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TECHNICAL EDUCATION TEACHERS' PERCEIVED STRATEGIES FOR SUSTAINING STUDENTS' INTEREST IN TECHNOLOGY-BASED COURSES IN TECHNICAL COLLEGES

Dr. Peter I. Okoye, and Cletus O. Ochiobi & Sylvester C. Ownusa

Department of Technology & Vocational Education
Nnamdi Azikiwe University, Awka, Anambra State
piz.okoye@unizik.edu.ng; *+2348037588548*

ABSTRACT
This study examined technical education teachers' perceived strategies for sustaining students' interest in technology-based courses in technical colleges in Imo State. The study adopted the descriptive survey design. Four (4) research questions guided the study. The population of the study comprised forty (40) technical education teachers selected using simple random sampling from four out of five technical colleges in Imo State. A structured questionnaire titled "Technical Education Teachers' Perceived Strategies for Sustaining Students' Interest in Technology-Based Courses (TETPSSITCQ)." The instrument was validated by three technical educators while its reliability was established using Cronbach alpha which yielded a reliability coefficient of 0.83. Frequency and mean were used to answer the research questions. The findings revealed among other factors that higher qualifications, effective use of instructional materials, symbiotic school-industry partnership could sustain students' interest in technology-based courses. The researchers concluded that proper application of the aforementioned strategies could sustain students' interest in technology-based courses .It was therefore, recommended among others that the Federal Government through the Ministry of Education in collaboration with the industries should organize conferences/workshops to retrain teachers on the current but effective teaching methods that could enable them arrest students' interest in technology-based courses and as well ensure that those subjects are assigned and taught by teachers based on their areas of specialties.

Keywords: *Technical Education Teachers, Perceptions, Strategies, Students' Interest, Technology-Based Courses*

Introduction

Education is a vital tool for self-realization and economic development. This is because education provides individuals the opportunity to equip themselves with essential skills and experience to survive and also promote national development in all ramifications. The achievement of the foregoing goal is utterly dependent on the manner in which schools which are the agents and mechanism for impartation and transfer of knowledge are structured and operated; which would ultimately turn out professionals in various fields of endeavor. This expectation could be met, if education, which is a vital agent of change, is not only appropriately configured but also religiously operated in order to foster optimal utilization of requisite skills and competencies for economic development. Incidentally such skills are acquired through technical education.

Technical education is an organized educational programmes offering a sequence of courses which are directly related to the preparation of individuals in paid or unpaid employment in current or emerging occupations. Based on that, vocational education is systematically structured to meet the job needs of individuals at various facets of educational programmes, either at the secondary or tertiary levels. The major objective of TVE at secondary level is to equip students with basic employability skillsto enter into paid and unpaid employment in various occupations (Federal republic of Nigeria-FRN, 2013; Perkins, 2009). It is regarded as education for job, because it enables therecipient/student after graduation, be able to

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venture into some economic activities, provide opportunities for jobs seekers as well as contribute to the transformation of the society (Okoye, &Nnajiofor, 2019). Evidently, various developed nations such the US, France, China to mention a few, leveraged on the potency of TVE to transform their economy. The situation is quite different in Nigeria State, where the masses inadvertentlydiscountenanced technical education with contempt, while the governments who are supposed to fund it, only tout it as a tool for amassing wealth. Little wonder, a lot of youth empowerment and skill acquisition programmes initiated by successive governments at various levels never yielded the expected outcome. Scholars have attributed this situation to overt exclusion of technical and vocational education institutions such as technical colleges and their professionals in the implementation of those empowerment schemes (Ogbuanya&Okoye, 2015).

Technical colleges are regarded as principal vocational institutions globally. As principal institutions that facilitate the realization of the goals of technical and vocational education and training (TVET), technical college curricular and instructional contents are articulately structured in trade modules (Federal Republic of Nigeria-FRN, 2013). Technical colleges give full vocational training intended to prepare students for entry into various trade areas. According to Obadara and Oyebolu (2013), training carried out in technical colleges not only prepares individuals for the world of work in order to be self-reliant and contribute to national development. Technical colleges are designed to produce craftsmen at the craft (secondary) level and master craftsmen at the advance craft (post-secondary) level. According to International Qualifications Assessment Service (2011), the programmes offered in technical colleges are classified into related trades, which include mechanical engineering trades, electrical/electronic trades, construction trades, miscellaneous trades and business trades. Similarly, technical colleges provide courses in technology, art, secretarial skills, agriculture inter alia (Hank, 2014). Trades offered in technical colleges are typically hands-on, as such requires an ideal environment for learners to learn and progress in it. With the potency and robustness of its curricular,the certificates and skills acquired in technical colleges can fetch someone a lucrative job in reputable industries as electrician, mechanic, machinist, pharmacy technician, nuclear technicianamong other specialties that thrust the nation's technological advancement.

Technological advancement of any nation depends on the viability of its college education system; which is predicatedon teacher's ingenuity to sustain students' interest to learn and acquire requisite skills to excel in their respective specialties in technical education and engineering. Apparently, the current state of school drop-out or roaming the street after graduation by school leavers has brought a lot of discouragement to individuals who desire to seek career opportunity in TVE. This and other factors make the programme seemingly unsustainable, and thereby obliterate the interest of persons either pursuing career or wishing to enroll in technical education. This call for proactive actions to educate, motivate and encourage learners to learn as well as sustain their interest in studying technology-based courses so as to steer the nation towards technological advancement. This makes it imperative to groom and nurture experts with requisite technological skills who would apply scientific knowledge and principle to render the needed services to humanity, and also reshape the face of the earth. Since, technical colleges and technology institutions are regarded as the machinery for the inculcation and transfer of technical know-how, studying of technology-based courses becomes imperative for students to acquire creative and innovative acumen to excel in their career and compete favorably in the dynamic global economy.

Technology-based courses can be defined ascourses or educational programmes that lead to skilled trade, applied science, modern technologies and careers in technology. They are basically courses involving scientific knowledge,


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applied science and modern technologies systematically tailored to expose students to requisite skills needed to advance in their chosencareers. They also avail students the opportunity to gain work experience through internships, on-the-job training and industrial certification opportunities. Technology-based courses are associated with the theory and science behind any skillful occupation (United StatesDepartment of Education, 2010). Technology-based courses offered at secondary education level includes: metal work, automobile, building construction, furniture, electrical, electronics, computer studies, mathematics and technical drawing. More so, these courses are offered in technical colleges, polytechnics, institutes of technology and universities with the aim of equipping learners with requisite employability skills and experiences for scientific knowledge transfer and technologies (FRN, 2013).

Despite the enormous benefits accruable from technology-based courses, some recipients, including those undergoing the training, owing to their lack of awareness, often misconstrue them as difficult courses (Okolimba, 2007). Okoye (2019) blamed this phenomenon majorly on lack of facilities, poor funding, overt negligence by governments, and ultimately, teachers' use of conventional teaching method, which is not only monotonous but stereotyped; hence does not encourage students to participate actively in the learning process (Lowman, 2014). Cognizant of the fact that technology-based courses grapple with some basic principles and ideologies that learners shouldimbibe, it becomes imperative to sustain students' interest, in order to motivate and encourage them to explore and exploit their potentials creatively, for sustainable living.

The need to sustain learners' interest towards the propagation and advancement of technology tends to be increasing astronomically among the comity of nations. As such, every country seems to strive profusely to produce competent experts in the field of technology who can optimize available resources to meet the yearning demands for their technological breakthroughs (Ames & Ames, 2015). This goal, indeed, requires a great deal of effort to be realized; most especially as pertains to sustaining learners' interest in technology-based courses in technical colleges. Furtherance of this, technical college system was split into various disciplines, and each designed to produce competent professionals with requisite skills to excel in their chosen fields. Apparently, some students seem naturally, enthusiastic to learn independently while others need their teachers' intervention to inspire and stimulate them; therefore, teachers' mastery of varieties of teaching methods and readiness to effectively employ them in imparting knowledge in students cannot be overemphasized (Ezekwere, 2009). This substantiates the notion that effective learning largely depends on the teacher's ability to provoke and sustain learners' interest in order to realize the objectives of such engagement or programme.

Interest can be viewed as the feeling or disposition of wanting to stick to something or learn more about something that a person enjoys learning about or doing. Erickson (2008) opined that, whatever level of interest a student brings to the classroom, could influence the learning outcome positively or negatively. To this end, interest can be viewed as a latent force or an instinct that propels ones commitment and participation towards the accomplishment of any pursuit or undertakings. This implies that, interest is a prerequisite for assuaging learners' curiosity and determination to succeed or to accomplish any meaningful adventure or preoccupation embarked upon(Oviawe, 2015). It could therefore, be deduced that teachers'ability to effectively applya corresponding strategy or method, could to a great extent, invoke and sustain learners' interestin technology-based courses.

According to Hornby (2015), strategy is defined as the art of using similar techniques or a plan of action intended to accomplish a specific goal or purpose. Onyirigbo(2014) further opined that,strategy connotes the optimization of skills, experience and acquired knowledge in delivering

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instruction so as to realize the expected goals or set objectives. It determines the direction or extent of realization of instructions and organizational objectives over a given span. Strategy is applied even in the military as an ideology that invokes soldiers' alertness to achieving a stipulated task. These posit that strategy is used to determine how resources are allocated and utilized to meet the expected needs of stakeholders; as such teachers apply suitable strategies in order to realize the objectives of the lesson. Substantiating the foregoing submissions, Bling and Sass (2000) encapsulated some teaching strategies to include: explanation, stimulus variation, planned repetition, demonstration and individualization, self-confidence and self-esteem as well as patience and persistence. Since, learners or students are not motivated by the same values, needs, desires or wants, teacher's ingenuity in applying suitable strategies could trigger off their interest to learn (Jossey, 2004). Hence, the imperative to arouse and sustain students' interest to enable then learn and progress on the profession.

Sustaining learners' interest means to cause or allow something to continue for a period of time (Oviawe, 2015).It also depicts thatthat gives something the support or strength to endure. According to Erickson (2008), teachers' own enthusiasm about technology-based courses could be powerful tools to sustain students' interest. Even if students are not initially attracted to or interested in the courses, by clear demonstration of mastery and enthusiasm, the teacher could raise students' curiosity and thereby motivate them to explore more in the course. This could inspire them to engage more deeply to discover values they had overlooked. In the same vein, teaching methods such as field trip method, students-centered methods, individualized instructional method, project method, term paper, inter alia could facilitate teaching and learning (Eze, Okoye, &Onwusa, (2020). As none of these strategies can on its own guarantee effective learning (Ames & Ames, 2015);it therefore, becomes expedienton the teacher to properly strategize so as to sustain learners' interest in their fields.

Regardless of the underlining objectives associated with any learning environment, if students are not acquainted with the value attached to such objectives, they may not be motivated to put in adequate effort to achieve them. Acknowledging the foregoing, Udegbe (2008) affirmed that,once students discern how coursework connects to their goals, their interests will arouse; which could cause them tobecome more committed to learn. Unless substantial effort is made to sustained students' interest in technology-based courses, the increasingly apathy and waning interest of learners would remain unabated, to the detriment of the aims of establishing technical college system in Nigeria.

Statement of the Problem

Students offering technology-based courses have not performed excellently in their exams. This could be attributed to various factors, such as use of inappropriate teaching methods, dearth of competent and committed teachers, students' attitude to learning, teacher's qualification, absence of synergy between schools and industries, teacher's experience and mastery of course content, lack of instructional aids, equipment, functional laboratory and power. It is obvious that when a teacher lacks confidence and bereft of some vital skills effectively to effectively the learners, such teacher would be seen as a mere information provider. As a result, students will find it difficult to participate in the learning process and consequently, perform poorly in exams; which may dampen their interest in studying technology-based courses.

Unfortunately, lack of awareness and misunderstanding of the rationale behind technical and vocational education has made a lot of parents see technical colleges system as inferior to conventional secondary schools and invariably discourage their wards from attending such institutions. This also contributes to the problem of low enrollment of students into technical colleges. More so, technical and vocational education is given a stigma of inferiority, resulting



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in the misconception that it for lowbrow professionals as such overly discourage their children from seeking in technical education.

Regrettably, in spite of the successive government efforts directed at improving technical education so as to make it attractive and sustain students' interest. All these factors and more seem to dampen students' interest in technical education thereby making it unattractive and disinteresting. Apparently, if this situation is not addressed adequately students will lack employable skills and hands-on-experience. This could in turn fuel unemployment and mediocrity and further cripple technological advancement of the nation. Against these issues raised the study therefore examined the strategies to sustain students' interest in technology- based courses in technical colleges in Imo State.

Research Questions*:* The following research questions guided study.

1. How does teachers' qualification sustain students' interest in technology-based courses?
2. How do teaching method/strategies sustain students' interest in technology-based courses?
3. How does school-industry partnership sustain students' interest in technology-based courses?

Research Method

The study adopted a survey design. According to Udegbe (2014), a survey research is a type of research design in which a group of people or items is studied by collecting and analyzing data from a few people or items considered to be representative of the entire group. The study was carried out in the five (5) public technical colleges in Imo State. The technical colleges are situated in Okigwe, Orlu, and Ahiara-Mbaise Local Governments Areas respectively. The availability of these colleges made the State an educational advantage for the impartation and acquisition of sellable knowledge and practical skills. The population of the study comprised all the 40 technical education teachers from the four technical colleges in the State. The population size is relatively small, hence all 40 technical college teachers were used for the study as follows: 8 teachers got from Osu Technical College (OTC) Okohia, Osu; 12 from OkporoTechnical College (OTC), Okporo; 8 from Ahiara Technical College (ATC), Ahiara; and 12 from Government Technical College (GTC), Owerri.

The instrument used for data collection was a structured questionnaire titled "Technical College Teachers' Perceptions of Strategies for Sustaining Students' Interest in Technology-Based Courses (TETPSSITCQ)". The questionnaire was structured on a four (4)-point Likert rating scale of Strongly Agree, Agree, Disagree, and Strongly Disagree, with the assigned values of 4,3,2,1 respectively. The instrument was validated by three experts, whose suggestions and corrections were optimally applied in producing the instrument. The reliability of the instrument was established using Cronbach Alpha statistics, which yielded reliability coefficients of 0.85. The researchers directly administered 40 copies of the questionnaire to the respondents in their respective colleges, and retrieved all, making 100% return rate. Frequency and mean were used to analyze the data while the mean cut-off value of 2.50 was used to ascertain the level of agreement. Thus, items with mean scores 2.50 or above were accepted, while those below 2.50 were rejected.

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Results Presentation

Research Question 1: What is the influence of teachers' qualification on sustaining students' interest in technology-based courses?

Table 1: Mean Scores of Respondents on Influence of Teachers' Qualifications on Sustaining Students' Interest in Technology-Based Courses

Items	N	X	Remarks
1.Higher qualification is a prerequisite for effective teaching and learning, in that it enables teachers to wide their horizon.	40	3.54	Agreed
2.Students taught by teachers who possess higher qualifications are likely to perform better than their counterparts taught by teachers with lower qualifications.	40	3.25	Agreed
3.Teacher's qualification can arouse students' interest to study harder in order to excel in technology-based courses.	40	3.30	Agreed
4.Aquisition of higher qualifications exposes the teacher to the frontiers of knowledge in their chosen careers.	40	3.17	Agreed
5.Teachers need encouragement and support by government to advance and upgrade their qualifications in order to perform optimally.	40	3.50	Agreed

Data in Table 1 indicated that items 1, 2, 3, 4 and 5 had the mean scores of 3.54, 3.25, 3.30, 3.17 and 3.50 respectively. The result shows that respondents agreed that teachers' qualifications could sustain students' interest in technology-based courses. This is because, in the course of obtaining higher qualifications or degrees, the teacher ascends higher in the field, and thereby gains more expertise and builds capacity to teach effectively.

Research Question 2: What are the strategies adopted by technical colleges teachers to sustain students' interest in technology-based courses?

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Table 2: Mean Scores of Respondents on Strategies Adopted by Technical Colleges Teachers to Sustain Students' Interest in Technology-Based Courses

Items	N	X	Remarks
6.Teachers rarely use variety of instructional materials in teaching technology-based courses	40	3.38	Agreed
7.Providing career exploration and planning through field-trips/excursions helps to sustain students' interest and participations in technology based courses.	40	3.19	Agreed
8.Application of e-learning and electronic gadgets in teaching technology-based courses can arouse students' interest to learn effectively.	40	3.54	Agreed
9.Engaging students in work-based learning can captivate and sustain student' interest to learn technology-based courses.	40	3.93	Agreed
10. The use of students' centered approaches in teaching would enable students overcome their learning difficulties in order to learn actively and sustain their interest in technology-based courses.	40	3.50	Agreed

Data in Table 2 showed the responses on the influence of strategies that could be adopted by technical college teachers in order to sustain students' interest in technology-based courses. The table upheld items 7, 8, 9 and 10 with mean scores of 3.38, 3.19, 3.54, 3.93 and 3.50 respectively; which advocated that the use of instructional materials, field trips, e-learning and students'-centered teaching approaches could sustain students' interest in technology-based courses. The result also showed that teachers rarely use instructional materials, which could as well make the instruction boring to learners.

Research Question 3: How does school-industry partnership sustain students' interest in technology-based courses?

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Table 3: Mean Scores of Respondents on School-Industry Partnership in Sustaining Students' Interest in Technology-Based Courses

ItemsN	X	Remarks
11.Provision of trained manpower in applied science and technology through school-industry partnership	40	3.31 Agreed
12.Providing the students with the technical knowledge and the vocational skills necessary to sustain their interest in technology-based courses through industrial training programme.	40	3.58 Agreed
13.Make learning environment a replica of the workplace	40	3.76 Agreed
14.Providing teachers with the technical knowledge and vocational skills necessary to sustain students' interest in technology-based courses through workshops and training	40	3.21 Agreed
15.Restructure school curriculum to run harmoniously with industrial activities to enable students acquire requisite skills and knowledge before graduation.	40	3.10 Agreed

Table 3 presents results on how school-industry partnership could sustain students' interest in technology-based courses. The table indicates that items 11, 12, 13, 14 and 15 with the mean scores of 3.31, 3.58, 3.76, 3.21 and 3.10 respectively. From the results, all the respondents agreed that a harmonious partnership between technical colleges and relevant industries could foster a congenial atmosphere for learning among students, which will in turn, encourage them and also sustain their interest to study technology-based courses.

Discussion of Findings

Technical teachers' qualification is considered very essential in sustaining students' interest in technology-based courses. The findings revealed that achievement higher qualifications could encourage teachers to acquire more skills and robustly build their capacity to perform. This was clearly evident in the responses of the respondents, whose mean scores exceeded the agreement level of 2.50.This finding is in line with the submission of Erickson and Strommer (2013) which affirmed that, any activities carried out by a teacher to promote learning also enhances students' interest which in turn facilitate impartation of requisite knowledge and skills.

Findings also revealed that most teachers, who teach technology-based courses sparingly, use instructional materials in delivering their instructions or lessons. The finding concurs with the submission of (Okoye, 2019) that attributed lack of instructional materials and use of inappropriate teaching methods and strategies are some of the teething challenges to effective teaching of technical and vocational education in Nigeria. More so, the findings posited that the use of instructional materials, field trips, e-learning and students'-centered teaching approaches could sustain students' interest in technology-based courses. The findings collaborated with the assertion of Eze, Okoye and Onwusa (2020) which maintained that use conventional teaching methods and sundry learning approaches that

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encourage active learning could spur students to learn and retain what they learnt in the classroom. Hence, teachers should strive to incorporate instructional materials in teaching, to enable students learn rapidly and as well put what they learnt theoretically into practical.

The findings further revealed that school-industry partnership could make the learning environment a replica of the expected working environment; which howeversustains students' interest in technology-based courses. This report conforms to Pillay, Watters, and Hoff (2013) which contend that school-industry partnerships are posed as a method for the public sector to reduce cost through partnering with the private sector. This is however based on an assumption that the private sector is experience and creativity driven, and therefore provides a robust preparatory ground for learners to acquire necessary skills. In acknowledging the foregoing assertion, Pillay et al affirmed that school-industry partnership is a sine qua non for technical college to keep pace with the requisite knowledge, new work practices and products with innovative educational solutions.

Conclusion

Cognizant of the apparent dwindling interest of students in technical colleges, who are meant to stimulate technological advancement of the country towards global competitiveness, the study investigated the perceptions of technical education teachers on factors that could arouse and sustain students' interest in technology-based courses. Based on the findings, it was therefore, concluded that teacher's qualification, mastery and appropriate application of teaching methods and strategies as well as a properly articulated school-industry training partnership could significantly revamp and sustain the abating interest of students in technology-based courses.

Recommendations: Based on the findings of the study, the following were recommended:

1. Ministry of Education in partnership with school administrators should synergize with relevant industries to enable students learn in an environment replica to where they will work after graduation. This will not only expose them to the basic skills and know-hows in their fields, but also provoke and sustain their interest in technology-based courses.
2. Government should in addition to providing scholarships and trainings for teachers' capacity building, remunerate them commensurately. This will motivate them to put in more effort to their jobs instead of engaging in other activities that might distract them.
3. Government should ensure that only qualified teachers with cognate experience and qualifications are employed, and also, subjects assigned based on their area of specialization.
4. Teachers should employ appropriate strategies and teaching methods, such as student-centered methods, so as to effectively impart the requisite knowledge and skills in students.

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