DOI: https://doi.org/10.53555/nnel.v9i4.1632 Publication URL: https://nnpub.org/index.php/EL/article/view/1632

EVALUATING INTEREST IN VOCATIONAL PROGRAMS IN ANAMBRA STATE, NIGERIA: DOES CREATIVE THINKING AND OPEN-MINDEDNESS MATTER?

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Abstract

The government's dedication to ensuring that students acquire technical and vocational skills for self-development and economic growth is reflected in the integration of the TVET program into Nigeria's educational ecosystem. Nevertheless, signs point to a decrease in students enrolling in vocational programs. The current study aimed to determine whether secondary school students were interested in the TVET program based on critical thinking and open-mindedness. The study involved 233 secondary school students from public and private institutions in Anambra State. 13 (12.4%) respondents were 17 years old, 103 (58.0%) respondents were 16 years old, and 87 (25.6%) respondents were 15 years old. Among the respondents were 84 males (41.0 percent) and 119 females (59.0 percent). They filled out self-report questionnaires on their interest in TVET, their level of creativity, and their level of open-mindedness. The results showed that creative thinking (=.183, p .001) and open-mindedness (= 168, p .001) among secondary school students in Anambra State were significant predictors of student interest in vocational programs. The two predictor variables explained the total variance in the students' interest in vocational programs to 42.2%. The study's conclusions and practical implications are discussed.

Keywords: *vocational programs, creative thinking, open-mindedness, interest, students*

INTRODUCTION

Even though it is hard to figure out how much education costs compared to what it gives back, education is an essential human industry in which any country can participate (Afolayan, 2015). Vocational education's economic and social importance has not been lost on the Nigerian population. It remains the primary tool for national socioeconomic development, individual socioeconomic empowerment, and poverty reduction (Romina, 2013; Ubogu & Veronica, 2018). The idea that every individual should have the opportunity to participate as entirely as possible in the social life of those around them is central to the concept of democracy. In its broadest sense, education refers to learning that involves transmitting one generation's knowledge, abilities, values, beliefs, and routines to the next. It can also be defined as an instrument of unrivaled quality for social engineering and development. It increases individual potential (Aja-Okorie, 2013), produces a quality workforce (Aluede et al., 2020), accelerates social and economic progress (Afolayan, 2015; Oladunni et al., 2018), and offers the necessary skills and knowledge to live a better life (Bello & Othman, 2020). The education system in Nigeria continues to develop and expands to meet the demands of the contemporary society that strongly advocates the teaching and learning of skills. As such, technology & vocational education training (TVET) encourages school students to develop technical skills and be self-dependent; however, the aspiration and interest to pursue higher education in technical and vocational fields are still low among school students.

The skillsets required for numerous jobs are rapidly evolving due to technological advancements. Since the rate of change is rapid, it is essential to constantly acquire new skills through lifelong education. Education models that have historically focused primarily on theoretical knowledge may not adequately prepare today's youth for the dynamic and ever-changing nature of the modern workplace. Thus, The value of TVET for national development cannot be overstated, particularly in light of the deteriorating economy, rising unemployment, and the inapplicability of some academic content to societal needs. (Akanbi, 2017). Research on emerging innovative approaches to TVET in both developed and developing country contexts is documented (Arthur-Mensah & Alagaraja, 2013; Igberaharha, 2021; Ngor & Tambari, 2017; Osidipe, 2018; Paryono, 2017; Postiglione & Tang, 2019; Raimi & Akhuemonkhan, 2014; Roslan et al., 2020; Siddiky & Uh, 2020; TamBari, 2019).

Nigeria is strengthening policy guidance and regulatory frameworks for technical and vocational education and training (TVET) and improving its governance and program implementation for economic transformation and sustainable development. The change requires that TVET programs are integrated into academic curricula. TVET describes any education that mainly impacts learners' skills, preparing them for self-employment (Odu, 2011). The National Policy on Education (2004) described vocational training as that aspect of education that facilitates achieving practical and applied skills, including basic scientific knowledge. TVET is a distinct type of schooling, training, or re-training designed to provide an individual with the tools needed to accept the outcome of the workplace. It is intended to foster the attitudes, skills, abilities, and knowledge required to keep one's job. Thus, TVET refers to the essential training, skills, abilities, and understanding students should acquire to be well-prepared for the workplace and compete globally (Oviawe & Ehirheme, 2020).

Technical Vocational Education and Training (TVET) is frequently cited as a critical factor in a country's socioeconomic development and technological advancement (Chinyere et al., 2015). In today's society, technical knowledge is not the only skill needed; employability skills are also essential to compete for jobs and keep them in the global industrial market (Ismail & Mohammed, 2015). The persistent unemployment problem has been linked to inadequate knowledge and skill acquisition for students, who later become unemployed due to insufficient employable skills (Osidipe, 2017). As a result, TVET aims to create a skilled workforce that can compete and succeed in a rapidly changing environment and boost a nation's economy (Okoye & Chijioke, 2013). Research in TVET has linked vocational education to poverty reduction (Achigbe, 2016; Hartl, 2009; Hoeckel, 2014; Nwachukwu, 2014; Ogbuanya & Izuoba, 2015; Okoye & Eze, 2010; Opoko et al., 2018; Pongo & Obinnim, 2015; Searles, 2010; Yi et al., 2015). Indeed, TVET's poverty reduction role reflects its national security potential (Ogbunaya & Udoudo, 2015). Developing the TVET program in any environment largely depends on the learner's interest. Consequently, interest in the program is less than expected, given the importance associated with the TVET programs.

TVET programs encounter many challenges in Nigeria's secondary education ecosystem, including personal interests. As a result, psychosocial and cultural factors significantly impact how an individual's interests develop and affect attitudes toward vocational and technical education. The idea of personal interest is crucial to understanding human behavior and motivation. Individual interests are known to develop in early childhood and stay largely stable throughout childhood and adolescence (Su et al., 2019). An individual's interests can develop due to psychological factors, background variables, and social influences (Wang et al., 2019). Human development occurs within a system comprising ties (such as family, neighbors, school, or peers), affiliations with different social groups, and a significant sociopolitical environment (Wang et al., 2019).

Previous studies have underscored the factors that could influence students' interest in TVET to include ignorant of the scope (Rathidevi & Sudhakaran, 2019), parental influence (Hina Ayub, 2017), parental educational status, role model (Yaakob et al., 2020), including gender and subject preference. Given those mentioned earlier, this study aims to determine a correlation between students' interest in the TVET program and the crucial variables of creative thinking and open-

mindedness among secondary school students in Anambra State, Nigeria. The current study also aims to add to the literature on secondary school students' interest in TVET programs and contribute to the TVET discussion.

Creative thinking and interest in TVET

Creative thinking encompasses viewing a phenomenon differently and discovering novel approaches to resolve issues. It refers to the knowledge and regulation of one's cognitive processes, which has been regarded as a critical component of technical skills. However, the current literature on the association between creative thinking and interest in TVET remains scarce. The underlying role of creative thinking in interest towards TVET appears insufficiently explored and explained. This paper focuses on innovative thinking in students' technical and vocational education interests. Developing critical thinking skills has become the focus of attention in meeting the needs of the labor market with social and complex challenges (Cruz, Payan-Carreira, and Dominguez, 2017). Students need critical thinking skills to solve increasingly complex life problems (ŽivkoviĿ, 2016) and enhance students abilities (Hashemi, 2011), including generating ideas and innovations both comparatively and competitively in global competition (Martincová & Lukešová, 2015). Thus, creative thinking might potentiate a favorable interest needed to enroll in TVET program. Given the above, the following hypothesis is proposed to establish the correlation between creative thinking and students' interest in the TVET program among secondary schools in Anambra State:

H^1: *Creative thinking would significantly correlate with interest in TVET programs among secondary school students in Anambra State, Nigeria*

Open-mindedness and interest in TVET

Open-mindedness is the disposition to consider ideas and viewpoints that are novel or different from one's own. Open-mindedness is typically considered an intellectual virtue that brings humans into contact with reality and its complexities (Verducci, 2019). Because of its close connection to creative thinking, it enables students to investigate the possibility of moving beyond barriers. Students who have received an education with an open mind are more likely to challenge their preconceived notions, recognize when they have been given incorrect information, and consider different paths to take when making decisions. Being open-minded also provides the opportunity to investigate how various people in other parts of the world think and behave. This involves considering experiences, beliefs, values, perspectives, and so on that are different from one's own. It is a way to find a solution to a problem that is personally and socially relevant by considering various ways of thinking about the issue at hand. It may represent an antidote to a potential narrowness of view, resulting from a person only pursuing what interests them. Open-mindedness involves being receptive to various ideas, arguments, and information. Being open-minded is generally considered a positive quality and necessary to think critically and rationally, which might potentiate interest in skills. Thus, open-minded students may be likely to engage in the TVET program. Therefore, the below hypothesis is proposed:

H^2: *Open-mindedness would significantly correlate with interest in TVET programs among secondary school students in Anambra State, Nigeria*

Method

This study adopted a cross-sectional survey design. Researchers used a quantitative technique based on prior research (Hair et al., 2010). A structured self-reported questionnaire was used to collect data. Three hundred eighty-six participants were randomly selected from government secondary schools in Anambra State, Nigeria. The researcher surveyed the sampled secondary schools, briefed the students (respondents), and distributed the questionnaires. Additionally, participation was voluntary, and no participants were forced into partaking in the study. Students were informed of the study through a verbal message from the school's contact person. A student who was interested in participating had to be 15 – 17 years old and would be able to consent to participation when accessing the survey.

Measures

Interest in TVET was measured using a 19 items questionnaire adapted from Baker et al. (2015). The scale consists of items such as "I like working with my hands" (Affection), "I know different ways to create a design" (Cognition), and "I am persistent and willing to try a new process to get an invention to work" (Conation). The participants responded on a five-point Likert-type scale that ranged from "Strongly disagree = 1" to "Strongly agree = 5". In this study, Cronbach's alpha coefficient of the instrument was a=.82. A higher score on this scale indicates a positive interest.

Creative thinking was assessed using the Creative Thinking Assessment Scale (Barak & Doppelt, 2000), the scale initially designed to evaluate the awareness of thought, observation of thinking, strategy, and reflection. The respondents rated their creative thinking ability with a 10-item Linkert form scale scored in 5-point ratings ranging from 1 (not likable at all) to 5 (very likable). The scale was validated following a pilot study, and Cronbach alpha .78 reliability coefficient was obtained. A higher score indicates a high creative thinking skill.

Open-mindedness was measured with the Actively Open-Minded Thinking Scale (Stanovich & West, 2007), consisting of 41 items. The response format consisted of six answering categories: Strongly agree (6), moderately agree (5), slightly agree (4), slightly disagree (3), moderately disagree (2), and strongly disagree (1). For all items, a higher score indicated a stronger disposition towards actively open-minded thinking

Result

According to the demographic statistics, there were 87 (25.6%) responders were 15 years old, 103 (58.0%) were 16 years old, and 13 (12.4%) were 17 years old. There were 119 (59.0%) females and 84 (41.0 percent) males among the responders)

Table.1. Demographic results.

	Frequency	Percentage (%)	Mean	SD
Age			16.64	1.48
15	87	25.6		
16	103	58.0		
17	13	12.4		
Gender				
Male	84	41.0		
Female	119	59.0		

Table 2. analysis for association of students' interest in the TVET program.

	Construct	B	SE	β	t	p
1	(Constant)	4.3	14	.192	23.56	.000
2	CT	.252	.040	.183	6.73	.000
3	OM	.192	.042	.168	4.78	.000

Note. CT= Creative thinking, OM= Open mindedness, R^1 = .422, F = 218.75

Multiple linear regression analysis was performed to assess the correlation of students' interest in TVET with the study's independent variables. Preliminary data analyses were conducted initially to confirm that normality, linearity, and multicollinearity assumptions were not breached. The predictors (creative thinking and open-mindedness) significantly predicted students' interest in the TVET program among secondary school students in Anambra State, Nigeria, whereby F (2, 384) = 200.75,p<.001. This means that creative thinking (β = .183, p < .001) and open-mindedness (β = 168, p< .001) were significant predictors of student interest in TVET among secondary school students in Anambra State. The two predictor variables explained 42.2% of the total variance in the students' interest in TVET. According to Cohen (1988), this is a significant effect.

Discussion

The current study investigated secondary school students' interest in TVET based on creative thinking and open-mindedness. Three hundred and eighty-six participants responded to the instrument of data collection. It was hypothesized that creative thinking and open-mindedness would significantly correlate with interest in TVET. The multiple regression model's results established a statistically significant association of the variables on the respondent's interest in TVET. The result revealed that creative thinking correlated with secondary school students' interest in the TVET program at Anambra State. Thus, the first hypothesis (H^1) is confirmed. This implies that people with high creative thinking abilities are likelier to develop a positive attitude towards TVE. Creative thinking is the ability to establish a novel approach to solving a problem. It encompasses the ability to see various possibilities of solutions for the increasingly complex problems in which individuals are expected to think and form new ways or change the old ways creatively to survive in more challenging competitions. Importantly, individuals with creative thinking abilities tend to explore ideas and are likely to embrace the concept of TVE in education.

Furthermore, the finding showed that open-mindedness significantly correlated with secondary school students' interest in the TVET program in Anambra State. This result indicates that students who are open to new ideas are more likely to embrace the opportunities of TVET programs. The link between open-mindedness and interest in TVET is empirically insufficient in the literature. However, the finding of this study offers insight into the possible interaction effect between open-mindedness and interest in TVET. These findings imply that students' interest in the TVET program among secondary school students in Anambra State could be effectively reinforced by employing measures capable of enhancing creativity. Involving students in self-motivated goal-setting activities, helping them understand themselves and their environments better, guiding them in creating career goals, and giving them a sense of agency are all ways to increase students' interest in the TVET program.

Practical implication

The variables of this study, i.e., creative thinking and open-mindedness, might be crucial to developing interest in the TVET program. Thus, interventions capable of promoting creative thinking and open-mindedness are required in secondary schools. Such intervention will create a pathway for more inclusive participation in Nigeria's TVET programs in secondary education.

Conclusion

This study assesses the interest in TVET among secondary school students based on creative thinking abilities and open-mindedness. Data from the creative thinking assessment and the active open-mindedness scale revealed that the

independent variables positively correlate with interest in TVET. Moreso, the result indicated a more favorable interest than an adverse interest regarding TVET in the study context. Thus, the study concludes that creative thinking and open-mindedness are vital determinants of secondary school students' interest in the TVET program. Despite this knowledge, the sampling and the self-reported measures might affect the generalization of the result. However, the study contributes to the TVET literature by revealing a possible association between creative thinking and open-mindedness in students' interest in the TVET program.

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