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COGNITIVE SCIENCES AND HUMAN DEVELOPMENT

Technological Change as a Mediator of Employee Competency Profiling in Selected Industries in Kuching, Sarawak: A Structural Equation Modeling Approach

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ABSTRACT

This study aims to investigate competency profiling and determine if technological change act as a mediator in the relationship between the identified factors and employee competency in selected industries in Kuching, Sarawak. It is also to develop the best fit model based on the variables selected. The four identified variables are teamwork, organizational culture, change management, and technological change. The sample of this study were 302 respondents selected through a simple random sampling. The findings showed that there is a positive effect between teamwork, organizational culture, change management, and technological change as mediator towards employee competency. This study provides positive implications, such as, improving competency process in organizational setting, improving policy and related action plan regarding human resource practices on competency.

Keywords: competency profiling; teamwork; organizationa culture; change management; technological change; mediator; structural equation modelling

INTRODUCTION

Competency profiling is important in order to ensure the competency levels of the employees meets the requirement of the organization. Employee competency level and performance should be measured in numerical manner, by observation and could be seen as benchmarking for future improvement on specific skills, ability and knowledge. Competency is defined as the set of behavior patterns that the incumbent needs to bring to a position in order to perform tasks and functions with competence (Woodruffe, 1993). In the modern world, factors that relates to competency and performance are always major obstacle that hinders organization to produce competent employees that fit in today dynamic industrial movement.

As a result of technological change

ARTICLE INFO

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ISSN: 2462-1153

and force from the market, the organization need to adapt, and align to the objective and strategy in order to counter the change and global economic issues (Rahman, Abdullah, Agus & Rahmat, 2007). A study by Rahman, Abdullah, Agus and Rahmat, (2007) showed that there were large gaps between the level of importance of competencies and the level of emphasis of competencies in the workplace. The question of "how employee competency can help in achieving organization strategy and objective" has become the main issue in achieving organizational effectiveness (Draganidis & Mentzas, 2006).

For the organization to succeed, it is necessary for it to possess capabilities in each strategic area of competence. Many organizations did not consider the link of employee competency and strategic planning as part of an overall competency.

BACKGROUND OF THE STUDY

This study targets the telecommunication industry and food and beverages both located in Kuching, Sarawak. Telecommunication industry in this study is one of the government link companies that is successfully operating and is established worldwide which focus on internet and communication services. Meanwhile, for food and beverages it is the multinational company that mainly focus in food and beverages as the company main business. In order for both organizations to compete with their competitors, internal and external factors should be put under consideration in order to avoid loss. Internal factors in this context mean the other indicators that influence human capital that trigger employee competency.

Competency in Malaysia

In order to achieve vision 2020, Malaysia needs to highlight the key competencies regardless of types of industries or professions. High skill workers and competent employees are crucial as the engine for the government to achieve the objectives of the government transformational plan.

Suhairom, Musta'amal, Amin, and Johari (2014) indicated that competency model is significant in order to determine the level of employee competency. In the previous study, independent variables were divided into career competency, personality, technical competency and non-technical competency which is highly correlated with work performance. The need of competency profiling is necessary in today's market due to changing business environment and global economic conditions. Competency not only restricted those who work or those who are searching for new job, it also is useful for university to identify student competency before they leave the university. Marthandan, Jayashree, and Yelwa (2012) stated that the communication and teamwork skill top the list as the competency acquired by the students when they leave universities. Secondly are the managerial and entrepreneurial skills. This is a good sign that the students are ready and are confident to be managers. They are also confident of the practical skills that they acquired in universities. Values, attitudes and professionalism and problem solving and scientific skills are lagging behind among the students when they leave the university.

Marthandan, et al. (2012) explained that most of the students require the necessary knowledge, skills and abilities in order to survive when they graduatted. Marthandan, et al. (2012) highlighted this issue due to lack of competency and high unemployment among graduates in Malaysia. In support of Marthandan, et al. (2012), a study done by Hanapi and Nordin (2014) stated that one of the factors that contributes to the unemployment problem among Malaysian graduates is the quality of the graduates. There are employers in the industry giving negative comments on the graduates and mentioned that the graduates do not have the suitable skills

and qualifications, which meet the needs of the industry. Besides, the graduates are weak in employability skills and do not show good working performance. Findings by Hanapi and Nordin (2014) also showed that the majority of respondents agreed that graduates' attribute, lecturers' competency and the quality of education, which are referred to as the curriculum of a study field, are factors that contribute to the unemployment problem among Malaysian graduates.

Competency among graduates critically hits Malaysia that leads to most organizations and practitioners question the quality of graduates in Malaysia. Azmi, Ahmad and Zainuddin (2009) findings indicated that competency based career development practice is the best practice that should be implemented by any public organization in Malaysia in order to obtain higher quality services. Their findings also revealed that there is a positive relationship between competencies based career development practice and all service quality dimensions found in Malaysian public organizations. Competencies help individual to develop his or her career based on their career interest. Therefore, it is significant as a tool to help employee to shape the future of career development. A qualitative study on "Academia and Practitioner Perspectives on Competencies Required for Technical and Vocational Education Students in Malaysia" by Salleh, Sulaiman, Mohamad and Sern (2015) showed that both academic faculty and workforce practitioners agree that graduates need to possess the necessary competencies before entering the workplace. It appears that most workplaces need graduates who are highly motivated and willing to learn within the organization. Additionally, the practitioners urge that practical training or internships to be an important element that has to be embedded into programs offered in universities. There are many studies highlighting graduate competencies due to dynamic changes in employability market today.

Previous studies addressing this issue come from feedback by industries. The study on competency by Jainudin, Francis, Tawie, and Matarul (2015) stated that in order to enhance graduates employability, industrial training course be introduced as one of the compulsory requirements in the course program. The objective of the training is to expose students to the competency, knowledge and skills needed to succeed in the workplace. By undergoing industrial training, they will be able to relate the theory that they learnt and applied them practically.

Technological Change as a Mediator

Introduction of new technology and identification of market changes have emerged as most important competencies because they are significantly correlated with subjective performance, competency, objective performance and overall competitiveness of organizations. Technological changes provide significant impacts towards organization performance particularly employee competency in dealing with technological changes.

Hamel and Prahalad (as cited in Rajesh, Suresh & Deshmukh, 2008) defined core competence as a bundle of skills and technologies that enable a company to provide a particular benefit to the customers. A study done by Rajesh, Suresh and Deshmukh (2008) provided significant findings which indicated that there were significant correlation on introduction of new technology and employee performance. Introduction of new technology requires employees to adapt and learn new skills which require devotion of time and willingness to learn in order to become competent. Rajesh, et al. (2008) also indicated that introduction of new technology and identification of market changes are important because they are significantly correlated with subjective performance, objective performance, and overall com-

petitiveness at specified levels of significance. The reason for these observations may be fast changing market conditions and product features.

Karanja's (2015) findings revealed that employee performance has been positively influenced by organizational change. The variable that has changed the most and influenced employee performance positively is technology. Karanja's (2015) study mainly assess the effects of technological change, structure change, the changing roles, responsibilities of employees, and the changes in management on the performance of workforce. Past studies tried to answer questions raised in regards to the impacts of technological change, structure change, the changing role and obligations and change in administration on employee competency. The importance of past study was to track changes in the working environment after some time in an association experiencing various changes and to decide how it influences the employee competency. Past study is essential to guide the current study in investigating technological change as a mediating factor, and how it influences employee competency.

Change Management

There are a number of issues that need to be addressed in order to advance the approach to competency management if the objective is to find support in competencies for implementing strategy-driven change initiatives. First, there is a need to shift towards a forward looking and proactive approaches to competency modelling. If competency modelling focuses on the analysis of gaps between current high and average performance, it ignores the skills required for long-term future success. As a result, the organisation compensates and rewards behaviours that already are in the outset, are obsolete and constitute obstacles to strategy implementation (Antonacopoulou & Fitzgerald, 1996 as cited in Maria & Klas, 2007). As business needs are changing, business leaders are recognising the value of employees who are not only highly skilled, but more importantly, can adapt to changes, learn quickly, commit themselves to continuous professional and personal development. The competency management is time-paced with the rollout of the corporate wide restructuring project. This gives a unique opportunity to observe and analyse, through participant observation and interviews with executives and branch employees on how the competency framework actively could translate the strategy behind the transformation into actions at the level of individual job holders, and how it supports change.

Six particular areas shown in Table 1 proposed by Maria and Klass, (2007) explained that change management should be done based on strategic changes and explained clearly about change to every employee and how to achieve it. This is significant because employee knowledge, skills and abilities are the assets of the organization that are needed to be maintained and polished based on the need of the current market. Organizations that face change management need to consider the potential issue of resistance for change and competency. Employee may feel jeopardized due to the changes made by the management. Therefore, Maria and Klass (2007) also stated that the alteration of new behaviour is a must for every single employee in order to reinforce employee competency through training and development. The study done by Maria and Klass, (2007) is an important prelude for the current study to explore in detail how change management is shaping employee competency. Findings by Kansal and Chandani (2014) indicated that poor change management may effect organizational performance, human resource function and employee performance. Kansal and Chandani, (2014) also revealed that change management should be perform based on the need of the market and not necessar-

Table 1: Potential positive impacts for supporting strategic change (six particular area)

1. Communication of strategic
2. Improvement of employees' understanding of how to reach goals
3. Improvement of feedback from branches to headquarters
4. Incorporation of new behaviours
5. Enhancement of employee participation in change implementation
6. Institutionalising changes

(Maria & Klass, 2007)

ily effect current employee competency. Change management should be done without effecting employee competency and meeting the business need. Previous study also indicated that change management effect employee performance due to merger, downsizing and resizing which require new knowledge, skills and abilities. Due to merger, downsizing and resizing, employee are being forced to accept the changes in term of management style, tools, procedure and policy which may reflex the performance of the employee and organization. Previous study is significant in shaping the current study to investigate the effect of change management that may influence employee competency.

Organization Culture

Culture has been characterized by many authors as "something to do with the people and unique quality and style of organization" (Kilman et al., 1985 as cited in Siew, 2004, p. 340) "the way we do things around here" or the "expressive non-rational qualities of an organization". Martins and Coetzee (2007) explained that as far as the culture survey is concerned, the overall results indicated that the organisational structure evoked significantly less positive experiences from females, whites, production staff and the age group below 35. It appears from the results that the less positive experiences regarding the leadership style, in particular communication, control, and decision making could be probable causes for these experience. Their study revealed that different group of employees and different gender of employee showed different result based on experienced towards organization culture, diversity, interdepartmental relation and managers relationship. A study done by Martins and Coetzee (2007) is significant in explaining the nature on how organizational culture influence employee personality, competency and leadership.

Organizational culture is considered as a norm in organization that helps to shape employee and working culture. Through organizational culture employee could understand the essence of the vision and mission of the company and translate it into desired action that is significantly important for organization effectiveness. Before questioning organizational effectiveness, organization should look at organizational culture that may contribute toward employee competency. A study by Martins and Coetzee (2007) addressing this issue was only interested in personality, emotional intelligence and basic competency which did not cover employee competency profiling necessary in performing tasks and only concentrating on internal factors. However, through the limitations of previous study, the current study

intends to investigate the relationship between organizational culture and employee competency. Shahzad (2014) revealed that there was a positive relationship between organizational culture and employee's job performance at software houses in Pakistan. Findings showed the link between culture and employee's job performance within the organization. Strong culture within the organization to raises the employee's commitment towards achieving the goals of the organization with a common path. It is very helpful to increase the performance of the employees. Shahzad's (2014) study is significant in order to measure the level of employee performance based on organizational culture. Organizational culture may not directly influence employee competency but directly influence employee performance.

Teamwork

Teamwork in an organization is important in order to help organization to achieve its objectives. Performance in the team depends on individual competency and much more relates to team competency. Margerison's (2001) study on team competencies provide an in depth understanding on how individual competency relates to team competencies. Margerison (2001) suggests that there is a misplaced over emphasis on individual competency rather than team competency. There is not enough attention on team competency. Some organizations may only focus on individual competency without considering team competency as the indicator contributing to individual competency.

Margerison (2001) coins nine team competencies which are advising, innovating, promoting, developing, organizing, producing, inspecting, maintaining and linking. On the other hand, Olupeliyawa, Hughes, and Balasooriya (2009) indicated that team training is essential, especially from a perspective of improving inter-professional collaboration and safety. They also stated that team competencies are based on continual training and exposure to organizational shared values and visions.

Teamwork competency is significant in order to determine the level of employee competency based on the training received by the members of the team, exposure to high profile projects, exposure on decision making which require high cognitive ability. Previous study also stated that individual competency is based on team learning and team support. In order that the whole team members achieve their goals, team leader have to ensure that all the team members are competent in order to complete the assigned tasks. To ensure team members competence, practitioners or higher authority in the organization should consider team training and team building as the essence to achieve higher degree of team competencies (Salas, Rosen, Burke, & Goodwin, 2009). From team training, the members of the team could sharpen their soft skills, communication skills, decision making skills, attitude, leadership skills and knowledge.

Team training helps members of the team achieve the desired competency level that is aligned with the nature of the task assigned. Blanco, Echaluce, Penalvo, and Conde (2015) indicated that the analysis of the members are considered individually, consistent with prior studies which confirm that the quality of the individual performance of their members is a fundamental factor for the success of the team (Storm, 1999 as cited in Blanco, Echaluce, Penalvo, & Conde, 2015). Blanco et al. (2015) also explained that individual performance is significant in order to ensure the success of the team. Based on the statement, it does clearly indicates that employee competency correlates with individual performance and teamwork performance.

Employee competency is the essence of teamwork competency. Previous study suggested future research to explore

the possibility of including relationship of individual performance in the teamwork context and its potential to detect anomalies. This is significant for the current study to explore and understand more on how teamwork influence employee competency.

PROBLEM STATEMENT

This study investigates how technological change affects employee competency before the process of competency profiling takes place. The issue start when practitioner or organization overlooked the micro and macro factors contributing to employee competency profiling process. Some organizations provide assessment based on the interest of shareholder and organization without assessing the current situation (Tovey, 1994). Many organization have failed to assess how macro and micro factors affecting competency profiling process, for instance technology shift or commonly known as technological change, change management due to downsizing or resizing, organizational culture issue and teamwork competency (Karanja, 2015).

Empirical, theoretical and practical research gaps are explored as the basis of this study.

Empirical Gap

Previous research provides inconsistent finding based on different need and analysis conducted. Local research provides different findings compared to international and Asian researches.

Inconsistent findings may lead to conflict of opinion, model development and discussion of the findings among scholars who lead seminal research in their respective country. Contradiction between international study and local study is due to dynamic industrial need, cultural, perception and technological change. In order to close this gap, practitioners ought to assess current environment related to organization needs, job requirement, management style and demand from global market (Nadri, Hasbee, Mughal, & Channa, 2016).

Theoretical Gap

Previous research on employee competency only brings in theory based on internal factors that contribute to employee competency for instance model or theory development which only provides a common system for assessing competency problem and opportunities, as well as, individual competency as the indicator toward employee competency.

This study proposes that competency profiling should cover both theoretical and model from the perspective covering work life balance, psychological factors and external factors that correlate with employee competency. Cheng, Yang, and

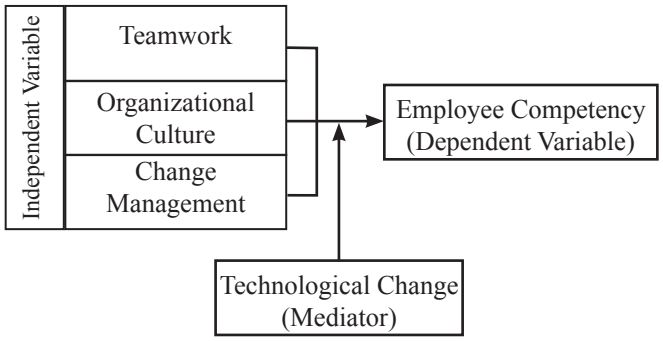


Figure 1: Conceptual framework

Peng (2011) proposed a reasonable model looking at the impacts of perceived individual and social learning support on employees which only focuses on human factors and covering external factors. Some studies may overlook external indicators that could affect employee competency, such as, technological advancements.

Omer's study in (2012) have the basis of competencies divided into business knowledge, change management, and technological competencies, and it is significant for this study to include competency model or theory based on external factors. Employee competency not only comes from internal factors but also driven by external factors that may lead to employee competency. Emanating from this theoretical gap, the current study proposes to cover both elements in order to close the theoretical gap.

Practical Gap

The need of competency is significant to develop high skill workers that are linked to the 10th Malaysia plan and vision 2020. The practice of employee competency in Sarawak is still at the preliminary stage. This initiative requires effort to link competency to the Government Transformation Plan and balanced scorecard initiative that was just implemented in the last 2 years in Sarawak (Sains, 2013). Furthermore the Public Complaint Bureau (PCB as cited in Azmi, Ahmad, & Zainuddin, 2009) indicated that the number of complaint received by the Malaysian public organizations are three times higher than the number of complaints received by PCB. This suggests that service quality is not as expected by the customers. This is done partly by implementing competency based career development and performance management practices in the public services since 1st November 2002 (Putra Nurwan & Hizatul, 2004 as cited in Azmi, Ahmad, & Zainuddin, 2009). The need of competency profiling practice in Malaysia is significant in order to increase the quality of service. Therefore, this study investigates factors that may contribute towards employee competency.

RESEARCH OBJECTIVES

Specifically, the objectives of this study are as follows:

i. To investigate the direct effect of teamwork on employee competency.
ii. To investigate the direct effect of change management on employee competency.
iii. To investigate the direct effect of organizational culture and employee competency.
iv. To investigate the effect of technological change towards employee competency.
v. To determine the indirect effect of teamwork and technological change as mediating factor on employee competency.
vi. To determine the indirect effect of organizational culture and technological change as mediating factor on employee competency.
vii. To determine the indirect effect of change management and technological change as mediating factor on employee competency.

METHODOLOGY

This study adapt quantitative survey design. The sample of this study were 302 respondents selected through a simple random sampling.

Instrument

This study adapted questionnaire from 5 sources. Employee competency was measured by using instrument that was develop by Tovey (1994). Teamwork was measured by using instrument that was develop by

Table 2: Construct validity, average variance extracted, and discriminant validity

Construct	CR	AVE	ECM	TECH	TMWK	CULT
ECM	0.750	0.501	0.708			
TECH	0.829	0.549	0.193	0.741		
TMWK	0.848	0.653	0.677	0.026	0.808	
CULT	0.838	0.633	0.778	0.234	0.616	0.796
CHNG	0.808	0.585	0.785	0.167	0.545	0.802

Note: ECM=Employee Competency, TMK=Teamwork, EXPC=Work Experience, CULT= Organizational Culture, CHNG= Change Management, and TECH= Technological Change

Charles (2001), organizational culture was measured by using instrument that was develop by Siew Kim Jean Lee and Kelvin Yu (2004), change management and technological change was measured by using instrument that was develop by Omer (2012). All five variables were measured using a Likert scale of 1 represent strongly disagree, 2 disagree, 3 neutral, 4 agree and 5 strongly agree. High score represent high competency.

Exploratory Factor Analysis

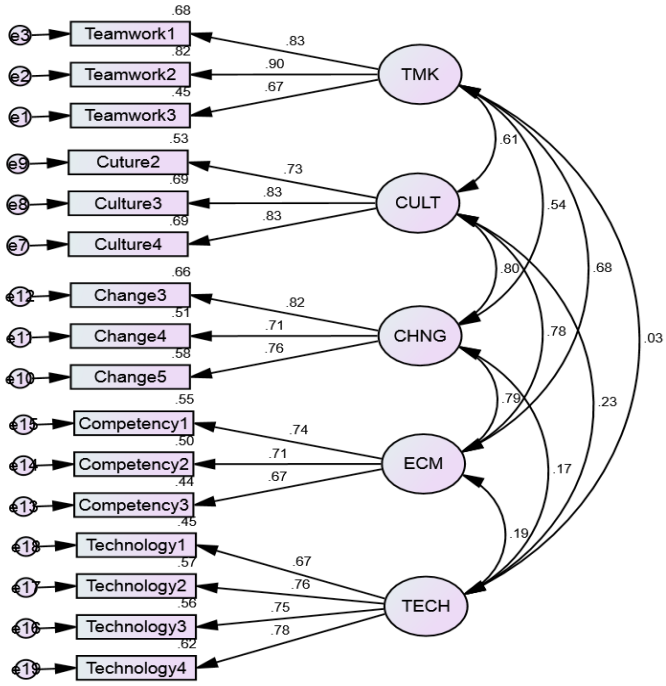
Exploratory factor analysis was performed. Kaiser-Meyer-Olkin measure of sampling adequacy was above the commonly recommended value of 0.6 (Neill, 2008) and loading factors between the ranges of 0.67 to 0.80.

Table 2 above explains construct validity (CR), average variance extracted (AVE) and discriminant validity. Employee competency with construct validity (CR) .750, AVE .501 and discriminant validity was at .708, technological change with construct validity (CR).829 AVE .549 and discriminant validity at .741 followed by teamwork with construct validity (CR) .848, AVE .653 and discriminant validity at .808. For Organizational culture construct validity (CR) was at .838 AVE .633 and discriminant validity at .796. The next construct is change management with construct validity at .808, AVE .585 and discriminant validity at .765. Hair, Sarstedt, Ringle, & Mena (2012) proposed that Average variance extracted at the range of 0.5, construct reliability 0.7 and discriminant value should be higher that any below construct.

RESULTS

Figure 2 shows a measurement model which consisted of Good Fit Index (GFI), Chi-square and Degree of Freedom (CMIN/DF), Root mean square error of approximation (RMSEA), Normated fit index (NFI) and Comparative Fit Index (CFI). The results for confirmatory factor analysis showed that Good Fit Index was at 0.931 as proposed by Hair et al. (2012) which is considered as an excellent good fit. For Chi-square and Degree of Freedom, results showed that CMIN/DF was below 5.0 (Hair et al., 2012) with a value of 1.580 at significant value of .000. Root mean square error of approximation (RMSEA) was at .042 which is below 0.05 (Hair et al., 2012), Normated fit Index (NFI) was at 0.932 above 0.9 (Hair et al., 2006) and Comparative fit index (CFI) was at 0.973. The result for confirmatory factor analysis in this study was at excellent level and meet the measurement level.

Final fix indexes for structural model in Figure 3 shows that CMIN/Df was at 1.526 and chi-square at 143.475, p- value was at .001, RMSEA was at .042, GFI was at .946, CFI was at .978, TLI was at 972, NFI was at .939, RFI was at .922 and IFI was at .978. All recommended



Note: ECM=Employee Competency, TMK=Teamwork, CULT= Organizational Culture, CHNG= Change Management, and TECH= Technological Change

Figure 2: Mesurement model

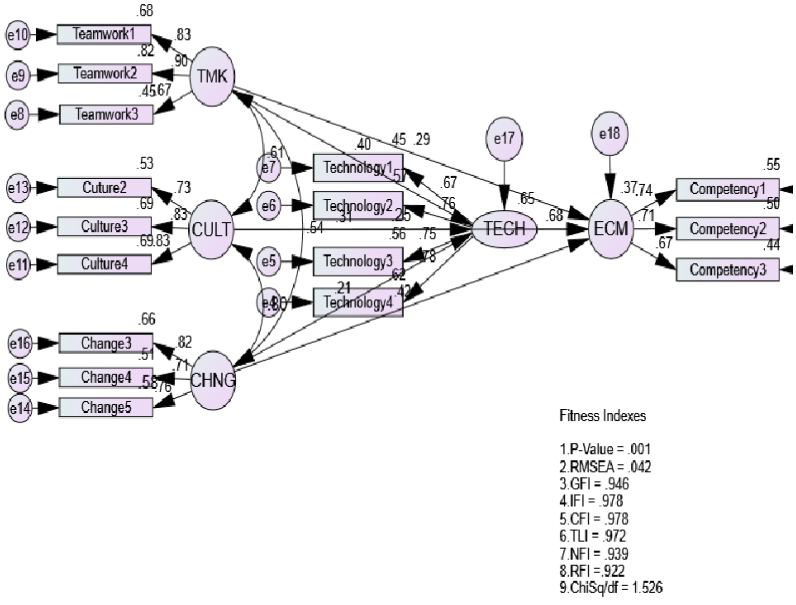


Figure 3: Structural model

Table 3: Hypothesis testing

Constructs			**(β)**	*p*	**Hypothesis**
Technology	<---	Teamwork	.398	***	H_a1 Supported
Technology	<---	Change management	.212	***	H_a2 Supported
Technology	<---	Organization culture	.311	***	H_a3 Supported
Employee competency	<---	Technology	.683	***	H_a4 Supported
Direct effect			**(β)**	*p*	**Hypothesis**
Employee competency	<---	Teamwork	.293	***	H_a5 Supported
Employee competency	<---	Change Management	.417	***	H_a6 Supported
Employee competency	<---	Organization Culture	.252	.037	H_a7 Supported

Squared Multiple Correlations: Technology R^2 **.653 (large effect size with f-squared 1.8818 ,** Employee Competency R^2 **373 (large effect size with f-squared 0.5949)**

fits indexes were proposed by Hair et al. (2012). Squared Multiple Correlations for Technological change at was R^2.653 which is large effect size with f-squared 1.8818 and Employee Competency with R^2 373 with large effect size with f-squared 0.5949**.**

Result of Hypothesis Testing

Table 3 showed that all the hypotheses were supported. Final fix indices for structural model showed that CMIN/Df was at 1.526 and chi-square at 143.475, p- value was at .001, RMSEA was at .042, GFI was at .946, CFI was at .978, TLI was at 972, NFI was at .939, RFI was at .922 and IFI was at .978. All recommended fits indexes were proposed by Hair et al. (2012). Squared Multiple Correlations for Technological change at was R^2 .653 which is large effect size with f-squared 1.8818 and Employee Competency with R^2 .373 with large effect size with f-squared 0.5949**.**

DISCUSSION

Teamwork is vital in order for individual to learn, adapt with the changes and measure the competency level. The current study provides insight on how teamwork plays an important role in adapting the changes of technology and also affecting employee competency. There was a positive effect of teamwork and technological change as mediating factor towards employee competency. Teamwork provides a support system for individual to adapt with the changes particularly in technological change. If employees are unable to adapt due to lack of support and guide for team members, it will also affect the overall performance of the team and individual competency.

The findings are also similar to Olupeliyawa, Hughes, and Balasooriya (2009) which indicated that team training is essential, especially from the perspective of improving inter-professional collaboration, safety and adaptability. The context of adaptability here is addressing to the changes that may reflect performance and competency. The findings are also supported by Salas, Rosen, Burke, and Goodwin (2009). They indicated that to achieve higher degree of competency and adaptability to technological change, practitioners or higher authority in the organization should consider team training

and team building as the essence of higher degree of team competencies. Technological change can be considered as an opportunity for individual to learn new skills in the team, and it also could be the threat for employee performance and competency.

Success of teamwork and quality of individual competency comes from team learning, team adaptability to the changes and stress (Blanco, Echaluce, Penalvo, & Conde, 2015). Working in the team help individual to develop technical and non-technical competency that help individual to adapt with the changes that comes from organizational, technological changes and change management.

The finding of this study showed that there was a positive effect between organizational culture and technological change as mediating factor towards employee competency. Culture and daily practices in organization should support any type of changes that occurred be it external and internal. This study provides insight on how employee perceived organization culture as one of the factors that helps employee to stimulate the competency level when they are exposed to technological change at work place. Martins and Coetzee (2007) explained the nature on how organizational culture influence employee personality, competency and leadership. Competency in this context is competency in adapting to technological change. Organization culture should align with the change and provide values and belief to the employee in order to support technological change.

Changes sometimes are important for organizations in order to compete in the global market, surviving in business, particularly in 21st century are the challenges for every organization. Therefore, organization needs to adopt and change the practices and system that may reflect or affect employee competency and overall performance of the company. The current study found that change management provided a positive indirect effect to technological change as a mediating factor towards employee competency. The six particular areas proposed by Maria and Klass (2007) also stated that in order to overcome changes the alteration of new behaviour is a must for every single employee in order to reinforce employee competency through training and development. Maria and Klass (2007) also indicated that changes in technology affect management process and employee performance. In addition, Kansal and Chandani (2014) indicated that poor change management may effect organizational performance, human resource function and employee performance. Therefore, changes in management or department need to be aligned with the changes in technology, particularly in system and working tools that employee and organization use to produce the output.

Technology is important in our daily lives as it helps to improve our way of living and in performing our job effectively. However, to some extent technology could be a threat and can also provide an opportunity for development and competency.

The findings of this study showed significant positive effects on technological change and employee competency. This is consistent with Rajesh, Suresh, and Deshmukh (2008) study which indicated high correlation between introduction of new technology and competency. Karanja (2015) similarly explained that technological change variable that has changed the most and influenced employee performance positively is technology. The pattern of the findings from previous studies is consistent with the current study. Therefore, adaptation and introduction of new technology need to be aligned with the interest and current employee competency. Organization need to provide related training in order to align the changes in technology and employee competency.

CONCLUSION AND RECOMMENDATIONS

In conclusion, competency profiling is affected by the changes of technology, management, culture and other micro and macro factors that may influence the quality of employee competency. Thus, it is important for organization to understand the underpinning reasons that contributes towards the quality of employee competency in organization.

This study provides practical applications toward the practice of competency measurement and competency development. The applications include improving current profiling assessment before actual competency profiling takes place, improving practitioner's knowledge on what is the most dynamic factor underpinning competency profiling process.

The results have confirmed that the most significant elements before conducting competency profiling are personality, peer support, work life balance, teamwork, organizational culture, change management, technological change and demography factors. Hence these elements are necessary in pre- assessment of employee competencies. Therefore, this study could forecast the relevant positive applications ,such as, improving competency process in organizational setting, improving policy and related action plan regarding human resource practices mainly on competency, and also could help local authorities to review findings of this study as necessary elements in order to achieve high competent workers.

This study proposes a mixed method in order to understand the factors that may contribute towards employee competency in the future. By combining both methods, relevant model may be developed to understand in depth the issue of employee competency. In addition future study can include technical and non-technical competencies as dependent variables in order to measure effectively employee competency. Competency is essential for every employees, organization and even management system. Other future studies can investigate other factors apart from internal factors as contributing factors toward competency.

In conclusion, competency profiling is affected by the changes of technology, management, culture and other micro and macro factors that may influence the quality of employee competency. Thus, it is important for organization to understand the underpinning reasons that contributes towards the quality of employee competency in organization.

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