

## TECHNICAL EDUCATION GRADUATE STUDENTS' CAREER SATISFACTION AND WILLINGNESS FOR SKILLS UPGRADING: THE MEDIATING ROLE OF LIFELONG LEARNING OPPORTUNITIES

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### **Abstract**

*The call for lifelong learning (LLL) may continue to be fantasized if the individual's characteristics towards personal and professional development for career satisfaction and intentions for skills upgrading are not taken into consideration. This study, therefore, investigated the relationship between career satisfaction and willingness for vocational skills upgrading via perceived lifelong learning opportunities among postgraduate students of technical education. The correlational survey research design was this study employed. The participants were 97 postgraduate students of technical education programmes in universities in south-south and south-east Nigeria. Questionnaire was used for data collection. It was validated by experts, and it has a reliability coefficient of 0.91 via Cronbach's alpha. Data analysis was done using bivariate correlation, bias-corrected (BC) bootstrap of 5000 re-sample and Fisher-Z transformation. Results revealed a significant relationship between career satisfaction and willingness for vocational skills upgrading, which was partially mediated by perceived lifelong learning opportunities. Gender and employment status differences were found significant in the relationship between career satisfaction and willingness for skills upgrading.*

*Keywords: technical education postgraduate students, career satisfaction, intentions for skills upgrading, lifelong learning, demographic characteristics.*

### **Introduction**

Learning experiences that enhance personal and professional developments are very vital in today's society where knowledge, information, science, and technology are increasingly influencing human endeavours and activities. These have predominantly affected the thoughts, actions, and activities of all works of life. It is, therefore, necessary to continually improve one's personal and professional competencies to cope with the present competitive society (Laal & Salamati, 2012). These necessities involve the integration of formal, non-formal and informal learning process which are interrelated and interdependent (Laal, Laal, & Aliramaei, 2014; Kyndt, Govaerts, Verbeek, & Dochy, 2013). These forms of learning are anchored on vocational and technical skills, as well as lifelong learning competencies. Hence, it is important that undergraduates and graduate students (herein referred to as postgraduate students) do not absolutely depend on the skills acquired from the formal education system, but to integrate the different forms of learning for personal, career and professional development (Olatunji, Otefism, & Ajayi, 2017).

Personal and professional developments of postgraduate students of technical education are also vital to meet advancement in technological innovation. In this study, the postgraduate students are considered because it is assumed that majority of them are already in the world of work or in search of one form of job or the other to contribute meaningfully to national development via their personal and professional skills. Thus, it is believed that the students should be yearning for capacity building to become more relevant in our society, which is a function of an increased level of career satisfaction. Hence, the continual need to accentuate and seek for lifelong learning and its related opportunities among postgraduate and other students of technical education.

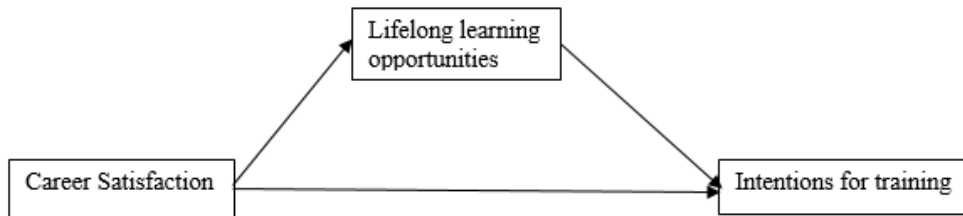
Lifelong learning involves steadiness in learning over one's life in and beyond the formal educational settings. It is the continuous building of skills and knowledge throughout the life of an individual to enhance social inclusion, active citizenship, personal development, and employability (Aliwa, 2017; Illieris, 2006; Laal & Salamati, 2012; Kyndt et al., 2013). In this study, lifelong learning is anchored on experiential learning theory (Kolb, 2015; Raelin, 1998); which proposes that learners learn skills better when exposed to real-life situations, hence bringing them to the experience of what is to be learned. This kind of learning keeps the individual abreast of the recent changes and improvement in knowledge and skills in technology and allied fields of study. The researcher, therefore, deduces that lifelong learning opportunities are outcomes of experiential learning in TVET. Hence, it is one of the essences of Technical Education for skills development among its recipients.

Technical Education prepares its prospective graduates for the world of work, by inculcating the requisite school-to-work transition skills in the students. The responsibilities of technical education include preparing its prospective graduates for job opportunities, to be self-reliant, and to develop career-related decisions and choices in their areas of studies (Bassualdo & Toby, 2004; Ekpenyong, 2011; Federal Republic of Nigeria, 2013). This implies that technical education is also expected to give learners the knowledge and practical skills that will enable them to continue in the world of work. Hence, there is a synergy between technical education and lifelong learning. Lifelong learning and technical education can be achieved via formal, non-formal, and informal education for employability skills (Ifeanacho, Uba, & Chukwuji, 2017; Illeris, 2006; Laal, 2012; Laal & Salamati, 2014). The totality of these is to enable one develop career competencies, get acquainted with the lifelong learning opportunities and benefits, and propel one's intention to undertake vocational training periodically for personal and professional development, which are dependent on the level of the individual's career satisfaction.

Career success largely reflects an individual's professional growth and development over a lifetime. Such development can be achieved by exploring and effectively utilizing opportunities, and engaging in related vocational training. The implicit aspect of career success is career satisfaction (Shockley, Ureksoy, Rodopman, Poteat, & Dullaghan, 2015), which is an individual's idiosyncratic evaluation of his/her own career, as a central indicator of subjective career success (Holfmans, Dries, & Pepermans, 2008; NG, Eby, Sorensen, & Feldman, 2005; Spurr, Abele, & Volmer, 2011, 2015). Career satisfaction is a subjective measure that captures one's discernment of his/her satisfaction with the overall career goals, goals for income, goals for advancement and goals for the development of new skills (Greenhaus, Parasuraman, & Wormley, 1990; Yap, Cukier, Holmas, & Hannan, 2010). Thus, an individual's perception of achieving career goals may predict the willingness for professional or vocational training.

Willingness has to do with the preparedness to engage or not to engage in a task. It is commonly equated to intention in vocational education and guidance. Thus, willingness will be used interchangeably with intention in this study. Hence, the theory of planned behaviour (TPB – Ajzen, 1991) also supports this study. The theory premised that human behaviour is best predicted by people's intentions to or not to perform the behaviour in question. Intentions are therefore the extent to which individuals are willing to try hard to perform the behaviour or the effort they are planning to exert in order to perform that behaviour (Ajzen, 2011, Chukwuedo, 2018). Therefore, the most proximal determinant of professional or vocational development is the individual's intentions to engage in vocational, occupational or professional training (Kyndt, Onghena, Smet, & Dochy, 2014; Sousa-Ribeiro, Sverke, Coimbra, & De Witte, 2018). Thus, engaging in vocational training is an indication of possessed lifelong learning competency or perceived lifelong learning

opportunities. By implication, the researcher theorizes that an individual's perceived lifelong learning opportunities may be the mechanism to explain the relationship that may exist between one's level of career satisfaction and the intentions to undertake vocational training. Hence, perceived lifelong learning opportunities is considered as a mediator in this study. The mediation model is shown in figure 1.



**Figure 1.** Simple mediation model on willingness for skills upgrading via perceived lifelong learning opportunities

The mediation model in figure 1 depicts that career satisfaction has a direct and indirect link with intentions or willingness to undertake vocational skills training. In other words, the researcher theorizes that one's level of career satisfaction will directly predict his/her intentions to undertake vocational skills training for improvement. In another dimension, the researcher also presumes that one's level of career satisfaction will predict his/her willingness to undertake vocational skills training via perceived lifelong learning opportunities. This implies that it is expected that one's level of career satisfaction will predict his/her perceived lifelong learning opportunities, which will in turn, predict the willingness for vocational skills training. This model represents the mediation framework of this study.

### Statement of the Problem

Technical education is meant to give learners the theoretical and practical skills needed for school-to-work transition. The programme is meant equip individuals with the practical skills that are needed to cope with the advancement in technology. It is expected that its graduates should be able to perceive opportunities, handle present career-related situations, and develop lifelong learning skills. Congruently, the benefit of lifelong learning opportunities cannot be over-emphasized in that it involves one's lifetime in enhancing knowledge and skills.

Unfortunately, the goals of technical education have not been achieved satisfactorily for students' effective skills development within the educational and industrial contexts. This situation has led to dissatisfaction in this programme among the students (Chukwuedo & Ogbuanya, 2018), and perhaps among the graduates. Thus, this leads to a high rate of job attrition among technical education graduates; which is an indication of career thwarting behaviour. It, therefore, appears that these graduates find it difficult to perceive and effectively utilize opportunities available around them, or engage in vocational training for personal and professional development. This study, therefore, investigated the relationship between the level of career satisfaction and willingness to participate in vocational training among postgraduate students of technical education. The study also determined the mediating role of perceived lifelong learning opportunities, as well as the moderating roles of the students' demographic characteristics on the relationship between career satisfaction and willingness to engage in skills upgrading for personal and professional development.

## Hypotheses

Based on the discussions so far, the following hypotheses guided this study.

1. There is a significant relationship among the students' demographic variables, career satisfaction, perceived lifelong learning opportunities and willingness for vocational skills upgrading.
2. Perceived lifelong learning opportunities will significantly mediate the relationship between the students' levels of career satisfaction and willingness for vocational skills upgrading.
3. There will be significant differences in students' gender, age, academic programme and employment status on the relationship between the students' levels of career satisfaction and willingness for vocational skills upgrading.

## Methodology

This study was a cross-sectional survey that employed the correlational survey research design since it determined the relationship between the independent and the dependent variables of the study in a snap-shot of data collection (Gall, Gall & Borg, 2007; Gay, Mills & Airasian, 2011). The population of the study was made up of 224 postgraduate students of technical education from four federal universities that offer technical education at the postgraduate level in south-south and south-east Nigeria. The participants were 97 postgraduate students of technical education programmes (63 from the south-east and 34 from the south-south), who were conveniently sampled because of the inability of the researcher to meet the majority of the students at a time or in a cluster in their various institutions. This is because the majority of the students were not undertaking their course work but were already embarking on their research work. Hence, they were not steadily in school at all time at the time of this study.

The instrument used for data collection was a questionnaire with two sections A and B. Section A elicited demographic characteristics of the postgraduate students, such as gender (male and female), age (young and old), academic programme (M.Ed and Ph.D), and employment status (employed and unemployed). In this study, the researcher purposively categorized age as follows: 20 to 35 years as young, while above 35 years represented old. Section B of the questionnaire was made up of 13 items. It measured career satisfaction (five items; e.g. I am satisfied with the success I have achieved in my career), perceived lifelong learning opportunities (four items, e.g. I recognize the opportunities available for me to develop my skills for professional development), and willingness to participate in vocational training (four items; e.g. I cannot expend effort any longer to engage in any vocational training). The five items of career satisfaction were based on Greenhaus, Parasuraman, & Worrnley (1990) career satisfaction scale, while the items that measured perceived lifelong learning opportunities and willingness for vocational skills upgrading were developed by the researchers, by consulting previous literature (e.g. Kyndt et al., 2014; Sousa-Ribeiro et al., 2018).

The questionnaire was validated by experts, and reliability coefficients of .89, .93, and .90 were determined using Cronbach's alpha method for career satisfaction, willingness to participate in vocational training, and perceived LLL opportunities respectively. The overall alpha value of the questionnaire was .91. For effective administration and retrieval of the questionnaire, two research assistants were also used for data collection. The data analyses were done using bivariate correlation (Pearson's product moment correlation coefficient), Fisher-Z transformation statistic, and structural equation modeling (SEM) by applying bias-corrected (BC) regression estimates with 5000 re-sample (Preacher & Hayes, 2004). A bivariate correlation was used for hypothesis 1, SEM for hypothesis 2, and Fisher-Z for hypothesis 3.

The decision rule for the bivariate correlation was based on the range of R-values: -.35 to +.35 for weak/no correlation; +.35 to +.65 or -.35 to -.65 for moderate correlation; and +.65 to 1.00 or -.65 to -1.00 for strong correlation (Gay et al., 2011). For the Fisher-Z transformation, the decision was based on the difference between the calculated Fisher-Z and critical Fisher-Z (1.96) values at .05 level of significance, such that the hypothesis is retained when the critical Z is less than the calculated Z; otherwise, it is rejected. The statistical packages employed were Statistical Packages for Social Sciences (SPSS 22.0) and Analysis of Moment of Structure (AMOS 22.0).

**Results**

The results of this study are presented as follows:

*Relationship between Variables*

The test of relationships between variables is presented in Table 1.

**Table 1**

*Correlation of the study variables*

Variables	M	SD	1	2	3	4	5	6	7
1. Gender	1.16	.373	1						
2. Age	1.56	.499	.021	1					
3. Programme	1.27	.445	.008	-.054	1				
4. Employment	1.34	.476	-.061	.102*	.120*	1			
5. Career satisfaction	2.31	.645	.121**	.115*	.141*	.250***	1		
6. LLL opportunities	2.44	.872	.173*	.197	.117*	.191**	.415***	1	
7. Willingness for training	2.13	.554	.142**	.132**	.126	.203**	.372***	.331***	1

Note. M – Mean, SD – Standard Deviation, \*\*\*p <.001, \*\*p <.01. \*p <.05. LLL – lifelong learning

Table 1 reveals the correlations between the demographic characteristics, career satisfaction, perceived lifelong learning opportunities, and willingness to participate in vocational training. From the table, gender and employment status were significantly correlated with career satisfaction, perceived lifelong learning opportunities, and willingness to participate in vocational training. The results also depicted significant correlations among age, career satisfaction, and willingness to participate in vocational training. Academic programme also showed significant correlations with career satisfaction and perceived lifelong learning opportunities. Finally, career satisfaction, perceived lifelong opportunities, and intentions to participate in vocational training were significantly correlated. Thus, hypothesis 1 is upheld.

*Test of Mediation Model*

**Table 2**

*Summary of mediation role of perceived lifelong learning opportunities*

Hypothesis	Direct Effect			Indirect Effect			Remark
	Estimate	BC 95% CI		Estimate	BC 95% CI		
		LL	UL		LL	UL	
CS → LO → WT	.371***	.021	.349	.216**	.017	.150	Partial Mediation

Note. CS – Career Satisfaction, LO – Perceived Lifelong Learning Opportunities, WT – Willingness to participate in Vocational Training, CI – confidence interval, LL – lower limit, UL – upper limit. BC- bias corrected; \*\*\*p <.001, \*\*p <.01.

Table 2 depicts that the direct effect ( $\beta = .371$ ,  $CI = .021$  to  $.349$ ,  $p < .001$ ) and the indirect effect ( $\beta = .216$ ,  $CI = .017$  to  $.150$ ,  $p < .01$ ) were significant. Since the direct effect was significant, partial mediation is confirmed. This result means that few amounts of variance that career satisfaction explains in the students' intentions to participate in vocational training was accounted for via perceived lifelong learning opportunities. Thus, perceived lifelong learning opportunities partially mediated the relationship between career satisfaction and intentions for skills upgrading. From these results, hypothesis 2 is partially upheld.

**Table 3**

*Fisher-Z transformation on differences in demographic variables on the relationship between career satisfaction and intentions to participate in vocational training.*

Variables	Categories	N	R	Zr	Z-cal.	Z-crit.	Decision
Gender	Male	81	.101	.1003	2.04	1.96	Rejected
	Female	16	.162	.1614			
Age	Young	43	.153	.1411	1.46	1.96	Retained
	Old	54	.112	.1105			
Programme	M.Ed	71	.110	.1105	.81	1.96	Retained
	Ph.D	24	.131	.1308			
Employment	Employed	64	.103	.1003	2.68	1.99	Rejected
	Unemployed	33	.281	.2877			

*Note.* Zr – Fisher's z, Z-cal. – calculated value, Z-crit. – critical value.  $p < .05$ .

The results shown in Table 3 reveal that the correlation between career satisfaction and willingness to participate in vocational training among male and female technical education postgraduate students are .101 and .152 respectively. Since the critical value (Z-crit. = 1.96) is less than the calculated value (Z-cal. = 2.04), there was a significant difference between male and female students on the relationship between their levels of career satisfaction and willingness for skills upgrading. Similarly, there was a significant difference (Zr-cal. = 2.68 > Z-crit. = 1.96) between employed and unemployed students on the relationship between their levels of career satisfaction and willingness for skills upgrading. Conversely, no significant difference in age (young and old) and academic programme (M.Ed and Ph.D) of the students were found on the relationship between career satisfaction and willingness to participate in vocational skills upgrading. Thus, hypothesis 3 is partially upheld.

### Discussion

This study aimed at determining the relationship between technical education postgraduate students' level of career satisfaction and intentions to participate in vocational training via their perceived lifelong learning opportunities. The central goal of the study is to provide empirical evidence that will help to encourage postgraduate students to actively engage in lifelong learning opportunities as well as up-skilling activities, because of the prevailing economic degradation, increase in unemployment and underemployment status of graduates, and fall in the standard and quality of education in Nigeria.

Based on the outcomes of hypothesis 1, this study revealed that there is a significant relationship between the students' level of career satisfaction and their intentions to participate in vocational training. Thus, the

students' low levels of career satisfaction significantly predict their low intentions to participate in vocational skills training. Similarly, the perceived lifelong learning opportunities of the students were significantly predicted by their levels of career satisfaction. Perceived lifelong learning opportunities also predicted the students' intentions to participate in vocational training. All in all, this study has shown that intentions for skills upgrading among technical education postgraduate students largely depend on their perceived lifelong learning opportunities as well as their level of career satisfaction. In a similar vein, this study revealed that perceived lifelong learning opportunities and intentions for skills upgrading depend on the students' demographic characteristics (Sousa-Ribeiro et al., 2018). These outcomes are in consensus with Nissen (2006) and van Vianem, Dalhoeven, and Pater (2011) who found that aging is related to willingness to undergo career training.

The findings of hypothesis 2 revealed a partial mediating role of perceived lifelong learning opportunities on the relationship between the students' levels of career satisfaction and their intentions to participate in vocational training. This implies that the relationship that exists between career satisfaction and intentions to participate in vocational training among technical education postgraduate students cannot absolutely be explained via perceived lifelong learning opportunities. However, lifelong learning opportunities partly play a role in the relationship. All in all, these findings revealed that intentions to participate in vocational skills upgrading and perceived lifelong learning opportunities among the students are predicted by their level of career satisfaction. Perceived lifelong learning also predicted intentions for skills upgrading. These findings are inconsonant with Ngurukwem and Ede (2017) who affirm that lifelong learning enhances reskilling. The findings also agree with Udegbonam and Koledoye (2017)'s reviewed study on enhancing level of employability via training and lifelong learning.

From the outcomes of hypothesis 3, this study found that there were significant differences in gender (male and female) and employment status (employed and unemployed) on the relationship between the students' levels of career satisfaction and their intentions to participate in vocational training. Conversely, there were no significant differences in academic programme (M.Ed and Ph.D) and age (young and old) on the relationship between the students' levels of career satisfaction and their intentions to participate in vocational training. These explain that male and female, as well as the employed and unemployed postgraduate students of technical education significantly differ in the relationship between their levels of career satisfaction and intentions to participate in vocational training. These results are relatively in consensus with previous research findings (e.g. Kyndt et al., 2014; Nissen, 2006; van Vianem, Dalhoeven, & Pater, 2011) who independently confirmed that demographic characteristics are potential moderators of career and lifelong learning outcomes.

### **Implication of the Study**

This study has both theoretical and practical implications. Theoretically, this study contributes to the extant literature on career satisfaction and lifelong learning. This study has also extended lifelong learning and career literature in the context of postgraduate students, technical education and Nigeria. This study has shown that there are links among lifelong learning opportunities, career satisfaction and intentions to engage in vocational skills training. Thus, the study contributes to the theories of career, lifelong learning, and vocational skills development.

Practically, the findings of this study have implications for vocational educators and administrators, students, individuals, and society at large. It is an awareness to vocational educators and administrators on the need

for an effective link among formal, non-formal and informal lifelong learning. Hence, it creates awareness to the students on the need to enhance their lifelong learning competencies, as well as their skills for career satisfaction.

### **Limitations of the Study**

Despite the relative contributions of this study, it is not void of limitations. The findings of this study may be restricted to be generalized to other categories of students or individuals since the participants of the study are strictly postgraduate students of technical education. This study is also a cross-sectional survey, hence there may be a restriction to generalize the findings because of some confounds that were not controlled in this study, and events that may occur over time. Thus, the need for longitudinal and experimental studies in this area of research.

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