



## INNOVATIVE APPROACHES TO SCALING UP TECHNOLOGIES FOR SUSTAINING QUALITY BUSINESS EDUCATION FOR ADAPTABILITY TO E-LABOUR MARKET IN ANAMBRA STATE

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### Abstract

*The need to sustain the quality of business education to respond to e-labour market demands necessitated this study. The purpose of this study was to ascertain innovative approaches to scaling up technologies for sustaining quality business education for adaptability to e-labour markets in Anambra State. Two research questions guided the study and two null hypotheses were tested. The study adopted descriptive survey research design. The population of the study comprised 122 business educators in tertiary institutions offering business education programme in Anambra State. A 19 item self-developed questionnaire was validated by three experts and used for data collection. Cronbach Alpha was used to determine the reliability co-efficient values of 0.88 and 0.90 for clusters B1 and B2, with an overall co-efficient value of 0.89. Mean, standard deviation, and Analysis of Variance were used for data analysis. The findings of the study revealed that technology-supported teaching is moderately adapted, while formalization of professional development approaches are lowly adapted for sustaining quality business education to e-labour market in Anambra State. Years of teaching experience of business educators did not significantly influence their mean ratings on the extent they adapt technology-supported teaching, but significantly influence the extent they adapt formalization of professional development approaches for sustaining quality business education to e-labour market. The study concluded that innovative approaches to scaling up technologies have not been fully adapted for sustaining quality business education to e-labour market in Anambra State. It was recommended that government should undertake massive in-service training and retraining through workshops, conferences, seminars and symposia to enable business educators gained an insight towards adapting innovative approaches to scaling up technologies for sustaining quality business education to e-labour market.*

**Keywords:** Innovative Approaches, Scaling Up Technologies, Quality Business Education, E-labour Market

### Introduction

The world's constant innovative changes have shown that the future is unpredictable especially as it concerns education, skills, competencies and technology which are considered the bedrock of economic, social and political growth. Supporting this statement, Olushola, Haruna, Mohammed and Salisu (2022) stated that countries whose populations have high level of education are fertile soil for information-based technology. It was in realization of the critical role of education that a National Policy on education was formulated. Education is the process of acquiring knowledge, skills, attitudes, interest, abilities, competences and the cultural norms of a society by people and to transmit life to the coming generations so as to enhance perpetual development of the society (Yekini, 2013). Chukwurah (2013) described education as a life-long process through which individuals acquire relevant knowledge and value which enable them to become useful to themselves and the society in which they are domiciled. This could also be applicable to business education.

Business education programme is concerned with teaching skills, attitudes and knowledge necessary for a successful career in office and business world. Anyaeneh and Nkegwu (2015) described



business education as education that enriches basic education for teaching career, entrepreneurship, business understanding, office understanding, office environment and vocational practices. In the view of Onajite (2016), business education encompasses education programme for business, office occupation, economic understanding, entrepreneurship and it seeks to develop in the learner's basic skills for personal use in the future. The objectives of business education as identified by Onajite (2016) are to enable the students to gain experience with skills and also to provide students with information about all aspects of business.

According to Ordu and Abdulkarim (2020), business education is needed by students in the contemporary world because business education develops life skills for economic success and helps students to develop skills and attitudes needed for career success. In the opinion of the researchers, the relevance of business education for scaling up technologies for sustaining its programme for adaptability to e-labour market in Nigeria cannot be over-emphasized because of its potential in equipping the recipients with the relevant skills for self-employment.

The labor market refers to the supply of and demands for labor, for which employees provide the supply and employers provide the demand. It is a major component of any economy and is intricately linked to markets for capital, goods, and services. The world marketplace has taken a new turn with the advancement of technology. Technological innovation has changed the nature of production and trade, as industrialization is gradually becoming more capital-intensive, largely due to the discoveries of machineries and technology, as such, has an overwhelming effect on the labour force. New economy emergence has been characterized by increase in productivity and output level, largely driven by progress in technological innovations and inventions.

Innovation on its' own is a broad concept which allows for the development of extra or additional steps to increase production in stages. It is the ability to introduce or develop new ways of production of products and services which are useful for accomplishing goals and objectives. It is also a new process of achieving an old task. Therefore, technological innovation is the technological aspect of innovation which emphasizes the use of technology as the key determinant of growth. In the business world, technological innovation is simply a new and improved way of achieving or accomplishing traditional tasks. Conventionally, the most important source of growth in economics is technological change (Todaro & Smith, 2013). The invention of new technology is a form of technological innovation; progress in technology changes the process of production of firm's overtime (Perloff, 2012).

Innovation is defined as incremental, radical, and revolutionary changes in thinking, products, processes or organization (Obuekwe & Eze, 2017). In the organization context, innovation may be linked to performance and growth through improvement inefficiency, productivity, quality, competitive positioning, and among others. An innovation is an implementation of a new or significantly improved product (good or service), a new process, a new marketing method or anew organizational method in business practices, workplace organization or external relations (Olushola, Haruna, Mohammed & Salisu, 2022). Thus, scaling of proven technologies and practices as the process of sustainably increasing the adoption and diffusion of a credible technology or practice, or a package of technologies and practices, to retain or improve upon the demonstrated positive impact of the technology or practice and achieve widespread use by stakeholders. Adaption of improved technologies and practices by a small number of adapters will not accomplish our development goals. In order to yield maximum impact, there must accomplish the widespread adoption of improved technologies and practices. Therefore, innovative approaches to scaling up technologies for sustaining programme for adaptability to e-labour market in business education could be technology-supported teaching and professional development.

Technology-supported teaching refers to the use of technological tools for delivery of instructions to the learners. To Oyegoke and Wasiu (2021), technology-supported learning is not merely the adoption of software and applications to manage the learning environment effectively, but it is a well-structured tool that addresses the educational aims and objectives of enhancing the student's acquisition of worthwhile educational objectives by introducing online learning, blended classrooms, project-based activities incorporating technology and game-based learning and assessment. Others include learning with mobile and handheld devices, instructional tools like interactive whiteboards and student response systems, web-based projects, explorations and research, student-created media like podcasts, videos, or slideshows, tools like wikis or google docs, and use of social media to engage students (Oyegoke & Wasiu, 2021). Eze (2015) noted that the important of technology-supported teaching is to allow students and teachers to control, manipulate and contribute information to learning and teaching environments as interactive books,



journals and the like are usually made available via internet. Another innovative approaches used here is formalization of professional development.

Professional development refers to as opportunities for teachers and other education personnel to take part in conferences, workshops or in-services either in short-term or ongoing, and long-term contexts. These opportunities are often offered through schools, school districts, educational organizations and professional associations. It is becoming increasingly evident, however, that a single view of what constitutes effective professional development is no longer relevant and meaningful in today's educational climate (Serdyukov, 2021). Martín-Morán and Martín-Nieto (2022) opined that attending classes, workshops or conferences is one way that teachers and other school employees learn some of what they need to know. Martín-Morán and Martín-Nieto stated that professional developments are just as important and often, more effective than traditional sit-and-get sessions. For example, when teachers plan lessons together or study a subject together, that's a form of professional development. A teacher who observes another teacher teach is also participating in a form of professional development. If a teacher is being coached by another teacher, that's professional development. Thus, effective professional development strongly links teacher and student learning and is guided by data and it needs to be sustained, ongoing, in-depth, requiring active engagement by the professional.

Innovative teaching method involves the use of digital and ICT based tools in teaching. Noor-UI-Amin (2013) identified the following innovative teaching technologies that are used in education delivery business education inclusive to include: technology-driven classroom, cross-curricular connections, smart interactive boards, computer-based assisted instruction, collaborative learning, activity-based learning and learning labs, digitalization in teaching, e- learning, flipped classroom, computer managed instruction (CMI), modeling and simulation, and teleconferencing. An improved and qualitative business education is of fundamental importance to ensure effective and efficient human capital development. Business education in a globalized economy demands effective use of innovative teaching methods in instructional delivery for the programme to achieve the manpower needs of the country.

Respondent variable that can influence the innovative approaches to scaling up technologies for sustaining quality business education for adaptability to e-labour market in Nigeria could be years of teaching experience. Years of teaching experience describes the period of time business educator is professionally engaged in a tertiary institution. According to Steve-Beke, Akosubo-Ogori and Egemuze-Paul (2020), moderating variables such as years of teaching experience influence their opinions on certain educational issues. Business education teachers use of innovative teaching method like smart board during instructional delivery allows them make proper illustrations of those business concepts that are always difficult to illustrate. Consequently, the use of innovative approaches to scaling up technologies for sustaining quality business education classroom instruction enhances students learning and improves business teachers' instructional delivery. Thus, appropriate use of this technology motivates students to learn and also improve their performance. At the same time, it helps the teachers to take care of individual differences of the students. However, the influence of years of teaching experience on business educator's opinions is the basis upon which this study was conceived to ascertain the extent innovative approaches to scaling up technologies for sustaining quality business education for adaptability to e-labour market in Anambra State.

### **Statement of the Problem**

Technological innovation has changed the nature of production and trade, as industrialization is gradually becoming more capital-intensive, largely due to the discoveries of machineries and technology which has overwhelming effect on the labour force. New economy emergence has been characterized by increase in productivity and output level, largely driven by progress in technological innovations. Innovations in education are intended to raise productivity and efficiency of learning process and improve learning quality. It seems that the systems and values of industrial education were not designed with innovation and digital tools in mind. Innovation, whether it is with technology, assessment or instruction, requires time and space for experimentation and a high tolerance for uncertainty (Heick, 2016). This results in production of insignificant change in teaching and learning, leading to unfavourable environment to student's learning. It is to this end that this study was conducted to determine the extent technology-supported teaching and formalization of professional development approaches to scaling up technologies for sustaining quality business education for adaptability to e-labour market in Anambra State.



### Research Questions

The following research questions guided this study:

1. To what extent are technology-supported teaching approaches adapted for sustaining quality business education to e-labour market Anambra State?
2. To what extent are formalization of professional development approaches adapted for sustaining quality business education for adaptability to e-labour market Anambra State?

### Hypotheses

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

1. Business educators do not differ significantly in their mean ratings on the extent they adapted technology-supported teaching approaches for sustaining quality business education to e-labour market in Anambra State based on their years of business experience.
2. Business educators do not differ significantly in their mean ratings on the extent they adapted formalization of professional development approaches for sustaining quality business education to e-labour market in Anambra State based on their years of business experience.

### Method

The study adopted descriptive survey design. The population of the study comprised 122 business educators in tertiary institutions offering business education programme in Anambra State. No sample was drawn for the research as the entire population was studied. Data for this study was collected using a 19 item structured questionnaire. The respondents were requested to rate the items on a 5-point rating scale of Very Highly Adapted (VHA), Highly Adapted (HA), Moderately Adapted (MA), Lowly Adapted (LA) and Very Lowly Adapted (VLA) with values 5, 4, 3, 2 and 1 respectively. The instrument was validated by two experts in business education. Cronbach Alpha method was used to establish the reliability of the instrument. The reliability coefficients values of 0.88 and 0.90 for clusters B1 and B2 respectively with an overall coefficient value of 0.89. Out of the 122 copies of the questionnaire distributed to the respondents in their institutions through direct approach which facilitated a response rate, 118 copies (representing 97 percent) were dully completed, retrieved and used for data analysis. Data collected were analyzed using mean, standard deviation and ANOVA at 0.05 level of significance. The application of Statistical Package for Social Sciences (SPSS) version 23 was used for data analysis. For the hypotheses, p-value was used for decision making. Where the calculated p-value was less than the stipulated level of significance 0.05 ( $p < 0.05$ ), it implies that there was a significant difference between respondents' mean scores and the null hypothesis is rejected. On the other hand, if the p-value is greater than or equal to the alpha level of 0.05 ( $p \geq 0.05$ ), it means that there was no significant difference in the respondents mean scores and is not rejected.

### Presentation of Results

#### Research Question 1:

To what extent are technology-supported teaching approaches adapted for sustaining quality business education to e-labour market in Anambra State?

**Table 1: Mean ratings of business educators on the extent they adapt technology-supported teaching approaches for sustaining quality business education to e-labour market in Anambra State. N =118**

S/N	Technology-supported teaching approaches	$\bar{X}$	SD	Remarks
1.	Learning with mobile and handheld devices	3.20	0.64	Moderately Adopted
2.	Interactive whiteboards	3.60	0.43	Moderately Adopted
3.	Web-based projects	3.70	0.42	Moderately Adopted
4.	Google docs	2.49	0.68	Lowly Adopted
5.	Use of social media to engage students	3.54	0.48	Moderately Adopted
6.	Interactive books	3.24	0.56	Moderately Adopted
7.	Journals	2.20	0.79	Lowly Adopted
8.	Use of internet	3.50	0.50	Moderately Adopted
9.	Use of wikis	3.36	0.54	Moderately Adopted
	<b>Cluster Mean</b>	<b>3.20</b>		<b>Moderately Applied</b>



Data in Table 1 shows the cluster mean score of 3.24 indicate that business educators in tertiary institutions in Anambra State moderately adopt technology-supported teaching approaches for sustaining quality business education to e-labour market. The analysis of the items further indicates that business educators rated seven items out of the nine listed items as moderately applied. The mean rating for the seven items ranged from 3.50 to 3.70. The remaining two items were rated by business educators as lowly adopted with mean ratings ranging from 2.20 to 2.49. The standard deviation of 0.42 to 0.79 showed that respondents are not wide apart in their mean ratings which indicate homogeneity.

**Research Question 2:**

To what extent are formalization of professional development approaches adapted for sustaining quality business education for adaptability to e-labour market in Anambra State?

**Table 2: Mean ratings of business educators on the extent they adapt formalization of professional development approaches for sustaining quality business education to e-labour market in Anambra State. N =118**

S/N Formalization of professional development Approaches through	$\bar{X}$	SD	Remarks
10. Conferences	2.60	0.47	Moderately Adopted
11. Workshops	3.20	0.39	Moderately Adopted
12. In-services	2.73	0.44	Moderately Adopted
13. Attending classes	2.59	0.50	Moderately Adopted
14. Teachers plan lessons together	2.22	0.76	Lowly Adopted
15. Teachers study a subject together	2.35	0.48	Lowly Adopted
16. Teacher observing another teacher teach	2.33	0.72	Lowly Adopted
17. Teacher being coached by another teacher	2.36	0.58	Lowly Adopted
<b>Cluster Mean</b>	<b>2.55</b>		<b>Lowly Adopted</b>

Data in Table 2 shows the cluster mean score of 2.55 indicate that business educators in tertiary institutions in Anambra State lowly adapt to formalization of professional development approaches for sustaining quality business education to e-labour market. The analysis of the items further indicates that business educators rated four items out of the eight listed items as moderately adopted. The mean rating for the four items ranged from 2.59 to 2.73. The remaining four items were rated by business educators as lowly adopted with mean ratings ranging from 2.22 to 2.36. The standard deviation of 0.44 to 0.76 showed that respondents are not wide apart in their mean ratings which indicate homogeneity.

**Hypothesis 1:**

Business educators do not differ significantly in their mean ratings on the extent they adapted technology-supported teaching approaches for sustaining quality business education to e-labour market in Anambra State based on their years of business experience.

**Table 3: Summary of Analysis of Variance on business educators mean ratings on the extent they adapted technology-supported teaching approaches for sustaining quality business education to e-labour market in Anambra State based on their years of business experience.**

	Sum of Squares	df	Mean Square	F	P-value	Remarks
Between Groups	1.213	2	1.223	11.168	0.441	Not Significant
Within Groups	1.723	115	1.131			
Total	2.936	117				

Table 3 shows that there is no significant difference among the three groups (1-5 years, 6-10 years and above 10 years) in terms of their mean ratings on the extent they adapt technology-supported teaching approaches for sustaining quality business education to e-labour market in Anambra State based on their years of business experience. It was observed that at 0.05 level of significance, 2 is nominator and 115 of denominator, the calculated F-ratio is 11.168 and *P-value* 0.441 which is greater than the 0.05 alpha level. Therefore, the null hypothesis is not rejected.



**Hypothesis 2:**

Business educators do not differ significantly in their mean ratings on the extent they adapted formalization of professional development approaches for sustaining quality business education to e-labour market in Anambra State based on their years of business experience.

**Table 4: Summary of Analysis of Variance on business educators mean ratings on the extent they adapted formalization of professional development approaches for sustaining quality business education to e-labour market in Anambra State based on their years of business experience.**

	Sum of Squares	df	Mean Square	F	P-value	Remarks
Between Groups	1.526	2	1.763	34.574	.000	Significant
Within Groups	4.055	115	1.022			
Total	5.581	117				

Table 4 shows that there is a significant difference among the three groups (1-5 years, 5-10 years and above 10 years) in terms of their mean ratings on the extent they adapted formalization of professional development approaches for sustaining quality business education to e-labour market in Anambra State based on their years of business experience. It was observed that at 0.05 level of significance, 2 is nominator and 115 of denominator, the calculated F-ratio is 34.574 and *P-value* .000 which is less than the 0.05 alpha level. Therefore, the null hypothesis is rejected.

**Discussion of Findings**

The findings from research question 1 revealed that technology-supported teaching approaches were moderately adopted for sustaining quality business education to e-labour market in Anambra State. This implies that business educators in South-East have not fully adopted technology-supported teaching approaches in their teaching with well-structured tool that addresses the educational aims and objectives of enhancing the student's acquisition of worthwhile educational objectives through online teaching. The adaption of technology-supported teaching approaches will help by allowing students and teachers to control manipulative and contribute information to learning and teaching environments as interactive books, journals and the like are usually made available via internet. This finding is in line with Oyegoke and Wasiu (2021) who reported that technology-supported teaching approaches involve learning with mobile and handheld devices, instructional tools like interactive whiteboards and student response systems, web-based projects, explorations, and research, student-created media like podcasts, videos, or slideshows, tools like wikis or google docs, and use of social media to engage students.

The findings of the study further revealed that there is no significant difference in respondents' mean ratings on the extent they adapt with technology-supported teaching approaches for sustaining quality business education to e-labour market in Anambra State based on their years of business experience. These findings disagree with Steve-Beke, Akosubo-Ogori and Egemuze-Paul (2020) who revealed that moderating variables such as years of teaching experience influence their opinions on certain educational issues. This difference in mean ratings could be as a result of efficiency in determining the amount of time, money, and resources that are necessary to obtain certain results.

The findings from research question 2 revealed that technology-supported teaching approaches were lowly adopted the formalization of professional development approaches for sustaining quality business education to e-labour market in Anambra State. This implies that business educators in South-East have not lowly adopt formalization of professional development in their teaching is no longer relevant and meaningful in today's educational climate. This finding is in line with Martín-Morán and Martín-Nieto (2022) who stated that professional development is just as important and, often, more effective than traditional sit-and-get sessions.

The findings of the study further revealed that there is no significant difference in respondents' mean ratings on the extent they adapt with technology-supported teaching approaches for sustaining quality business education to e-labour market in Anambra State based on their years of business experience. These findings disagree with Steve-Beke, Akosubo-Ogori and Egemuze-Paul (2020) who revealed that moderating variables such as years of teaching experience influence their opinions on certain educational issues. This difference in mean ratings could be as a result of effective professional development strongly links teacher and student learning and is guided by data and it needs to be sustained, ongoing, in-depth, requiring active engagement by the professional.



## Conclusion

Based on the findings of this study, it was concluded that innovative approaches to scaling up technologies have not been fully adapted for sustaining quality business education to e-labour market in Anambra State. Educational institutions are expected to provide an optimal academic environment as well as materials and conditions for achieving excellence of the learning outcomes for every student. Thus, the innovative approaches to scaling up technologies mentioned here were not widely adapted which is as a result of business educators' inability to determine the roles innovative approaches to scaling up technologies plays in teaching and learning.

## Recommendations

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

1. Management of business education in tertiary institutions should as a matter of urgency, invest in innovative approaches to scaling up technologies by way of upgrading their technological advancement architecture and organizing more training on adaption of technology-supported teaching and formalization of professional development approaches.
2. Government should undertake massive in-service training and retraining through workshops, conferences, seminars and symposia to enable business educators gained an insight towards adapting to innovative approaches to scaling up technologies for sustaining quality business education to e-labour market.

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