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Structural model of the effects of total quality management components on job performance considering the moderating effects of ppersonal factors

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ABSTRACT

This study aims to explore the structural model of the effect of TQM components on the job performance of the staff employees, considering the moderating effect of personal factors in teacher education universities of Iran. A sample of 335 subjects was obtained. through random cluster sampling method. Data collection was done using four questionnaires TQM' questionnaire developed by US Federal Quality Institute, Paterson's job performance questionnaire and two researcher designed questionnaires on the personal knowledge and skill factors. Considering the knowledge factor as a moderating variable, a relationship was observed between some components of TQM and job performance. Also, considering skills as of moderating variable, a relationship was observed between a few TQM components and job performance.

KEYWORDS
Total quality management (TQM) , Job performance, Personal knowledge, Personal skills

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Introduction

Nowadays, competent and efficient managers are deemed as an inventible requirement for the progress in the educational technology and success in the continuous improvement. Hence, all the teacher education universities must try their best to create and train such professional people. Given the fact that higher education institutions are among the most universal scientific agencies operating in the field of knowledge and technology production as well as students and scientists' training, it is necessary for them to move towards excellence so as to survive in the modern increasingly competitive environment.

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As per the extant literature, the implementation of TQM system and observance of the principles stipulated in this management approach can service as a success key for every organization bringing in not only customer satisfaction and quality promotion but also increased effectiveness (Zoualfaghari Zaferani & Kalantari, 2008). Keramati & Albadvi (2009) also found that implementation of TQM has a direct influence on the job performance. Job performance deals with the quality and quantity of an individual's work outputs. Chen & Liang (2011) have defined job performance as a measure that enables a business to assess the degree of attainment of its goals.

The most vital issue in any organization is the job performance of its human resources (Barati A, 2010). Job performance is also assumed to be a composite construct based on which successful employees are differentiated from the unsuccessful using a set of specific criteria (Austin & Villanova, 1992; Shekarshekan et al, 2001). An empirical study by Hung R.Y.Y,liensb.y.yangb.kuo y. (2011) confirmed the positive association between TQM and innovation performance. The recognition of the real requirements of the stakeholders and their appropriate satisfaction, making effort towards delivering new services to the stakeholders, establishing long-term relationships with the stakeholders and acquiring their satisfaction with service provision are among the main indicators of the stakeholders' satisfaction. Trying to prioritize the features and needs of stakeholders can focus the organization's efforts to improve features that improve consumers by assessment for organizations create competitive advantage(Shahin, Vaez Bagheri 2014). Accordingly, it can be concluded that TQM is related to job performance in some ways (Dubey & Singh, 2013).

Ability is known as a main factor of individual performance and productivity. Ability assesses one's knowledge, skill, experience and competence required for performing a job. Information processing, experiences, practical knowledge and skills result in the production of new knowledge. Sharing of the useful information and lessons learned from experiences and different viewpoints among the employees can be regarded as a useful tool for increasing the efficiency(Narimani et al, 2014 In fact, the moderator variable of knowledge has a mental and personal nature intrinsically relating to the individual and group. Personal knowledge is founded on the information gained through experiences, beliefs and individual values. Skills which are mainly based on personal capabilities and talents allow effective problem solution and decision making by the individuals. Accordingly, it can be claimed that knowledge and skill function as two wings of a bird (Cho, 2002).

Figure no.1 represents the structural pattern of the effects of TQM's components on the job performance taking the moderating effect of the personal factors into account.

Research Methodology

This research was of applied nature conducted using descriptive correlational research method.Modeling was done using structural equation modeling technique while hierarchical regression technique was used so as to test the causal relationships between the variables. With a total size of 2553, the research statistical population consisted of all the staff employees working in the teacher education universities situated in 32 provinces of Iran in the academic year of 2015-2016. Applying the Krejcie and Morgan table, the size of the

sample was estimated to be 335 subjects and random cluster sampling technique was utilized.

Data Collection Instruments

Including: (1) Total Quality Management Questionnaire: This instrument has been developed by U.S. Federal Quality Institute (Asad, 2004). It contains 8 criteria with 6 items per every criterion covering 42 items collectively.. These criteria are as follows: 1) top management support and leadership, 2) strategic planning, 3) customer focus, 4) employee recruitment and training, 5) employee empowerment and teamwork, 6) quality measurement and analysis, 7) quality assurance, and 8) quality and productivity improvement rewards.(2) Paterson's Job Performance Questionnaire (2000): This instrument is composed of 16 items. (3)Personal Knowledge Questionnaire: To assess the subjects' knowledge, a researcher-designed questionnaire composed of 10 items prepared based on the studies reported in the management literature. (4) Personal Skill Questionnaire: This was also researcher designed questionnaire composed of 8 items All four guestion hairs have been designed based a five point Likert scale.

The validity of the instruments was examined in terms of content and construct validity. Content validity was confirmed in terms of the ideas of 7 practitioners in the management field. As per the calculations performed by the structural equation modeling (SEM), all the factor loadings of the measures were statistically significant ($P<0.05$) and the absolute magnitudes of t values were all higher than 1 providing strong evidence on the validity of the observable variables used in the measurement process.

In addition, the reliability of the questionnaires was tested using Cronbach's alpha coefficient. To do so, for every variable and its respective criteria, Cronbach's alpha coefficient was estimated using SPSS 23 software. Cronbach's alpha coefficients for four foregoing questionnaires were found to be 0/97,0/92,0/90 and 0/91. respectively.

To analyze the data, hierarchical regression and structural equation modeling techniques through Smart PLS version 3 were used.

Results

After determining the measurement models to evaluate the conceptual model, as well as ensuring the presence or absence of a causal relationship between variables, and to evaluate the appropriateness of observed data with conceptual models, the hypotheses were tested using Structural Equation Modeling. Figures (1) and (2) show the structural model with moderating role of individual knowledge and individual skills variables (personal factors), using the values of significance level.

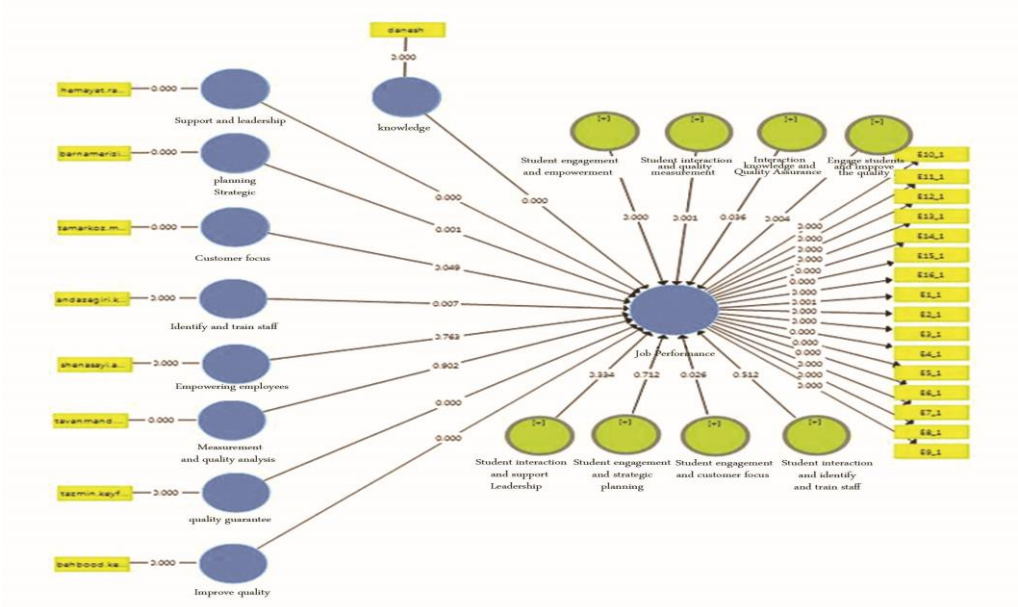

Figure 1: Shows the results of the structural role of moderator

Explained variance for job performance in Figure (1) The moderating role of personal knowledge is 0.740 which means that independent variables account for 74 percent of the variance of the dependent variable, job performance.

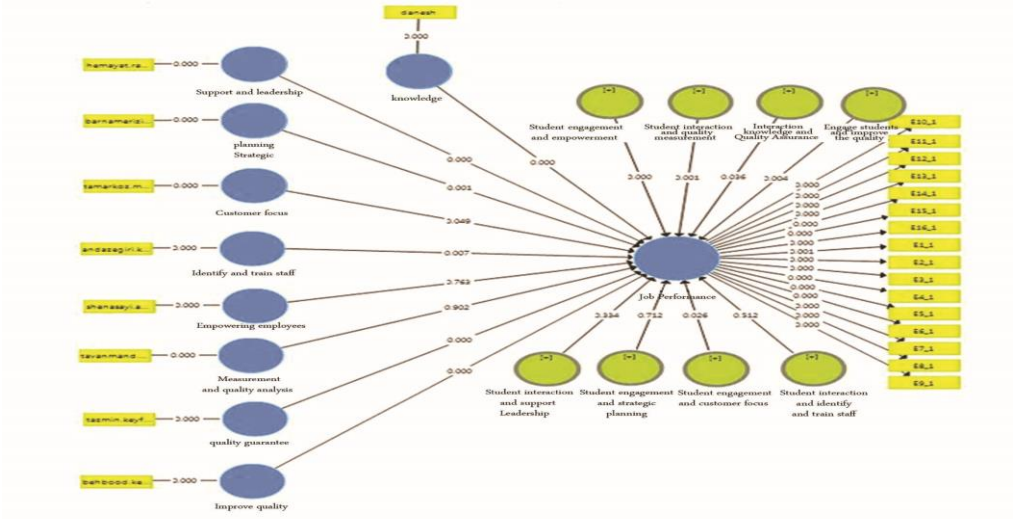

Figure 2: Shows the results of the structural model with the role of moderator skills

The explained variance for job performance in Figure (2) the moderating role of individual skill equals 0.645, which means independent variables

account for 64 percent of the variance of the dependent variable, job performance. Also, testing structural model and main hypothesis of the study with moderating role of personal factors, including personal knowledge and personal skill, can provide a positive moderating role among the staff of the organization and lead to positive attitude.

Table 1: Results structural model with moderator role of personal factors

Personal factors	Mediating variables	Path value	T Value	Significance level
knowledge	Effect of the interaction between top management support and leadership component and knowledge variable on job performance	-0.130	0.933	0.351
	Effect of the interaction between strategic planning component and knowledge variable on job performance	0.055	0.366	0.715
	Effect of interaction between customer focus and knowledge variable on job performance	0.301	2.296	0.022
	Effect of interaction between employee recruitment and training and knowledge variable on job performance	-0.092	0.640	0.523
	Effect of interaction between employee empowerment and teamwork and knowledge variable on job performance	-0.449	3.783	0.000
	Effect of interaction between quality appraisal and analysis and knowledge variable component on job performance	0.365	3.043	0.002
	Effect of interaction between quality assurance component and knowledge variable on the job performance	-0.559	5.112	0.000
	Effect of interaction between quality improvement and efficiency rewards component and knowledge variable on the job performance	-0.285	-2.819	0.005
Skill	Effect of the interaction between top management support and leadership component and skill variable on job performance	-0.206	2.602	0.010
	Effect of the interaction between strategic planning component and skill variable on job performance	-0.290	2.410	0.016
	Effect of interaction between customer focus and skill variable on job performance	0.811	6.378	0.000
	Effect of interaction between employee recruitment and training and skill variable on job performance	-0.111	1.240	0.216
	Effect of interaction between employee empowerment and teamwork and skill variable on job performance	-0.206	1.568	0.118
	Effect of interaction between quality appraisal and analysis and skill variable component on job performance	-0.002	0.017	0.986
	Effect of interaction between quality assurance component and skill variable on the job performance	0.214	2.039	0.042
	Effect of interaction between quality improvement and efficiency rewards component and skill variable on the job performance	-0.240	3.055	0.002

Given the results presented in table (1), the impact of interaction between top management support and leadership, strategic planning, to identify and train the staff, the moderating variable if personal knowledge on job performance enjoys a significance level higher than 0.05. Therefore, given that the value is less than 1.96 and significance level is higher than 0.05, this impact won't be approved and consequently top management support and leadership, strategic planning, to identify and train the staff have no impact on job performance of teacher training university staff with moderating role of personal knowledge.

The impact of interactions between customer focus, employee empowerment and teamwork, quality analysis, quality assurance, quality improvement variables and moderating variable of personal knowledge on job performance enjoys a significance level of 0.001. Therefore, given the T-value which is more than 1.96 and significance which is less than 0.05, this impact will be approved. Therefore, the variables of customer focus, employee empowerment and teamwork, quality analysis, quality assurance, quality improvement with moderating role of personal knowledge significantly impact job performance of teacher training university staff.

The impact of interaction between variables of identify and train employees, employee empowerment and teamwork, quality analysis, and moderating variable of organizational culture on job performance enjoys a significance level of 0.05 in the model. Therefore, given the T-value which is less than 1.96 and significance level which is higher than 0.05, this impact won't be approved. Consequently, to identify and train the employees, employee empowerment and teamwork, quality analysis and moderating variable of personal skill affect job performance of teacher training university staff in a significance level higher than 0.05.

The impact of top management support and leadership, strategic planning, customer focus, quality assurance and quality improvement and moderating variable of personal skill on job performance will be 0.001 in a significance level; therefore, given the T-value which is higher than 1.96 and the significance level which is less than 0.05, this impact will be approved. Consequently, top management support and leadership, strategic planning, customer focus, quality assurance and quality improvement affect job performance of the staff in teacher training universities, with moderating role of personal skill.

Discussion & Conclusions

The findings revealed that there was a statistically significant correlation between the components of TQM including customer focus, employee empowerment and teamwork, quality analysis, quality assurance and quality improvement and the job performance when considering knowledge as the moderator variable while there was no statistically significant correlation between top management support and leadership, strategic planning, employee recruitment and training and the job performance for the same moderator variable (see figure no.2). Furthermore, moderated by the skill factor, the correlation between top-management and support, strategic planning, customer

focus, quality assurance and quality improvement was statistically significant while no statistically significant association was observed between the employee recruitment and training, employee empowerment and teamwork and quality analysis and job performance (see figure no.3).

Knowledge and skill acquisition is deemed as one of the stages of TQM implementation through which the instruments and techniques of continuous quality improvement are taught to the employees. These traits are transformed into concrete results via the employees' behaviors. As a result, the employees must possess certain characteristics so as to perform some set of behaviors and achieve certain results. To achieve the competitive advantages, these traits, behaviors and results need to be knitted with the organizational strategies.

Top management support and leadership concept used in this study mainly refers to the level of the involvement of organization's senior managers in the quality-oriented activities. From this perspective, it can be said the employees' knowledge and skill tend to produce a less and an indirect effect. In TQM practice, quality is defined by the customer. Hence, the product must be organized in such a way that it can satisfy the customer's expectations. Customer's expectations tend to vary in terms of age, gender, personality, job, economic and social status etc. To put it differently, different consumers perceive quality in different ways so that high quality to one consumer may be an inferior to another person. training job-related skills and behavioral skills to the front-line employees are among the essential criteria for servicing the employees in order to improve the capabilities for facing with different needs of the customers under different circumstances influencing the customers' level of satisfaction and organizational commitment. The significance of human resources training gets more obvious when we take this fact into account that development requires training high quality and competent human resources. To put it more precisely, development is almost impossible without competent persons. Besides human resources training, the updating of the information, knowledge and capabilities of the human resources working in different types of organization is the other major pillar of development and getting rid of stagnation (Vajargahi Fathi, 2005). The results showed that significantly improve the performance of personnel training and evaluation Mlkrdtasyr (Saleh, A. S., Piaw, C. Y., Idris, A. R, 2015).

One of the criteria considered for preempting the competitors in the modern In conclusion, it can be claimed that not only the personal skill but also group cooperation and teamwork are among the most important factors for the enhancement of the employees' level of performance. Measurement system analysis indicates whether the results obtained from the system are acceptable or not. As a result, quality measurement provides a strong instrument for relating the current efficiency and effectiveness to the targeted goal or standard. However, as per the results of this study, knowledge and skill fail to moderate the association between quality analysis and job performance of the teacher education universities a result which is in line with the studies by Haghighi (2011). Quality assurance in fact monitors the whole path qualitatively and can assure the observers of the required quality of the produced product or delivered service moving towards better quality. Nonetheless, knowledge and skill cannot appropriately moderate the association between quality assurance and job performance of the line employees in the teacher education universities. This mainly results from this fact that quality in the higher education is not an easily

definable concept so that there is no consensus regarding the definition of higher education quality. To achieve transcendental goals, every organization must create, validate and implement a quality management system for itself and take the necessary measures for both its maintenance and continuous improvement of its effectiveness and quality as per the respective standards' requirements. Quality is measured also increases the performance of the staff. In fact, the interaction of the quality and productivity rewards with the moderator variables of human resources, knowledge and skill fail to place a direct effect on the employee's job performance. The result obtained for this hypothesis was found to contradict the results reported in studies by Khakbaz (2008) but was in full conformity with the results of the study by Sajjad and Amjad (2012). Furthermore, nowadays a majority of the conventional human resources and management systems do not appear appropriate so that the traditional patterns are not deemed as efficient anymore. As a result, reflection upon and giving thought to various issues especially the quality and productivity measurement of the employees' performance is of critical significance influencing the managers' achievement of effective performance appraisal.

It is suggested that in Teacher Training University, TQM can be used to improve employees' job performance, where personal knowledge and personal skill variables play a key role.

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