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MANAGEMENT STRATEGIES FOR IMPROVING TECHNICAL AND VOCATIONAL EDUCATION IN ANAMBRA STATE

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ABSTRACT

The purpose of the study was to determine management strategies for improving the training capacity of technical and vocational education in Anambra State, Nigeria. Two research questions guided the study. Descriptive research design was adopted for the study. This study was carried out in public and private secondary schools in Awka Education zone. The design adopted for the study was descriptive survey. The population comprised 109 teachers of entrepreneurship in the 18 public and 22 registered private secondary schools in the zone. The population is made up of 54 entrepreneurship teachers in public and 55 entrepreneurship teachers in private secondary schools in the area. Entrepreneurship teachers were used as respondents because they are also among the technical and vocational educators and are capable of rating the programme objectively. The whole population was studied using purposive sampling technique. A researcher-developed instrument was the instrument for data collection. The instrument was made up of two parts- "A" and "B". Part A was on the bio-data of the respondents while part B contained items TVE. The instrument contains 20 items structured on a four-point rating scale of Strongly Agree, Agree, Disagree and Strongly Disagree. The instrument was validated by three experts in the faculty of education, Nnamdi Azikiwe University, Awka. It was further subjected to reliability testing through a pilot test on 20 entrepreneurship teachers in Onitsha education zone who were not included in the population of the study. The application of Cronbach Alpha reliability method on the obtained data yielded coefficient values of 0.84 and 0.79 for the two clusters with an overall reliability co-efficient of 0.81. This high reliability index indicated that the instrument is reliable and therefore considered adequate for the study. The researcher collected the data from the respondents. Data collected from the respondents were analyzed with mean and standard deviation. Findings revealed that the respondents agreed that lack of electricity, poor institutions readiness for the new normal learning, reduced cash flow for small TVET providers, lack of effective and user-friendly distance learning platforms, lack of access to internet and reduced cash flow for parents are some of the challenges limiting the training capacity of technical and vocational education during the pandemic in Nigeria. Furthermore, the respondents agree that the use of blended learning in TVE programme; integration of technology in the TVE programme;

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enforcement of policies on the security and ethics of technology to protect the personal data of both TVE students and staff and provision of free quality web-based learning tools by TVE institutions to reduce disruption online learning are management strategies for improving the training capacity of technical and vocational education during the pandemic in Nigeria. Based on the findings the researchers recommended that Nigerian government at all levels should demonstrate a strong commitment to reviewing and implementing a national information and communication technology (ICT) framework focused toward ICT adoption in TVE institutions and training centres.

Keywords: Technical and Vocational Education, Training, Challenges.

Introduction

Technical and vocational education (TVE) is a broad term that refers to aspects of educational processes that include, in addition to general education, the study of technologies and related sciences, as well as the acquisition of skills, attitudes, understanding, and knowledge relating to occupations in various sectors of economic and social life. Adepoju (2014) defined technical and vocational education as an educational training that includes knowledge, skills, competencies, structural activities, abilities, capacities, and all other structural experiences for securing work in various sectors of the economy or even becoming self-sufficient by creating jobs. Technical and vocational education is designed to provide people with the opportunity to improve their general competency, particularly in relation to their current or prospective career. One of the primary goals for Technical and Vocational Education (TVE) is to provide more options for students to learn from the fundamentals to the advanced levels of science and technology education at a variety of institutions. The programme is further geared towards training students to become skilled and semi-skilled workers in order to meet the labor supply needs of the local industry (Owo & Ajie, 2020). The abrupt closure of the vast majority of TVE centers as a result of national lockdowns declared in Nigeria as well as in numerous nations severely disrupted TVE continuity.

The difficulties and constraints confronting TVET systems in general appear to have been exacerbated by the advent of this crisis. In Nigeria, the sudden shift toward remote training approaches to assure training continuity, however, it seems like the TVE programmes were unprepared to meet this issue. Due to a lack of requisite skills and infrastructure to handle distance teaching and learning methodologies, TVET managers, trainers, and learners were not fully prepared for this abrupt move to remote learning (International Labour Organization & World Bank, 2021). The urgent need to transition to distance learning modes was hampered by a lack of suitable infrastructure. In several countries like Nigeria, problems with electrical supply, online access, insufficient bandwidth, and a lack of network capacity to

handle rising data traffic appeared to exacerbate the crisis's difficulties. Students and teachers bore the majority of the higher data use costs incurred for distance learning (International Telecommunication Union (ITU) & United Nations Educational, Scientific and Cultural Organization (UNESCO), 2020). Furthermore, the functionality of the learning platforms and technologies used to deliver programs has a significant impact on the quality of remote learning. Parents' failure to pay fees is likely to result in young people dropping out of TVET programs, and the ensuing impact on finances has limited TVET centers' ability to invest time and money in the development of distant learning infrastructure, and in certain cases to pay trainers' wages.

Governments could improve Internet penetration in rural regions by making remote satellite Internet connections cheaper (Jalli, 2020). Chong (2020) opined that there is need to supplement Internet penetration with more economical and dependable Internet bundles as well as expanded coverage in various parts of Nigeria. Yeap, Suhaimi and Nasir (2021) averred that government must issue a directive to reduce the disruption to students' learning processes. Yeap, Suhaimi and Nasir further averred that government directives are crucial because they provide direction on how to implement programmes that are mostly practical in nature. This can be done through e-learning so as to ensure that no disruptions will occur. Furthermore, throughout the pandemic, alternative techniques of providing practical skills training and conducting assessments should be implemented. It has been suggested that the provision of adequate human and material resource would facilitate the development of a variety of innovative and flexible learning solutions, not only to respond to the current pandemic but beyond the pandemic. The extent to which these suggested management strategies would be successful in TVE programmes in Nigeria, demands an empirically investigation. It is therefore imperative to empirically determine the management strategies for improving technical and vocational education in Nigeria, particularly in Anambra State.

Statement of the Problem

The researcher is worried that the continued existence of the various could worsen the rate of unemployment in Nigeria, given the fact that most TVE training institutions seem to have struggled to cope with changes in the educational sphere resulting from the high rate of unemployment in the country. This study therefore determines the management management strategies for improving the capacity of technical and vocational education in Nigeria.

Research Questions

The following research questions guided the study:

1. What are the challenges facing technical and vocational education in Anambra State, Nigeria?
2. What are the management strategies for improving technical and vocational education in Anambra State, Nigeria?

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Research Method

This study was carried out in public and private secondary schools in Awka Education zone. The design adopted for the study was descriptive survey. The population comprised 109 teachers of entrepreneurship in the 18 public and 22 registered private secondary schools in the zone (information was collected from Post Primary School Service Commission on the 19th of January 2019). The population is made up of 54 entrepreneurship teachers in public and 55 entrepreneurship teachers in private secondary schools in the area. Entrepreneurship teachers were used as respondents because they are also among the technical and vocational educators and are capable of rating the programme objectively. The whole population was studied using purposive sampling technique. A researcher-developed instrument was the instrument for data collection. The instrument was made up of two parts- "A" and "B". Part A was on the bio-data of the respondents while part B contained items TVE. The instrument contains 20 items structured on a four-point rating scale of Strongly Agree, Agree, Disagree and Strongly Disagree. The instrument was validated by three experts in the faculty of education, Nnamdi Azikiwe University, Awka. It was further subjected to reliability testing through a pilot test on 20 entrepreneurship teachers in Onitsha education zone who were not included in the population of the study. The application of Cronbach Alpha reliability method on the obtained data yielded coefficient values of 0.84 and 0.79 for the two clusters with an overall reliability co-efficient of 0.81. This high reliability index indicated that the instrument is reliable and therefore considered adequate for the study. The researchers collected the data from the respondents. The research question was answered using mean. Mean scores that fall between 3.00 -5.00; 3.50 – 3.49; 2.50 – 3.49; and 1.00 – 1.49 were taken to indicate Strongly Agree, Agree, Disagree and Strongly Disagree respectively.

Presentation of Results

Research Question 1: What are the challenges facing technical and vocational education in Anambra State, Nigeria?

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Table 1: Respondents Mean Ratings on the Challenges Facing Technical and Vocational Education in Anambra State, Nigeria

S/No.	Items	$\overline{X}$	SD	Remarks
1.	Lack of electricity	3.22	0.87	Agree
2.	Lack of access to Internet	3.10	0.86	Agree
3.	Low bandwidth	3.04	0.76	Agree
4.	lack of network capacity to cope with increased data usage	2.99	0.80	Agree
5.	Lack of effective and user-friendly distance learning platforms	3.11	0.78	Agree
6.	Lack of staff capacity to support distance learning through quality pedagogical resources	2.86	0.81	Agree
7.	Lack of motivation of teachers	3.06	0.87	Agree
8.	Reduced cash flow for small TVET providers	3.16	0.74	Agree
9.	Reduced cash flow for parents	3.09	0.98	Agree
10.	Lack of students' readiness for the new normal learning	2.75	0.70	Agree
11.	Poor institutions readiness for the new normal learning	3.22	0.99	Agree
	Cluster Mean	**3.05**		**Agree**

Data in Table 1 reveal that the respondents agreed that items 1-11 with mean ratings ranging from 2.75 to 3.22 were the challenges facing technical and vocational education in Anambra State, Nigeria. The standard deviation scores ranging between 0.70 to 0.98 shows that the respondents' opinions are closely related. Furthermore, the cluster mean of 3.05 indicate that the respondents agree that lack of electricity, poor institutions readiness for the new normal learning, reduced cash flow for small TVET providers, lack of effective and user-friendly distance learning platforms, lack of access to internet and reduced cash flow for parents are some of the challenges facing technical and vocational education in Anambra State, Nigeria.

Research Question 2: What are the management strategies for improving technical and vocational education in Anambra State, Nigeria?

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Table 2: Management strategies for Improving Technical and Vocational Education in Anambra State, Nigeria

S/No.	Items	$\overline{X}$	SD	Remarks
1.	Integration of technology in the TVE programme	3.48	0.88	Agree
2.	Improving training capacity of instructors and TVE teachers through in-service training programmes	3.30	0.74	Agree
3.	Increased collaboration between administrators of TVE programme and the private sector	3.21	0.71	Agree
4.	Recruitment of digital forensics experts to support TVE in tertiary education institutions	3.18	0.70	Agree
5.	Enforcement of policies on the security and ethics of technology to protect the personal data of both TVE students and staff	3.44	0.83	Agree
6.	Provision of free quality web-based learning tools by TVE institutions to reduce disruption online learning	3.43	0.82	Agree
7.	Setting up e-campus in TVE institutions as a platform to host and run e-learning courses or training to both students and instructors	3.56	0.91	Agree
8.	Use of blended learning in TVE programme	3.67	0.95	Agree
Cluster Mean		**3.40**		**Agree**

Data in Table 1 reveal that the respondents agree that items 1-8 with mean ratings ranging between 3.18 to 3.67 are the management strategies for improving the training capacity of technical and vocational education during the pandemic in Nigeria. The standard deviation scores ranging between 0.70 to 0.95 shows that the respondents' opinions are closely related. The cluster mean of 3.40 indicate that use of blended learning in TVE programme; integration of technology in the TVE programme; enforcement of policies on the security and ethics of technology to protect the personal data of both TVE students and staff and provision of free quality web-based learning tools by TVE institutions to reduce disruption online learning are the management strategies for improving technical and vocational education in Anambra State, Nigeria.

Discussion

Findings revealed that lack of electricity, poor institutions readiness for the new normal learning, reduced cash flow for small TVET providers, lack of effective and user-friendly distance learning platforms, lack of access to internet and reduced cash flow for parents are some of the challenges facing technical and vocational education in Anambra State, Nigeria. This is in line with Yeap, Suhaimi and Nasir (2021) internet connectivity problem, learning platform, content of curriculum and assessment, the readiness of trainers and trainees for e-

learning have been challenges of TVET education. Yeap et al (2021) further stated that one of the biggest challenges of TVE was the transition from traditional face to face method of teaching learning to distance and online learning as TVE focuses more on practical skills and work-readiness. According to UNESCO-UNEVOC International Centre (2020), the ability of TVET institutions to implement e-learning depends on the capacity to adapt curriculum as well as the preparedness of infrastructures such as internet connectivity, devices or media, learning platforms and the readiness of trainers and teachers for online learning. The sudden change from traditional teaching models to online teaching methods presents a huge challenge for TVE instructors as some instructors lack skills in the use of technology for teaching and learning. In reaction to the changing norm in teaching and learning procedures, instructors may need to alter their pedagogical approaches, techniques and methods, classroom management, and evaluation Yeap et al (2021). Instructors must be prepared for e-learning since they require time to create instructional materials and increase their IT skills, as well as online pedagogy and evaluation skills. These are critical factors for teachers to effectively engage and conduct their lessons using e-learning (Nasir, 20202).

Findings revealed that the use of blended learning in TVE programme; integration of technology in the TVE programme; enforcement of policies on the security and ethics of technology to protect the personal data of both TVE students and staff and provision of free quality web-based learning tools by TVE institutions to reduce disruption online learning are the management strategies for improving technical and vocational education in Anambra State, Nigeria. This is in agreement with Ating (2020) who posited that government can alleviate the hardship faced by TVE teachers by putting in place measures and policies that could facilitate easy access to technology that could facilitate training distant and online education. Chong (2020) stated that as TVE institution go online, government need to beef up cyber security to keep computers, electronic systems, and networks safe from hackers. In another vein, the need to strengthen collaboration between government and private sector is seen as another strategy that would improve TVE in Anambra State, Nigeria and beyond. According to Ozer (2020), government must take severe measures to ensure that youths have jobs quickly after completing their degrees, such as giving youths preference over foreign employees when filling vacancies. This will promote TVET by strengthen the education-employment relationship. According to Commonwealth of Learning (COL) (2020), the government should form partnerships between educational institutions, industry, and community organizations to better assess skill demands and help learners transition into employment and self-employment.

Conclusion

Based on the findings of the study, the researcher concludes that the TVE programme in Nigeria faced some challenges that affected their training capacity. Some of the challenges relates to the lack or poor state of ICT infrastructure, reduction in funding, readiness of trainers, TVE institutions and students. It is therefore imperative that adequate remediating measures are put in place to facilitate the improved training capacity in TVE programme.

Recommendations

The following recommendations were made by the researchers:

1. The Anambra State government should demonstrate a strong commitment to reviewing and implementing a national information and communication technology (ICT) framework focused toward ICT adoption in TVE schools.
2. The State Government as well as administrators of TVE programmes should collaborate with Private IT firms in the areas of provision of IT gadgets, free internet services, IT support, Data and web security services.
3. Educational zones in Anambra State should organize in-service training programmes for TVE instructors and teachers on how to use innovative pedagogical strategies like blended learning and e-learning to mitigate the challenges facing TVE in the State.

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