



PROPOSED COMPETENCY FRAMEWORK FOR MALAYSIAN TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING (TVET) TEACHERS

Mohammed Adamu Hamisu^{1&2i*}

Kahiroh Mohd Salleh¹,

Lai Chee Sern¹, Auwal Abubakar³

¹Department of Technical and Vocational Education,
Faculty of Vocational and Technical Education,
Universiti Tun Hussein Onn Malaysia, Johor, Malaysia

²Department of Business Education,
Faculty of Technology & Vocational Education,
Abubakar Tatari Ali Polytechnic,
Bauchi, Bauchi State, Nigeria

³Department of Business Education,
Bauchi Institute of Arabic and Islamic Studies,
Bauchi State, Nigeria

Abstract:

Many issues have been taking place in the academia including Malaysian TVET institutions, which give rise to the need for continuous learning and updating competencies of TVET teachers across all ages. The purpose of this paper is to propose the competency Framework of TVET teachers by investigating the competency needs in Malaysian institutions. Primary data were collected using questionnaires to reveal the perceptions of thirty TVET teachers based on their competency needs. The result shows that the TVET teachers perceived all the twenty five competencies as important and the findings also shows the accepted Cronbach's Alpha. The paper concerns on only TVET teachers perceptions on competency needs in their institutions. The paper provides an important pilot analysis on proposed competency framework of TVET teachers to enable further analysis in the area to be carried out.

ⁱ Correspondence: email mohamsfulani2000@gmail.com

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1. Introduction

A lot of challenges have been taking place in the global academic arena including Malaysian TVET institutions, which resulted in the need for continuous learning and updating competencies of TVET teachers across all ages (Ali, 2015). Therefore, Malaysia as developing country in the world needs to have competent TVET teachers by ensuring effective education, training and preparation are in place. In order to be among the world players, institutions need to provide competent TVET teachers with new advance skills so that to meet the challenges of real time in their respective institutions or workplace (Salleh, Sulaiman & Frederiksen, 2014). However, Lack of competency in the institutions can bring more challenges which required new ways to accomplish competence and employability of workers or TVET teachers (Salleh, Sulaiman, Mohamed & Sern, 2015). It is more valuable to develop and improve teachers work ability, capability and skills thoroughly especially for TVET teachers (Billett, 2001). Since competency comprises required ability, skills, knowledge, attitude and behaviour possessed by employee in order to perform a task effectively and efficiently (Boyadzis, 2008).

Not much has been done to re-examine the determinants for the delivery of the TVET policy in Malaysia. This has left the challenges unattended to. According to Ali, (2015) a lot of Malaysian TVET teachers lack competency in their teaching subject and fresh graduates of TVET are identified with lack of competency in teaching profession. In view of the above, capacity of teachers is a critical factor in the TVET delivery. While much has been said about funding, infrastructure, instructional materials and other equipment, but there is insufficient investigation on the competencies of TVET teachers. In other word very little or no research was found in the literature on issues of competencies of Malaysian TVET teachers. Thus, the purpose of this research is to investigate the competency needs of TVET teachers and to propose the needed competency framework for Malaysian TVET teachers Based on Malaysian Human Resource Development Practitioners (MHRDP) Competency Model developed by Saleh, (2012). To achieve this, the first objective is to investigate the TVET teachers' perception on competency needs in Malaysian TVET institutions and also to determine the suitable items of competency framework to be applied for TVET teachers in Malaysia.

2. Literature Review

2.1 Technical and Vocational Education and Training (TVET) Teacher

The word teacher both in general education and in TVET are the backbone of education and training system. Therefore, TVET teachers can be consider as the tool or instrument of preparing citizen to be responsible in life. The TVET teacher programme is offered in tertiary institutions. Students who enrolled in these programme are prepared in different areas of studies in TVET which is aimed at producing competent TVET teachers in the schools after graduation from their respective institutions (Spöttill, 2009). The curriculum of TVET is based on a career title which plays a significant role in producing skilled and semi-skilled manpower in the world of work (Hanimastura, Hairulliza, Tengku Siti Merian, 2016). Therefore, TVET teachers plays a critical role in the development of the nation because they are committed toward the development of people by orientating individuals into the world of work, helping them to acquire employable skills, encouraging them not to remain idle in order to reduce the volume of poverty in the society. However, the needs for the Government to invest in education by providing all the necessary needs of TVET teachers and to ensure students learn when they go to school in order to achieve the desired objective of producing well competent and motivated teachers (Oni, 2007).

Indeed, the prospect of competent TVET teachers will bring about the needed manpower development in related field of science and technology and it will advance the career opportunities by producing competent teachers who will develop great dynamic economic growth and development (Njati, 2016). Therefore, it could then be argued that the competent TVET teacher means a TVET teacher with sufficiency of skills, knowledge, attitude or behaviour. By extension these attributes can be regarded as competency.

2.2 An Overview on Competency Model Perceived from Workplace

The word competency come from Latin word *competere* which literally means competent, competence or expertise that means individual to have quality or physical and intellectual qualification in carrying out specific task or job (Salleh, Sulaiman & Gloeckner, 2015). Therefore, competency is the ability and capability of TVET teacher to possess required knowledge, skills and attitude in order to perform a task assign to him/her. Competency 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 (Salleh, et al., 2015).

For more than three decades, the term 'Competency' is defined by different researchers with different perceptions and perspectives and in different ways. Based on the definitions given by different researchers, this will help the reader to comprehend and also to see the perception of the researcher is similarly the same with that of other researchers. They defined competency in their own research. According to McLagan, (2002) defined competency as a centre for knowledge or skills that is so vital in producing key outputs. Boyatzis, (2008) viewed competency as the capability and ability of individual skills, knowledge and behaviour to complete the task assigned to them. While Rycus and Hughes, (2000) defined competency as a combination of component of skills and knowledge required by workers in order to perform their job effectively and efficiently. Tripathi and Agrawal, (2014) on the other hand, posit that competency comprises a collection of skills, knowledge and behaviour that are practice for self-development. Therefore, competency is the ability of TVET teacher to be capably, competently and adequately in possession of required skills and knowledge, behaviour and abilities that can successfully performed serious task or job as required in the defined setting.

Furthermore, the word competency was firstly discussed and assessed by David McClelland a Professor of Harvard University in the early 1970s, as a significant forecasters of employee performance and success which is relatively important as a person's academic ability and knowledge as indicated by examination or test results or scores (McClelland, 1998). The person that conducted the first research on competency and came out with the HRD model for ASTD opined that competency is an area of skills and knowledge that is so vital for making or producing key output (McLagan, 2002). Although, ASTD argued that Walker and Pinto were the first to conduct HRD competency study in 1978. Similarly Bernthal, (2004) posited that Walker and Pinto carried out a study called "*A study of professional training and development roles and competencies*" that was first sponsored and published by ASTD in 1978 from then competencies became one of the main apparatus applied in measuring, examining or evaluating workers performance in the real world of work situations or environments especially in HRD (Dean, Dean, & Rebalsky, 1996). However, HRD is the way forward to organisations in order to address the development of workplace competencies (Conlon, 2004).

Recently, competencies have become primary source of organisations in terms of evaluating the employee's skills and abilities. It has become one of the review instruments of measuring and evaluating proficiency in soft and hard skills of workers (Conlon, 2004). However, competencies of workers are very vital instrument in determining organisational development and it has been proven to be an instrument to

improve HRD and organisational performance that concentrate on individual's performance (Salleh and Sulaiman 2013). Moreover, the performance of persons, individuals or workers is more related to the workplace performance while doing job or task assign to them (Salleh et al., 2015). Nevertheless, competency needs to be look into as something that represent the entire performance of institution, but is also with the individual performance (Morningstar, Kim, & Clark, 2008). However, the individuals or organisations need to be evaluated and modified (Salleh et al., 2015). Therefore, organisations can be a workplace or institutions where the individuals or TVET teachers work in order to earn their living. Generally, there are two types of competencies, individual and organisational competencies.

2.3 Individual competencies

Individual competency basically is more related to the features of individual which she or he can be trained, instructed, conditioned, indoctrinated, taught and contribute to workplace activities (Garavan & McGuire, 2001). Therefore, it is important to know that some of the aspects of competency are knowledge, attitude and skills that are matched to solve certain assignment for TVET teachers in the institutions. Similarly, Rodriguez, Patel, Bright, Gregory, and Gowing, (2002) demonstrate that competencies shows person's occupational or professional competence. According to Ruthwell, (2002); Buntat, Saleh, Musban, Jamal, Saud and Nor, (2013) there are competencies that are required for all workers or individuals which include knowledge, ability and skills as well as core skills. Therefore, any individual that possess the aforementioned competencies may definitely end up applying such competencies in the workplace, organisation or institutions. However, this study will only concentrate or emphasize on organisational competencies.

2.4 Organisational Competencies

Organisational competencies are those features of organisations or institutions that bring about the quality in the world of work (Garavan & McGuire, 2001). The main aim of competencies in organisations is to authenticate the skills levels of workers in order to recognize new combination of skills and knowledge that need to be transferred to the workplace. Hence organisations necessitate higher competency levels of skills and knowledge that can easily respond to the specific requirements within the professional practices (Sauber, McSurely, & Tummala, 2008). Therefore, the purpose of organisation or institution is to apply competency in order to facilitate the process of assessing the suitability and expertise of its employees or teachers in completing the task assigned to

them. The construct of this study can be categorized into three namely: organisational competencies, thinking competencies and application competencies (Salleh, 2012).

2.4.1 Organisational Competencies as main competencies

Organisational Competencies can be categorized into ten such as identification of Critical Business Issues, Communication, Group Dynamics, Work Environment Analysis, Goal Implementation, Buy-in/ Advocacy, Consulting, Negotiating/ Contracting, Systems Thinking, Visioning.

2.4 Thinking Competencies

Thinking competencies are also more related to knowledge and skills (Rycus & Hughes, 2000). They still maintained that it is the combination of skills and knowledge that help workers to perform their duties effectively and efficiently in the institutions. Therefore, thinking competencies are the most effective in terms of supporting long term plans in regards to the worker's career development process and professionalism in an organisation. Thinking competencies can also help workers to create, develop, initiate, process and generate good ideas or approach that can shape the organisation (Salleh, 2012). Thinking competencies can be categorized as Workplace performance, learning strategies and intervention evaluation, Competency identification, Facilitation, Standard identification, Questioning, Model building, Analytical thinking and Leadership (Salleh, 2012).

2.5 Application Competencies

Application competencies as the name implies is more or less about behaviours and attitudes of individual workers that can be applied in the workplace. These competencies will help the individual workers to realize and understand the needed attitude, values, morale and behaviour required by them to apply in the organisation. (Salleh, 2012). Similarly, Suhairom, Musta'amal, Amin, and Johari, (2014) posited that a set of competencies which are more related to behaviour and attitude of workers can easily influence the main aspect of job in organisation by applying such competencies. The application competencies can be categorized as: staff selection, theory and application, training theory and application, feedback, reward system theory and application, organisational development theory and application, career development theory and application and process consultation (Salleh, 2012).

3. Application of MHRDP competency model for workplace learning and performance to Malaysian TVET Institutions

Malaysia as developing country there's needs to improve the strength of TVET teacher's competencies. This can be accomplished by adopting and adapting the MHRDP competency model developed by Salleh, (2012). Although the MHRDP competency model for workplace learning and performance (WLP) is a product of American Society for Training and Development (ASTD) for Workplace Learning and performance (WPL) that have been in existence for so many years and it has fifty two (52) different indicators of competencies developed by Rothwell, Saunders and Soper, (1999). The competency model has been shown to undergo several reviews over the years since its development (Dubois & Rothwell, 2004). Many institutions are adopting and adapting competency model in order to develop and achieve their needs and goals (Berge et al., 2002) Therefore, the model also needs to work in line with the institutions policies and vision because it will test the TVET teachers competencies and it will be used as platform for the institutions to realize the best plan for current and future development of the TVET teachers. Devoting to improve the competency level is one of the most powerful ways to prove to the teachers that they are honourably valued, respected and trusted (Black, 2001).

3.1 Conceptual framework

Figure 1.1 present the proposed conceptual framework of this study which is adapted from Salleh, (2012) based on the Malaysian Human Resource Development Practitioners (MHRDP) Competency Model for WLP. The original MHRDP model contains twenty five indicators of competencies which were classified into three groups of competency which are main competencies, sub competencies 1 and sub competencies 2. The aim of this conceptual framework is to propose and describe the recent direction of TVET teachers by determining the suitable items of competencies which are related to the Malaysian TVET institutions based on these groupings. Table 1.1 below shows the items of competencies.

Table: 1.1 Three Competency Groups and Associated competencies

Competency Group	Competency Description	Source
Organisational Competency	• Identification of Critical Business Issue	Ruthwell, Soper & Saunders, (1999).
	• Communication	
	• Group Dynamics	
	• Work Environment Analysis	Garavan & McGuire, (2001).
	• Goal Implementation	

	<ul style="list-style-type: none"> • Buy-in/ Advocacy • Consulting • Negotiating/ Contracting • Systems Thinking • Visioning 	Conlon (2004). (Morningstar, Kim, & Clark, 2008). (Salleh, 2012).
Thinking Competency	<ul style="list-style-type: none"> • Workplace performance, learning strategies and intervention evaluation • Competency identification • Facilitation • Standard identification • Questioning • Model building • Analytical thinking • Leadership 	(Ruthwell, Soper & Sauders, 1999). (Rycus & Hughes, 2000). (Sauber, McSurely & Tummala, 2008). (Salleh, 2012).
Application Competency	<ul style="list-style-type: none"> • Staff selection theory and application • Training theory and application • Feedback • Reward system theory and application • Organisational development theory and application • Career development theory and application • Process consultation 	(Ruthwell, Soper & Sauders, 1999). (Salleh, 2012). (Suhairom, Musta'amal, Amin & Johari, 2014).

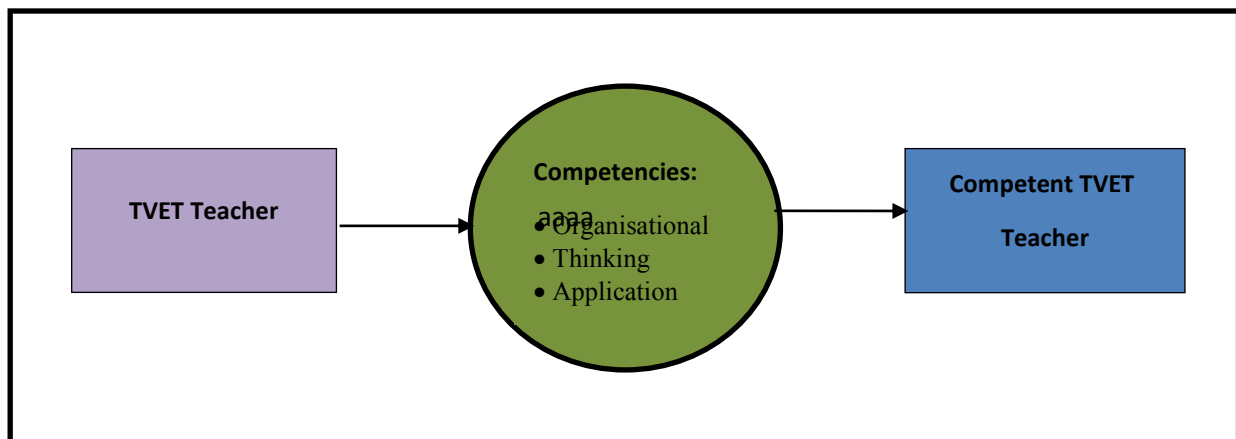


Figure: 1.1 Propose Conceptual Framework

Source: Adapted from Salleh, (2012)

The propose conceptual framework of the study show the relationship between the main competencies group and sub competencies groups thus, organisational competencies as main, thinking competencies and application competencies as sub

competencies 1 and 2. The three groups of competencies can be regarded as the combination of skills, knowledge and attitude or behaviour to be acquired by TVET teachers in order to produce competent TVET teachers in Malaysian TVET institutions.

4. Methodology

This research is purely quantitative and survey strategy was used, one of the most significant instruments to be use in such a research is questionnaire, it is a widely used instrument for data collection in survey strategy (Saunders, et al., 2016). Therefore, questionnaire instrument was used in this study which consist of personal and demographic details of respondents which is filled and returned to the researcher (Creswell, 2013).

The sample of this research is 30 TVET teachers from Malaysian TVET institutions as the respondents because the minimum number of instrument to conduct a pilot study is 30 (Fink, 2013). The stratified sampling technique has been used to carry out the study. The respondents participated in the survey are TVET teachers.

4.1 Expert validation for instrument

The draft of the instrument was sent to the four experts in TVET in order to assess the content validity of the instrument and its appropriateness in the contest of the problems under examination. The instruments were sent to the experts for a good one month and they made all the necessary observations and corrections which has been well noted and corrected.

Table 2: Pilot test result: reliability

Reliability			
Code	Label	Cronbach's Alpha if item deleted	Scale's Cronbach's Alpha
COM1	Skill	.518*	.612
COM2	Knowledge	.330*	
COM3	Attitude	.433*	
ORG1	Critical	.698	.722
ORG2	Communication	.723	
ORG3	Group dynamics	.736	
ORG4	Work environment	.726	
ORG5	Goal implementation	.714	
ORG6	Buy in	.641	
ORG7	Consulting	.679	
ORG8	Negotiating	.710	

ORG9	System thinking	.635	
ORG10	Visioning	.712	
THI1	Workplace	.603	
THI2	Competency identification	.620	
THI3	Facilitation	.671	
THI4	Standard identification	.669	
THI5	Questioning	.673	.670
THI6	Model building	.605	
THI7	Analytical thinking	.640	
THI8	Leadership	.625	
APP1	Staff selection	.692	
APP2	Training theory	.663	
APP3	Feedback	.716	
APP4	Reward system	.669	.696
APP5	Institutional development	.613	
APP6	Career development	.602	
APP7	Process consultation	.656	

Note: Values with Asterisk (*) is Corrected Item-Total Correlation

The consistency of the questionnaire scales were tested using the Cronbach's Alpha method. The recommended threshold for scale reliability is .70 and above. Although .60 can also be regarded as acceptable when the research is at its exploratory stage (Hair, Anderson, Tatham and Black, 2010). Moreover, another vital statistics usually examined is the corrected item-total correlation. This measures the internal consistency of the scale and value of .30 and above is recommended (Field, 1999).

Table 2.1 show the result of the reliability analysis. The reported Scale's Cronbach's Alphas indicated that all the scales are reliable. The Organisational Competencies reported the highest alpha value ($\alpha = .722$) with Cronbach's Alpha if item deleted ranging from .635 to .736. The next highest alpha values are Thinking Competencies ($\alpha = .696$), with Cronbach's Alpha if item deleted ranging from .602 to .716. Application Competencies ($\alpha = .670$) with Cronbach's Alpha if item deleted ranging from .603 to .673, and the TVET teachers Competencies ($\alpha = .612$) with corrected item-total correlations ranging from .330* to .518*. The Cronbach's Alpha if item deleted in respect of these scales range from .670 to .722, related to SPA and IB respectively. The reported alpha values and the corrected item-total correlations of the scales also satisfy the acceptable threshold of .70 or .60 and .30 respectively. Therefore, it could be concluded that the questionnaire scales are reliable and could be useful in measuring what it is intended to measure.

5. Conclusion

The proposed competency framework for Malaysian TVET teachers in this paper is now presented. Therefore, it could be concluded that the questionnaire scales are reliable and could be useful in measuring what it is intended to measure. This paper is limited to only publish articles that were accessible during this work. However, this established the limitation of this work and therefore the interpretation of this framework.

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