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Abstract

The study investigated vocational educators' competencies required for job performance. Four questions gave credence to the study, and one reasonable guess. A descriptive survey design was adopted. A population of 127 vocational and technical educators' participated in the study. Cronbach alpha technique was used for reliability coefficients of 0.84. The questionnaire was validated by three experts. Mean and standard deviation answered the research questions, while a t-test was used for the hypothesis at an alpha level of 5 percent. The finding revealed that vocational and technical educators require pedagogical, problem solving, and internet networking competencies to a very high extent for their job performance, and vocational and technical educators' competencies were not influenced by gender. As such, the null hypothesis was rejected. It was therefore recommended that pedagogical, problem-solving and internet networking competencies contained in this study be embedded in vocational and technical education curriculum, as they are very critical for job performance in today's digitalized and competitive economy.

Keywords: Competencies, Vocational and Technical Educators, Job Performance, Pedagogical Competence, Problem-Solving Competence, Internet Networking Competence

INTRODUCTION

The ability of vocational and technical educators to adapt to school-based knowledge, skills, attitude and competency to work often depends on how adequately exposed they have been to modern day technology and office environment. Worldwide, employers seem keen to recruit employees with adequate competencies to occupy various positions in their organizations to boost productivity and achieve organizational objective. It therefore, becomes incumbent for vocational and technical educators to perceive competencies necessary to access the true needs of society and try to match them with appropriate training that will facilitate the acquisition of the right competencies needed for job performance (Dumbiri & Nwadiani, 2020). This also will to a great extent depend on the perception of individual or group.

Perception is a way a person or group of people reasons or views something or an event in a given situation. Vocational and technical educators' perception of the competencies for job performance depicts their deep and clear understanding of the competencies they require to adequately carry out their functions. Competent teachers have knowledge of global, national and socio-cultural issues as these manifest in their intellectual sensitivity and ability to help learners become competent. Leveraging the knowledge resources of vocational and technical educators appears to be vital to gain competitive advantage to ensure vocational and technical education graduates as well as institutional competencies.

Competencies are traits of behavior of people that enhance performance within a particular job. Organizations and society in general are facing a lot of challenges in highly competitive market. Hence, competencies are needed to overcome these competing challenges in any organization. Competence is a person's attributes necessary for the job performance to the appropriate standard.

Teachers, vocational and technical educators, lecturers, tutors were used interchangeably in this study. Vocational and technical educators, male and female, in the universities and colleges of education are professionally trained teachers for the content of vocational and technical education curriculum, who are competent to teach the content of the programme (Oviawe, Mat Nashir & Azman, 2021). Vocational and technical education is a global programme aimed at preparing individuals for improved economic participation through skill acquisition to be intelligent, employable and self-reliant. The courses offered are developed to expose the students to core areas in the curriculum including general education, technical, entrepreneurship, general vocational course, teaching methodology and industrial work experience scheme (Esene, 2012). It is the acquisition of vocational and technical skills and competencies that enable students to be competent, employable, self -reliant and successful in their job performance.

Vocational and technical education graduates are a class of graduates, who have gone through either a three or four year programme of study in the content of vocational and technical education curriculum. Student admitted into the university level have the opportunity to complete the programme in four academic years (eight semesters). However, the programme is more practically inclined with the students' involvement in students' industrial work experience scheme (SIWES), workshop practices, teaching practice (TP) and in-house practical's prerequisite for attaining individual and organizational performance. Based on this training programme, vocational and technical education graduates are expected to possess up-to-date competencies required for job performance. The possession of appropriate competencies would offer them unique strategy for job performance.

Job performance according to Tolentino (2013), is the expected outcome needed from employees' behaviour carried out over a time frame, which enhances organizational effectiveness. These include task performance that helps in the transformation of raw materials into finished goods, and contextual performance which helps in the overall expected outcome. Every job requires specific set of competencies for its efficiency, and the individuals who would perform the job need to be laced with the required competencies for job performance. These skills among others include problemsolving, pedagogical and internet networking competencies.

Problem-solving skill is the ability to provide solutions to organizational problems. It is a way of identifying a problem, investigating the reason of the problem, identifying and selecting alternative course of action for a solution and identifying feasible opportunities that would result in knowledge growth, expansion and entails the ability to simplify complicated situations. Three prominent problem-solving skills include analytical skill, logical skill and creative skill.

Pedagogy is a science and practice of using a combination of creative instructional strategies to prepare citizens for the knowledge society. The vocational and technical teacher is expected to possess in-debt knowledge of innovative pedagogies which are a combination of creative strategies of instruction to achieve teaching and learning objectives required in preparing citizens for the knowledge society who will be creative to face changes, able to manage and analyze knowledge. Internet networking competencies on the other hand, help people reach out to other sources of teaching, learning and work materials within and outside the available ones in the best possible manner in achieving efficiency in job performance (Emeasoba & Ezenwafor, 2014). Knowledge of social networking sites enable the teacher share knowledge and information with students and others who share common interest through blogs, twitter, wikis and others frequently used by students. Vocational and technical education graduates' internet networking competencies equip graduates with the unique strategy for effectiveness in today's digitalized, global and competitive economy.

Lack of these foregoing competencies may have brought unemployment to a very high level in Nigeria. Acknowledging the high level of unemployment experienced by tertiary institution graduates, it becomes necessary to for vocational and technical educators to perceive and stimulate innovative thinking and generate new implementable ideas that are vital to employability, effectiveness and efficiency in their job performance.

The unemployment situation in Nigeria is becoming frightening, and graduates from all disciplines look for work and only few get employed. Available statistical data by Federal Bureau of

Statistics (2018) showed a steady increase in the number of unemployed tertiary institutions graduates. There have been unprecedented outcry and complaints from both employers and educators' alike as to the suitability of vocational and technical education graduates in job placement. Vocational and technical education programme designed to equip its recipients with the needed skills for graduates' job performance. In spite of the involvement of vocational and technical students in this skill training programme, it is being observed that vocational and technical education graduates perform dismally at employment interviews and are unable to apply themselves to basic office equipment, machineries and ICT resources. An eye witness observation reveals that employers prefer employing competent graduates who can help them achieve organizational objectives. Could it be that Vocational and technical education graduates do not acquire the necessary vocational and technical competencies in their training programme necessary for job performance? Essentially it is pertinent to find out the extent, pedagogical, internet networking and problem-solving competencies which constituted the problem of the study is required for Vocational and technical educators' job performance.

The purpose of this research was to find out the extent vocational and technical educators' competencies are required for job performance in Edo State. The clear-cut purposes of the study were to establish the extent:

- 1. Vocational and technical educators' require pedagogical competence for their job performance.
- 2. Vocational and technical educators' require problem solving competence for their job performance.
- 3. Vocational and technical educators' require internet networking competence for their job performance.
- 4. Male and female vocational and technical educators require competencies for their job performance

LITERATURE REVIEW

Competencies

It appears that no individual even vocational and technical educators perform in their work place optimally without possessing requisite competencies. This is why, Puspita, Muchlas & Kuat (2020) sees competency as a distinguishing attribute or acquired skill that enables an individual to possess the requisite ability, skills adequately, as well as being aware of the right standard and capability. The author further identified the following competencies a manager would need to manage his employees. They include overseeing others, resolving disunity, demonstrative astuteness, information transmission skills, control achievement, evaluating skills, group building, instructing, solving problem, and encouraging others. Competency refers to characteristics that enable an individual to perform in one occupation than in another. These characteristics are found in behavior of people that make them to excel in a mission. In the same vein, Federer (2018) described competencies as remarkable behaviors that enable people to outperform on the job. These observed behaviors include acquired proficiency. dexterity, understanding, motivations, and inherited characteristics an individual may have. Weldon (2018) opined that competencies can be categorized into broad areas of human behaviour competencies that entail a worker's performance in the job. There are also the specialized competencies which involve the individual employee to use IT systems and computers effectively and efficiently. The leadership competencies is what a leader needs to enable him perform optimally in the discharge of his expected role to make different individuals work harmoniously to bring about desired results. Harrison, Egunsola & Oguntunde (2020) premised that competencies are employee's knowledge and behaviours that guide the employee to optimally perform in their duties successfully. The researcher further said that competencies describe how people's behavior attests to their desirable outcome in their day-to-day job performance. Harrison et al (2020) identified "analytical ability, problem-solving, initiative, negotiation, improving business processes, strategic planning, and data-based decisions as some examples of competencies". From the forgoing, competencies are desired behavioural traits that enable vocational and technical educators to excel and outsmart others in work place more than others.

Vocational and Technical Educators

Vocational and technical educators are educators, teachers, lecturers who have the certification to teach vocational and technical students in their various educational institutions. Nurtanto et al (2021) opined that vocational teachers are also called career or technical teachers that bring their wealth of knowledge to teach in the classroom setting, workshops to enlighten students. Nurtanto et al (2021) further stated that the main focus of a vocational-technical teacher is to direct the affairs of the class through the impartation of the subject matter through classroom instruction. These involve demonstrating skills to their recipients in amenable ways such as the proper use of tools, equipment and software, as well as instructing students on special safe guide measures for doing a specific job. British Council (2017) stated that vocational teachers and trainers are professionals that possess professional skills that aid them in teaching and learning; that is, pedagogical approaches, as well as experts in their area of specialization. Fadilla, Abdullah & Wu (2020) stressed that vocational-technical teachers are also called career and technical teachers who organize students for careers that demand a specific set of skills for recipients' engagement. Vocational educators provide learners with desirable experience that will guide them after leaving school. From the forgoing, vocational educators who are also called career and technical education (CTE) teachers or "career-technology teachers" are those that provide valid information and direct learners to work in various fields for them to be prepared for the world of work.

Job Performance

Vocational educators are required to do their best in raising the standard of the institutions they belong. It is paramount that vocational educators should be able to perform optimally to bring about the desired outcome in their various organizations. This why, Campbell (1990) refers to job performance as the wherewithal to attain desired outcome in an organization. Supporting Campbell, Motowidlo and Peterson (2008) maintained that job performance is seen as the overall relative worth of an organization's unattached behavioral happenings that an employee maintains over a period of time. In a similar vein, Rich, Lepine & Crawford (2010) stressed that job performance is the extent how well workers perform their duties creditably well. This involves numerous factors that are inherent in an individual. These involve both task and contextual performance. It is expected that an employee should be able to add value to the company by selling optimally using his/her wealth of experience as well as maintaining a good relationship with other members of staff. Karnan & Marimuthu (2021) sees job performance as how employees perform creditably well in their work. It further states that "job performance is the training and natural ability (like dexterity or an inherent skill with numbers) of an individual. These include performance impacted by workplace environment factors such as physically demanding tasks, employee morale, stress levels, and working extended hours". From the forgoing, job performance is the ability of a vocational educator to perform well in a given tasks using his wealth of experience in a given task to achieve the desired result of the institution he serves, as well maintaining good relationship with other members of staff as well as those outside the school system.

Pedagogical Competence

Teacher's pedagogical competence is needed as a quality measure in education more especially in the 21st Century. As a result of this, lecturers have a role to play in ascertaining learners' achievements; and also influence students' achievement. The teachers are to teach students who are prepared to face competition. These students must be trained by teachers who have capability of knowing the future needs of the society. Therefore, lecturers need to update their knowledge and skills in order to improve and explore their teaching challenges. Suciu & Mata (2011) defined pedagogical competence as the capability and eagerness to consistently put into use attitudes, knowledge, and skills aimed at encouraging learning in the best way possible. Akhyak and Bakar (2013) see pedagogical competence as the capacity of instructors to manage the learning process in the area of planning, interacting, and performing assessment. In the same vein Sahana (2015) opined that pedagogical competence includes knowledge and skills that enable a teacher to have a deep understanding capable of joining theory and research to aid teaching and learning in the best way possible. From the foregoing, therefore pedagogical competence is the ability of a vocational and technical teacher to combine both human and material resources to achieve the expected outcome. Pedagogical competence is the fufilment of desired result, knowledge, comprehension and readiness of vocational teachers in teaching and learning which

includes teachers' capability to direct the teaching and learning process.

Problem-Solving Competence

In the teaching and learning environment, a lot of problems may come that need immediate solution; otherwise they will form a clog in the wheel effective teaching and learning process. Vocational teachers should be able to solve immediate and foreseeable problems through analyzing situation and applying critical thinking ability to resolve problems and decide on various courses of action to solve the challenges. In realization of these objectives, McCain (2005) stated that problem-solving skills help an individual to discover the cause of a problem and finding solution to it. These skills include some specific skills such as "active listening; analysis; research; creativity; communication; dependability; decision making and team-building". Problem-solving skills refer to the capability of vocational educators to proffer solutions to educational problems in the most effective and prompt manner without any constraints. In the same vein McCain (2005) maintained that problem-solving skills help employees to find out why an issue is occurring and how to solve such issue. Kolmar & Rommeswinkel (2020) opined that problem-solving entails some skills which include problem recognition and analysis. This is made possible through "active listening; data analysis; research; historical analysis; and communication. The second is creating possible solution through brainstorming; creativity; prediction; forecasting, decision making; topic knowledge/understanding; and process flow". The third is evaluation of solution options through "data analysis; creativity; decision making; prioritizing; prediction; forecasting; and evaluating and weighing". The fourth is solution implementation through "communication; dependability; teambuilding; troubleshooting; follow-through; leadership; believability; trustworthiness; and project management". The fifth is evaluation of the solution through "active listening; data analysis; research; communication; decision making; customer service; feedback responses; troubleshooting; and flexibility".

Internet networking competence

The world has become a global village that enables people to share information that were hitherto difficult to share. An intelligent vocational educator is capable of sharing information, and sourcing for information to enhance his performance. This is why Miller (2020) opined that "networking is used by professionals to expand their circles of acquaintances, to address job opportunities, and to increase their awareness of news and trends in their fields or in the greater world". Organizations and teachers may network to forge close relationships with people, industries, students, and fellow colleague in order to achieve optimum result. Miller further stated that networking is an online where people engage with others to share ideas and information that will be of benefit to all. Networking helps people to keep abreast with current realities. It also provides opportunities for people to help themselves. From the foregoing networking is the capacity vocational and technical educators to exchange ambition, aspiration and facts with a group of other professionals as well as persons that have common interests, such that relationships are developed for expected result.

METHODS

Descriptive survey design was adopted for this study. Salaria (2012) opined that descriptive survey design uses questionnaire and interview to collect information about people's attitudes, beliefs, feelings, behaviours and lifestyles from sample representative of the population. The population of the study comprised all 127 vocational and technical educators in Federal, State and Private Universities in Edo State. This was made up of 62 business educators; 28 Home Economics educators; 17 Agriculture Science educators; and 20 Technical educators, as shown in Table 1.

Vocational Educators	Population	Male	Female
Business Educators	62	45	15
Home Economics Educators	28	4	24
Agriculture Science Educators	17	13	4
Technical Educators	20	17	3
Total	127	79	46

Table 1.	Population	of the Res	pondents
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The entire 127 vocational and technical educators also constituted the sample for the study. This was because the population size was manageable. A structured questionnaire titled: Vocational and Technical Educators Competencies Required for Job Performance Questionnaire (VTECRJPQ) was used for data collection.

The questionnaire was made up of gender information, and18-item statements on Vocational and Technical Educators competencies required for job performance. The response category for the study was rated Very High Extent, High Extent, Low Extent, and Very Low Extent. Cronbach alpha was used to determine the reliability which was 0.84.

Copies of the questionnaires were administered directly to the respondents by the researchers with two research assistants. The mean(\bar{x}) and standard deviation (SD) were used to answer all the research questions, while t-test of two independent samples was used in testing the null hypothesis at .05 level of significance. To determine the competencies required by vocational and technical educators' job performance, a decision rule was taken such that, any item with a mean value of 2.50 and above was considered High Extent (HE), while any mean value of 2.50 and below was regarded as Low Extent (LE). For the hypothesis, if the estimated value was greater than the probability value, the null hypothesis was rejected, otherwise it was retained.

RESULTS AND DISCUSSION

Question 1: What is the level of pedagogical competencies for job performance among vocational and technical educators?

The data shown in Table 2 revealed the mean value of the respondents ranged from 2.87 to 3.39. It equally revealed that the standard deviation of the items on the table ranged from 0.54 to 0.79.

The mean values show that all vocational and technical educators required the six items of pedagogy competencies to a high extent. The composite mean of 3.19 revealed that vocational and technical educators required pedagogy to a high extent.

S/N	Items on Pedagogy	x	S.D	Decision
1	Linking curriculum with life experiences.		0.63	HE
2	Motivating students learning.		0.54	HE
3	Combining experiential and lecture methods.		0.61	HE
4	Combining discussion, focusing and structuring methods		0.66	HE
5	Using flipped classroom.		0.72	HE
6	Social/interactive strategies.		0.79	HE
	Composite Mean		0.48	HE

 Table 2. Mean and standard deviation responses of vocational and technical Pedagogical Competence for Job

 Performance

Source: Researchers' fieldwork (2021).

Question 2: What is the level of problem-solving competencies for job performance among vocational and technical educators?

The data shown in Table 3 revealed the mean value of the respondents ranged from 3.18 to 3.42. It equally revealed that the standard deviation of the items on the table ranged from 0.56 to 0.67.

The mean values show that all vocational and technical educators required the six items of

problem-solving competencies to high extent. The composite mean of 3.32 revealed that vocational and technical educators required problem-solving to a high extent.

S/N	Items on Problem-Solving)	$\overline{\mathbf{x}}$	S.D	Decision
7.	Use initiative to provide solutions	3.33	0.58	HE
8.	Fit in teams/groups to achieve	3.18	0.56	HE
9.	Initiative without supervision	3.27	0.60	HE
10.	Develop viable instructional ideas	3.32	0.61	HE
11.	Simplify complicated situations.	3.42	0.62	HE
12.	Apply knowledge effectively	3.35	0.67	HE
	Composite Mean	3.32	0.48	HE

Table 3. Mean and standard deviation responses of problem-solving competence for job performance

Source: Researchers' fieldwork (2021).

Research question 3: What is the level of internet networking competencies for job performance among vocational and technical educators?

The data shown in Table 3 revealed the mean value of the respondents ranged from 2.92 to 3.21. It equally revealed that the standard deviation of the items on the table ranged from 0.66 to 0.83.

The mean values show that all vocational and technical educators required the six items of internet/networking competencies to a high extent. The composite mean of 3.07 revealed that vocational and technical educators required internet networking to high extent.

Table 4. Mean and standard deviation responses of Internet Networking Competency for Job Performance.

S/N	Items on Internet/networking	x	S.D	Decision
13.	Internet search engine for teaching		0.76	HE
14.	Internet interact with students		0.83	HE
15.	Emails use in teaching	3.17	0.74	HE
16.	Students group chart	3.14	0.66	HE
17.	Television and other multimedia devices	2.92	0.73	HE
18.	Panel discussion and students reactions	2.97	0.75	HE
	Composite Mean	3.07	0.56	HE

Source: Researchers' fieldwork (2021).

Hypothesis 1: Male vocational and technical educators do not differ significantly from female vocational and technical educators in their possession of competencies for job performance.

Table 5 shows a t-value of -.565 and a P- value of .573. Testing at an alpha level of 0.05, the P-value is greater than alpha level. This indicates that there is no significant difference in the mean rating between male and female vocational and technical educators on the various competencies required for job performance. As such, the null hypothesis is retained. Meaning there is no significant difference between male and female vocational and technical educators on the competencies required for job performance. This is called Welch's t-test or independent two sample t-test.

Table 5. t-test analysis of male and female Competencies for job performance

Gender	Ν	$\overline{\mathbf{x}}$	SD	t-value	Sig
Male	79	25.835	3.356	565	.573
Female	48	26.146	2.304		

 $\alpha = 0.\overline{05}$

Source: Researchers' fieldwork (2021)

DISCUSSION OF FINDINGS

The result of the findings from research question 1 in Table 1 revealed that vocational and technical educators require pedagogy competence to a high extent for their job performance. This is in agreement with the findings of Lehto, Kairisto and Liisa (2011) which showed that pedagogical competency is a necessary requirement for teaching as it focuses on learning approaches for the development of knowledge and its use in a manner that can create innovations. The present finding is also in consonance with Said (2018) who stated that the vocational educators require pedagogical competence to create a condition in which learning takes place. The study of Ekoh (2016) is in correlation with the findings of the present study which stated that vocational educators require innovative pedagogical competence in technology-driven classroom, smart interactive boards, interdisciplinary learning, flipped classroom and digitization in teaching. The finding is also in agreement with Emeasoba and Ezenwafor (2014) who maintained that teaching competencies has positive influence on skill acquisition. The finding of the present study is however in dissonance with the findings of Umoru and Shaibu (2018) which revealed that instructors do not necessarily require teaching competencies for their job performance.

The result of the findings from research question 2 in Table 2 revealed that vocational and technical educators require problem-solving competence to a high extent. Miron (2012) finding is in agreement with the present study which revealed that the vocational educators are expected to have three kinds of skills prominent in problem-solving namely analytical, logical and creative skill for their effective job performance in tertiary institution. Adaku (2013) study is in agreement with the present study which revealed that problem-solving skills is highly demanded of vocational and technical educators due to occasional changes in the acquisition of skills fuelled by technological progress. The author further affirm that problem-solving skills in management entails the ability to simplify complicated situations, ability to use initiatives effectively and ability to engage in innovative thinking to provide solutions to organization's problems. Ezenwafor and Olaniyi (2017) study is linked to the findings of the present study which showed that vocational educators greatly need real life problem solving skill to excel in self-employment and enhance entrepreneurial development.

The result of the findings from research question 3 in Table 3 revealed that vocational and technical educators require internet/networking competencies to a high extent. The present study finding is also in consonance with the findings of Emeosoba and Ezenwafor (2014) which showed that networking competency is required of vocational educators to a high extent for their job performance to equip vocational students with employability skill needed for their relevance in the world of work. Similarly, the present study findings agree with the findings of Ademola (2014) which showed that vocational educators require to a high extent competencies in internet facilities for the job performance. The author further affirms that teachers have limited access to internet facilities, and lack of proficiency in internet skills capable of hindering skills acquisition in tertiary institutions in Anambra and Enugu States. The present study findings correlate with the findings of Ofili and Idris (2017) which showed that vocational and technical educators require networking competencies for their job performance. Ofili and Idris further stated that vocational educators need basic online skills to secure sites from hijackers, create web sites and make business transactions.

The findings from null hypothesis 1 revealed that there was no significant difference in the mean rating between male and female vocational and technical educators on pedagogy, problem solving, and internet/networking competencies required for job performance (Muhammad Baba Gusau & Mohamad, 2020). The findings of the present study is at variance with the study of Opayemi and Oyesola (2013) which revealed that female university lecturers showed more favourable link between pedagogical, problem-solving and networking competencies for employees' performance than male university lecturers. The findings of the present study however agrees with the study of Bhargava and Ambazhagen (2014) which show that there is no significant difference among genders on the competencies they require for their job performance, as both male and females teachers are competing for the same job offers. This is because in the globalized work place, both male and female are given the same job position. The findings of this study tend to agree with the study of Jim and Okafor (2015) that showed there is no significant difference between male and female vocational educators in their need of cash management skill. Jim and Okafor (2015) further stated that vocational educators need cash management skill to a high extent to manage available cash effectively, and effectively to teach their students. The findings of the present study also corroborates with the findings in the study of

Umoru and Shaibu (2018) who reported that vocational educators' competencies in instructional technologies is not influenced by gender, but instructional technology competence has significant influence on skill acquisition among OTM students.

CONCLUSION

In view of the findings, it could be concluded that vocational and technical educators in universities in Edo State require problem-solving, pedagogical and internet/networking competencies for their job performance. It was further concluded that gender did not influence vocational educators' job performance. Based on these it was recommended that management and more especially, heads of department, deans of faculties and schools of various institutions should ensure that vocational and technical education curriculum should be reviewed to reflect, internet networking competencies and current technology competencies at all levels of training required to meet the challenges in today digital, global and competitive work environment; vocational and technical educators are to take advantage of training and retraining opportunities and deliberate personal development to increase their internet networking, pedagogical, educational technology competencies in teaching and learning; tertiary institutions should package professional development programs for lecturers to update their pedagogy, and internet networking knowledge and skills in teaching and learning for vocational and technical education graduates' employability and job performance; and government at all levels should make stringent investment and policy statements in vocational educators' continuous training and retraining programmes in institutions, faculty, and department level in contemporary competencies for teacher's effective and efficient job performance.

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