

Differences of TVET Teachers' Perceptions on Competency across Different Types of TVET Institutions in Nigeria

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Abstract: Competency is regarded as one of the main elements related to human resource development because it supports the aims of an organisation and the capabilities of its employees. This paper aimed at finding out the differences of the TVET teachers' perceptions on competency (Thinking, Organizational and Application Competencies) across the three categorises of Nigerian tertiary institutions (University, Polytechnics, and College of Education) based on Malaysian Human Resource Development Practitioners (MHRDP) Competency Model. The study was quantitative by nature and 218 questionnaires were distributed to TVET teachers in five tertiary institutions based on stratified sampling technique. A total of 205 questionnaires were retrieved and ANOVA was conducted for data analysis. The present findings revealed that there was no statistically significant differences of the TVET teachers' perceptions across the three categorises of Nigerian tertiary institutions in terms of Thinking Competency, Organisational Competency, and Application Competency. This outcome reflects that the competency model (MHRDP) can be used by TVET teachers regardless of their affiliated TVET institutions.

Index Terms: Keywords: Competency, TVET, Tertiary Institution, Teacher.

I. INTRODUCTION

Education plays a vital role in supporting the economic development for both developed and developing nations. The educational system in Nigeria is based on a 6-3-3-4 system which means the system consists of six years of primary school education, three years of junior secondary school education, three years of education in senior secondary school, and four years of education in higher or tertiary institutions. The tertiary institutions can be categorised into three types: Universities, Polytechnics, and Colleges of Education. Academically, teachers are the backbone of education and training system either in general education or Technical and Vocational Education and Training (TVET) [1][2][3]. As far as TVET is concerned, TVET teachers are the key players in any TVET settings and their competencies matter a lot when it comes teaching and learning process.

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The challenges and problems related to TVET teachers' competencies are common in the developing countries with Nigerian being one of them [4][5]. The problems related to TVET teachers' competency will be affecting many Higher Learning Institutions in Nigeria and also the quality of TVET graduates. Nowadays, apart from technical knowledge, TVET teachers must equip themselves with competency related to their field of expertise in order to allow them to teach efficiently and effectively [6][7][8]. TVET teachers who are lacking competencies will lead to an unproductive teaching and learning process which, in turn, might bring about a negative impact on the quality of the graduates [9]. The competency of TVET teachers should be given more emphasis in order to ensure the TVET graduates are of high quality and are able to meet the needs of the industries [10].

To deal with the problems pertaining to TVET teachers' competency in Nigeria, competency model (e.g., Malaysian Human Resource Development Practitioners (MHRDP) Competency Model) has been used by different types of tertiary institutions that provide TVET programmes, such as University, Polytechnics, and College of Education [11]. Since different learning institutions have different vision, mission and organisational goals, therefore, it is plausible to postulate that the TVET teachers of different type of institutions might perceive the importance of competency elements differently and diversely. Therefore, this research was conducted to find out whether the TVET teachers' perceptions on competency components are different across the three categorises of Nigerian tertiary institutions based on MHRDP Competency Model developed [12][13]. In specific this paper focused only on Organisational, Thinking and Application competencies for MHRDP Competency Model.

A. The Concept of Competency

The word competency comes from Latin word *competere* which literally means expertise, competence or competent. In general, competency means the ability to have quality or physical and intellectual qualification in carrying out specific job or task. Competence was popularized first by Hamel and Prahalad in 1990 at Harvard Business Review and it was adapted by different researchers in different fields of studies giving it different perceptions or meanings in their fields based on the context in which it was applied.

For the past five decades, the word "competency" is defined by many researchers with different perceptions and perspectives and in different ways. Based on the definitions given by different researchers, the central theme conveyed in these definitions of competency point to the same meaning. The prominent definitions of competency were advanced [14][15][16].



McLagan, (2002) defined competency as a centre for knowledge or skills that is needed in producing key outputs. Whereas Boyatzis (2008) puts forward the concept of competency as the capability and ability of an individual in the aspects of skills, knowledge and behaviour to complete the task assigned to him/her. Likewise, Rycus and Hughes (2000) denote competency as a combination of skills and knowledge required by workers in order to perform their job effectively and efficiently. Another researcher, Lee (2009), defined competency as set of related skills, abilities, knowledge and behaviour which can influence the accomplishment and quality of worker's job. While Abel, (2008) defined competency as application some knowledge into practice within a specific context. Taken together, competency can be defined as capability to apply a set of skills, knowledge and attitude that can successfully perform a given task or job. This set of attributes can be considered as a competency model. .

B. Adapted Competency Model

The adapted competency model is referred to as the competency structure which is used as a guideline for the present research based on a particular phenomenon toward achieving research aims [17][18][19][20]. This research investigated the competency needs of TVET teachers in Nigerian tertiary institutions based on Malaysian Human Resource Development Practitioners (MHRDP) Competency Model developed by Salleh (2012). Figure 1 illustrates the MHRDP Competency Model.

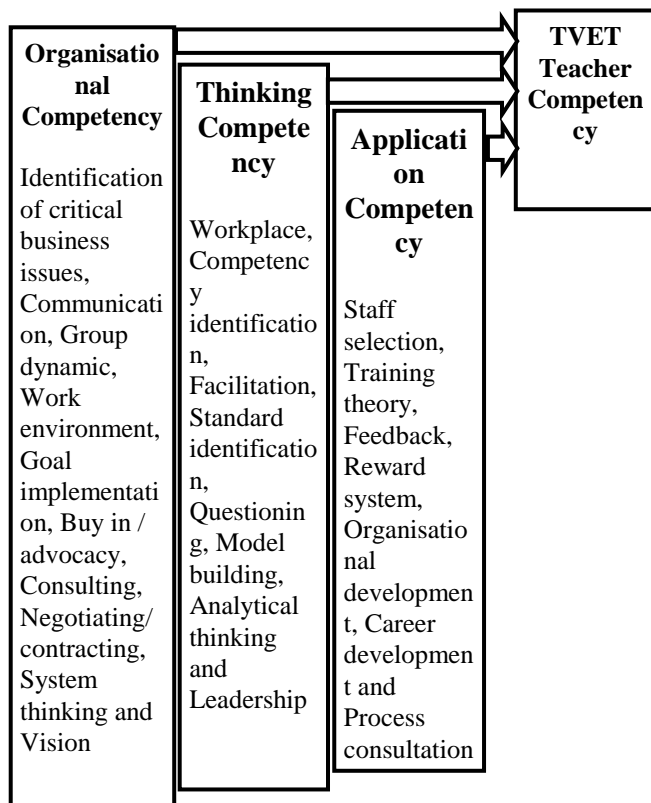


Fig. 1: Adapted Competency Model from Salleh (2012).

Fig. 1 presents the adapted competency model which shows the elements of competency components that consist of Organisational Competency, Thinking Competency, and Application Competency. The Organisational Competency comprises 10 elements, namely, identification of critical

business issues, communication, group dynamic, work environment, goal implementation, buy in / advocacy, consulting, negotiating/ contracting, system thinking and vision. Whereas Thinking Competency is composed of eight elements that include workplace, competency identification, facilitation, standard identification, questioning, model building, analytical thinking and leadership. Lastly, the Application Competency consists of seven elements which is inclusive of staff selection, training theory, feedback, reward system, organisational development, career development and process consultation.

II. METHOD

The research subjects involved and instrument used in the present research are explained in the following sections.

A. Sample

In general, this research was fully quantitative in nature. A total of 205 TVET teachers from University, Polytechnic and Colleges of Education, were taken as the research sample based on the Sample Size Table of developed by Saunders, Lewis, and Thornhill (2016). In specific, a total of 77 TVET teachers from universities, 56 TVET teachers from Polytechnics, and 72 TVET teachers from Colleges of Education participated in this research. The male TVET teachers made up 81% (166) of the total sample, whereas 19% (39) were female TVET teachers.

B. Instrument

A set of self-developed was used for data collection. The questionnaire was composed of items which were derived from the conceptual framework based on Organisational, Thinking, and Application Competencies. The items were designed using five-point scale, ranging from 1 (Not important), 2 (Slightly important), 3 (Important), 4 (Very important) until 5 (Extremely important). The reliability of the questionnaire was reported as acceptable with the Cronbach's Alpha = 0.61 (Alpha value should be larger than 0.6 as mentioned by Mohamad, Sulaiman, Sern and Salleh (2015)).

III. DATA ANALYSIS

ANOVA was conducted because there were three different categories of institutions. In general, one way ANOVA is used to find out whether the means of three or more unrelated groups differ significantly [21][22][23]. In this paper, the researchers intended to test whether there is significant differences in terms of TVET teachers' perception on competency among the staff of three types of tertiary institutions (Universities, Polytechnics and Colleges of Education) in Nigeria.

The ANOVA was set out based on the data extracted from the EFA conducted. The EFA results revealed that six observed constituents of the thinking competency were extracted and transformed into a single component, thus thinking competency. Similarly, eight organizational competency's constituents were also extracted and subsequently transformed to a single measure variable of organizational competency.



In the same instance, the application competency component was measured using five extracted constituents that were transformed into single component application competency. Therefore, one-way ANOVA was carried out to find out if there was any statistically significant difference in terms of TVET teachers' perception on thinking, organisational and application competencies among the three types of Nigerian tertiary institutions. Prior to conducting the ANOVA, descriptive statistics analysis was conducted to determine the means and standard deviations of the respective elements within each competency component. The results of the descriptive statics is shown in Table I.

Table I: Means and Standard Deviations for competency elements

	Mean (Standard Deviation)		
	University (n=77)	Polytechnics (n=56)	College of Education (n=72)
THI1	3.66 (0.98)	3.46 (0.93)	3.31 (1.04)
THI3	3.66 (0.98)	3.48 (0.97)	3.32 (1.06)
THI4	3.66 (0.98)	3.45 (0.95)	3.29 (1.04)
THI6	3.62 (0.99)	3.36 (0.96)	3.26 (1.06)
THI7	3.55 (0.97)	3.50 (1.09)	3.26 (1.18)
THI8	3.60 (0.94)	3.50 (1.09)	3.26 (1.16)
ORG2	3.79 (0.98)	3.89 (0.80)	4.07 (0.81)
ORG4	3.79 (0.98)	3.89 (0.80)	4.04 (0.81)
ORG5	3.88 (0.87)	3.70 (1.01)	4.01 (0.79)
ORG6	3.52 (0.85)	3.37 (0.78)	3.47 (0.73)
ORG7	3.44 (0.93)	3.29 (1.00)	3.35 (0.88)
ORG8	3.68 (0.94)	3.46 (0.99)	3.68 (0.90)
ORG9	3.45 (0.95)	3.36 (0.86)	3.40 (0.82)
ORG10	3.45 (0.91)	3.32 (0.92)	3.44 (0.84)
APP1	3.43 (0.91)	3.46 (0.85)	3.42 (0.88)
APP2	3.35 (0.93)	3.48 (0.81)	3.40 (0.90)
APP4	3.25 (1.07)	3.13 (0.97)	3.15 (1.03)
APP6	3.25 (1.07)	3.13 (0.97)	3.17 (1.04)
APP7	3.22 (0.79)	3.45 (0.83)	3.32 (0.82)

Table I presents the means and standard deviations of the three competency components. Three types of tertiary institutions were compared, namely, Universities, Polytechnics and Colleges of Education.

Specifically, the TVET teachers from three different institutions have perceived Thinking Competency as an important components in which the TVET teachers from University yielded the highest mean (M=3.66,SD=0.98), while the Polytechnic teachers obtained the mean value of 3.50 (SD=1.09). The TVET teachers from Colleges of Education obtained the lowest mean (M=3.32, SD=1.06).

In organisational competency, the result indicated that all the participating institutions from three categories perceived organisational competency as important as well based on the mean values ranging from 3.32 to 4.07. Specifically, TVET teachers of University yielded the mean value of 3.88 (SD=0.87) which was the lowest, Colleges of Education obtained the highest mean value of 4.07 (SD=0.81), whereas the TVET teachers from Polytechnic obtained the mean value 3.89 (SD=0.80).

In Application competency, the results showed that the TVET teachers perceived application competency as important component. Specifically, the mean scores for University, Polytechnic and College of education were

recorded as 3.43 (SD=0.91), 3.48 (SD=0.81) and 3.42 (SD=0.88) respectively. In a nut shell, TVET teachers from Polytechnic yielded the highest mean value, followed by University TVET teachers and Colleges of Education TVET teachers.

ANOVA was conducted to see if the perceptions of TVET teachers on competency across different types of tertiary institutions differ significantly. Before ANOVA was performed, the Levene's test was conducted to determine the equality or homogeneity of variance of the analysed data from the three competency components. The result showed equal variance for all competency components: Thinking Competency, F=0.78, P>0.05; Organisational Competency, F=0.19, P>0.05; Application Competency, F=0.20, p>0.05.

Since the assumption of equality of variance was fulfilled, ANOVA was then performed to test if there was any significant difference in terms of TVET teachers' perception on Thinking, Organisational, and Application Competencies between the three categories of institutions.

A. Thinking Competency

The outcome of ANOVA for Thinking Competency is presented in Table II

Table II: Outcome of ANOVA for Thinking Competency

	SS	df	MS	F	Sig
Between group	4.322	2	2.161	2.508	0.84
Within group	174.047	202	.862		
Total	178.369	204			

The analysis outcome indicated that there was no significant difference on the perceptions of TVET teachers on Thinking Competency between the three categories of tertiary institutions, F(2, 202) = 2.508, p>0.05).

B. Organisational Competency

The outcome of ANOVA for Organisational Competency is presented in Table III.

Table III: Outcome of ANOVA for Organisational Competency

	SS	Df	MS	F	Sig
Between group	.696	2	.348	1.25	.29
Within group	56.099	202	.278		
Total	56.795	204			

The outcome of analysis revealed that there was no statistically significant difference among TVET teachers between the three categories of institutions regarding their perception on organisational competency, F(2, 202) = 1.25, p>0.05. Therefore, the null hypothesis is accepted. It can be concluded that, in general, the TVET teachers have similar perceptions on Organisational Competency regardless of the type of educational institution they belong to.

C. Application Competency

ANOVA was performed to determine whether there was a significant difference among TVET teachers' perceptions on Application Competency among TVET teachers in the three categories of tertiary institutions. Table IV illustrates the result of ANOVA



Table IV: Outcome of ANOVA for Application Competency

	SS	df	MS	F	Sig
Between group	.047	2	.023	.073	.93
Within group	65.279	202	.323		
Total	65.326	204			

The outcome of analysis indicated that the null hypothesis was accepted. Therefore, there was no significant difference on the perception of Application Competency between the three categories of tertiary institutions, $F(2, 202) = 0.073$, $p > 0.05$. It can be concluded that TVET teachers from University, Polytechnic and Colleges of Education have similar perception on Application Competency.

IV. DISCUSSION

The research found out that there are no significant differences among the TVET teachers from different types of Nigerian tertiary institutions (University, Polytechnic and College of education) in their perception on the competency elements which comprises Thinking, Organizational and Application competencies. This finding is in contrast with that of Yoo (1999) in Korea, Peeraporn (1999) in Thailand, and Chew (2003) in Taiwan where they found that there were significant differences among the human resource practitioners' perceptions on competency groups. The divergence of the present finding with the previous studies could be linked to the fact that competencies differs in term of discipline, institutions and industry despite its key role in improving workplace environment (Dubois & Rothwell, 2004). Nonetheless, the findings of this research is in line with the findings of Salleh (2012) which found that there are no significant differences among the Malaysian human resource development practitioners thus (top level managers, middle level managers and others) perceptions on Organisational, Thinking and Application Competencies.

There are several possible explanations for the current findings. First of all, most of the Nigerian TVET teachers studies overseas, such as the United State of America, the United Kingdom, Malaysian, Australia, China and many more. Studying abroad provides more opportunities and exposure to understand different types of competency models and competency elements that are important for TVET [24][25]. This could be the reason why Nigerian TVET teachers have similar perception on the competency elements regardless of which institutions those TVET teachers are attached to.

Apart from that, the current findings could also be attributed to the similarity of curriculum structure. Although University, Polytechnics and Colleges of Education are different in terms of level of programmes offered, learning contents and duration of program, but in general curriculum structures are similar which consist of general courses, core courses and practical courses. The academic staff who teach in the TVET program should possess similar types of competencies, although attached to the different TVET institution. This might be the reason why the TVET teachers of the University, Polytechnic and Colleges of Education have similar perceptions on Organisational, Thinking and Application competencies.

V. CONCLUSION

The research discovered that the TVET teachers have similar perceptions on the Organisational, Thinking, and Application Competencies regardless of the type of tertiary institution they attached to. This findings imply that the policy makers and the top managerial personnel of TVET institution may apply MHRDP) Competency Model in TVET institutions in order to ensure the TVET teachers are equipped with the competencies that are relevant to field of TVET, and thereby producing high quality TVET graduates to cater for the needs of the industrial sectors.

This research is limited to the population of TVET teachers in Nigerian TVET tertiary institutions. This simply means that the result should not be generalized beyond the TVET teachers. Therefore, due to this limitation, the research does not consider determining the competency needs of non-TVET teachers. Future research should be undertaken to extend the result to reflect the Non-TVET teachers' competency needs within the non-TVET sphere.

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