrepreneurship education for wealth creation is positively high in federal and state universities in Imo State. This means that as technology-mediated learning in the universities increases, so does effective entrepreneurship education for wealth creation increase. This finding collaborates that of Black and Watties-Daniels (2006) that pointed out that students expect to use and learn from cutting edge technology during their academic careers to enhance their learning. Gibbs (2015) noted that simulators provide learning opportunities in an unpressurised environment, which reduces stress for the student and potential harm to patients. Alice (2008) posited that technology-mediated learning enables teachers and administrators to work with students who immerse entire lives in the 21<sup>st</sup> century media culture. Furthermore, Kpolovie and Akpelu (2017) posited that technology-mediated learning is instrumental in explaining, clarifying, elaborating, analysing and simplifying learners' content and products to facilitate teaching and learning.

Table 2 shows that there is therefore a positive significant relationship between technology-mediated learning and effective entrepreneurship education for wealth creation in federal and state universities in Imo State. This implies that even though there is a relationship between technology-mediated learning and effective entrepreneurship education for wealth creation, such relationship is not significant. The foregoing finding is similar to that of Medley and Horne (2005) who posited that technology has great potential for undergraduate entrepreneurship education programmes. Diener (2012) argued that reliance on technology has proven successful in learning skills in cultivating caring behaviours and sufficient development of interactive communication. Ramm et al (2015) posited that social learning experience, development of teaching skills, self-awareness and the opportunity to communicate constitute the gains which learners get from technologically-mediated learning. In addition, Conneely et al (2011) pointed out that technology-mediated learning impacts creativity, peer-learning, thematic learning and problem solving in the learner.

The implication on the foregoing is that technology-mediated learning enhances students' effectiveness in

entrepreneurship education and thus empowers them to create wealth. Students can therefore use and learn from technology during their careers in entrepreneurship education to enhance their learning of entrepreneurship education. Technologically-mediated learning can then provide learning opportunities in an unpressurised environment, to reduce stress those students in their bid to succeed in entrepreneurial endeavours. Another implication is that technology-mediated learning can be useful in explaining, clarifying, elaborating, analysing and simplifying learners' content and products to facilitate teaching and learning of entrepreneurship education for the recipients to be able to create wealth.

## CONCLUSION

The researchers concluded that technology enhances and encourages learning, making it more interesting to the learners in universities in Imo State. Thus, the provision and utilisation of technologies in the 21<sup>st</sup> century universities can boost academic programmes and engagements; advance the course of knowledge creation, its circulation and utilisation. With technology-mediated learning, there is the hope that social learning experience, development of teaching skills, self-awareness and communication opportunity will have direct impact in the learners.

## RECOMMENDATIONS

The following are pertinent in view of the findings in this study:

1. There should be provision of adequate technology for the teaching and learning of entrepreneurship education in order for the recipients to be able to create wealth.
2. The university system should fully embrace technology-mediated learning in order to enhance students' social learning experience, development of skills, self-awareness and communication competence.
3. Enabling technological platforms should be created as a quick response to students, teachers and administrators yearning for the use of technology in the school system as this is capable of enhancing teaching and learning.

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