

The Relationship between Total Quality Management and Staff's Job Performance at Teacher Training Universities

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ABSTRACT

The purpose of current study is to investigate the structural pattern of the impact of comprehensive quality management on job performance of the staff at teacher training universities. A descriptive-correlational research method was used for the purposes of the study. The statistical population consisted all the staff of teacher training universities in 32 provinces of the country including 2553 individuals. The sample size was estimated 335 individuals based on Morgan's table. A random cluster method was used for sampling. Total Quality Management Questionnaire, developed by US Federal Quality Institute, and Pearson job performance questionnaire (2000) were used to collect related data. The results showed that the two questionnaires used in this study are highly reliable. Therefore, the positive and significant impact of comprehensive quality management on job performance was confirmed

Keywords: total quality management, job performance, teacher training university

INTRODUCTION

Universities and higher education institutions have three main missions of education, research and service provision. Given the important role of these institutions in various economic, the fact that social, cultural and political dimensions of the society, ensuring their quality in order to prevent the loss of human and material capital and the ability to compete in the future world, quality is the most important component for organizations' survive, is an indispensable necessity. Therefore, to pay special attention to each of these functions and missions is of particular importance and has an important impact on the effectiveness of universities.

Given that Teacher Training University is a university for providing, training and empowering teachers and human resources of the Ministry of Education in Iran, and one of its strategic tasks and missions, empowerment and promotion of public, professional and professional competencies of the Ministry of Education through the Short-term and postgraduate education, therefore, this model can be used to evaluate and measure the quality improvement of Iranian cultural universities. On the other hand, to promote and rank teachers depends on establishing a system to assess their general and professional qualifications based on educational, research, cultural indicators, and Teacher Training University should have a teacher qualification system consisting of competencies, ethics, belief, revolutionary, professional and specialized in accordance with the foundations and objectives of the document on the fundamental transformation of education (Statute of the University of Farhangian, 2011).

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Societal, educational and economic changes and the ever-increasing development of science and technology have brought about dramatic changes in higher education systems in societies. The era in which we live is a customer oriented era and the success rate of each organization is directly related to its customer attention, its desires and the quality of services and products (Mojtaba Miklaei, Mehdi Zadeh Ashrafi and Emami Far, 2012). In the management category, various models and theories have been presented since the early 20th century. In this regard, various management methods have been developed and implemented to exploit the resources and resources to achieve this satisfaction. One of these models is a comprehensive quality management model that is now gradually introduced into the management scene with its more comprehensive models in quantitative and statistical fields, control and improvement, organization improvement, participatory patterns and so on. (Tari, 2005). Studies have shown that the actions of quality management and observance of the principles of this management approach are the key to the success of the organization and in addition to customer satisfaction and improvement of quality, it can increase its effectiveness (Zolfaghari Zaferani & Kalantari, 2008). As Keramati and Al-Badawi (2009) found that the implementation of comprehensive quality management affects job performance.

On the other hand, job performance is a general structure that refers to how organizational operations are carried out. In other words, job performance is an indicator of how an organization or institution achieves the goals (Ho & Tsai, 2006). Chen and Liang (2011) also recognize job performance as an indicator that a company can measure its achievement goals. The most important and fundamental issue of any organization is the human resource performance of that organization (Barati, Abadi, Ariati, & Nouri, 2010). Heinonen and Korvela (2003) found that organizations are more successful and have better performance to provide more customer satisfaction, as organizations are dependent on their customers. The degree of customer satisfaction determines the success or failure of the organization's activities (Dubey & Singh, 2013).

Management in educational organizations is, in fact, a conscious effort to raise the quality of education of people who have the burden of evolving individual and collective progress. By applying the principles and standards in the management of universities and educational areas, not only will the quality of education be improved, but savings will be made from the use of financial and human resources. In this regard, universities and higher education institutions have not been immune from these developments, and have recently faced a range of management development challenges (Groves, 2007). In addition, the pressure to replace managers who leave their positions has had environmental impacts and has also complicated the roles and responsibilities of higher education managers, which has led to reduced volunteers (Kezar & Eckel, 2004). Effective management in these turbulent conditions requires managers with the ability to create a sense of fit between organizational needs and environmental influences (Amin Beidokhty et al., 2008).

Azar et al. (2015) concluded that the positive effects of the two approaches of comprehensive and market-oriented management on performance were revealed and it was revealed that market orientation could play a role in interacting in the effectiveness of universal quality management.

Ahmadi et al. (2012) showed that there is a significant relationship between the dimensions of overall quality management and empowerment, and there is a significant relationship between the dimensions of overall quality management and performance evaluation, so that among the dimensions of overall quality management with empowerment, the support and leadership of managers, the outcomes of improving quality and productivity, customer-orientation and quality insurance, and among aspects of overall quality management, have a stronger relationship with the assessment of the quality of support and leadership of managers and quality insurance. They show.

Organizations that consciously and creatively associate with transformation can better respond to community needs and their growing responsibilities. Educational organizations of every society are also the main factors behind the development of a community. On the other hand, the key to the development of technology is in the hands of management. One of the most important forces that can strengthen educational institutions is the presence of thoughtful and creative managers. The role of management in changing organizational structure is critical for technology development. The management or leadership can maximize taking advantage of resources (physical capital and human capital).

Therefore, the study of comprehensive quality management by researchers, managers and officials of educational centers seems necessary to improve performance in productivity in educational system. The Effect of Learning and Learning on the progress of the educational system and the ever-increasing changes required for managers and teachers to be effective and competent. As a result, the Teacher Training University should try to train professionals for the educational system. Therefore, due to the emergence of the Teacher Training

Table 1. Distribution of questions in total quality management questionnaire separately by eight components

Questionnaire	component	indices
مدیریت کیفیت جامع	Support and leadership of the organization's top management	Items 1-7
	Strategic planning	Items 8-13
	Focus on customer	Items 14-21
	Measure and analyze quality	Items 22-28
	Identify and train the staff	Items 29-32
	Empower employees and team working	Items 33-35
	Quality assurance	Items 36-39
	The consequences of improving productivity and quality	Items 40-42

University and the challenge of staff performance, implementation of quality management can have an impact on the efficiency and effectiveness of the university. The innovative aspect of the present research is that no related research was found on the impact of comprehensive quality management components on employee performance and the moderating role of individual and organizational factors. For this reason, comprehensive quality management has been considered as a solution to the problem.

Therefore, the set of theoretical relations and predictions mentioned in this research will be tested in a benchmark to provide an answer to this question as to whether comprehensive quality management influences employees' job performance.

Structural Modeling (Main Hypothesis)

Structural Model The effect of comprehensive quality management on the job performance of staff in the academic staff of universities is based on the data.

METHODOLOGY

This research is applied in terms of its purpose and it is descriptive-correlational in terms of its method. It is descriptive because its purpose is to describe the objective, actual and regular events and various issues, and it is a kind of correlation since the researcher has determined the effect of comprehensive quality management on their employees' job performance.

The statistical population of this study included all the 2553 staff of Teacher Training University across the country and the number of secondary school girls in Isfahan city in the academic year 2012-2013. The sample size was estimated to be 335 by Cochran formula. The stratified random sampling method was proportional to the population size (in terms of provinces).

Total Quality Management Questionnaire

Total Quality Management Questionnaire was developed according to Gradual Quality Model with Leadership, Strategic Planning, Customer Focus, Quality Measurement and Analysis, Personnel Identification and Training, Employee Empowerment and Teamwork, Quality Assurance and the Outcomes of Productivity and Quality Improvement components, which includes 42 closed questions. Distribution of questions is presented in **Table 1** in the form of eight components.

The reliability of the comprehensive quality management questionnaire was 0.77 through Cronbach's alpha.

Job Performance Questionnaire

In this research, the Putterson Job Function Questionnaire (2000) will be used. This questionnaire, which was translated by Succinate and Senior (1369), has 16 questions. Salehi (2003) has used the Cronbach's alpha method to determine the reliability of this questionnaire. The obtained coefficient is 0.78 and 0.86 at 0.01, respectively. The reliability of job performance test in Zarei's research (2011) was 0.87 through Cronbach's alpha and 0.87 through test-retest. The reliability of job performance questionnaire was 0.89 in Cronbach's alpha. The distribution of questions in this questionnaire is presented in the four components as shown in **Table 2**.

Table 2. Distribution of job performance questionnaire by four components

Questionnaire	Components	Indices
Job performance	Observe discipline at work	Items 1-4
	responsibility at work	Items 5-8
	Cooperation at work	Items 9-12
	Improve the work	Items 13-16

In designing the questions, we tried to question the induction scheme and give a positive opinion in the form of a news story.

The spectrum used in the questionnaires is based on the five-choice five-point Likert spectrum (very disagreeing to very agreeable). The data were analyzed using descriptive and inferential statistics using PLS statistical software. In descriptive statistics, statistical characteristics such as frequency, percentage, mean and standard deviation were used and in the inferential statistics of structural equations.

Modeling Structural Equation and Software

Testing the Reliability of Measurement Tools (Test Pattern Test)

The PLS model is tested and interpreted in the same way as the other family members, the covariance-based methods, in two steps or steps. 1. The measurement pattern and 2. The structural pattern. The measurement pattern or confirmatory factor analysis part determines how the variables or substructures are measured in terms of the number of visible variables to answer questions about credibility and reliability of measurement. The structural pattern also shows the relationships between the structures (hidden variables) and their explanatory power. In this section, we test the pattern of measurement and proceed with the structural model test.

Investigating the Reliability of Total Quality Management

The reliability of the test relates to the accuracy of the measurement and its stability, so it has two different meanings: a meaning of reliability, stability, and reliability of the test scores over time. That is, if a test is run multiple times on an answer, its score is the same in all cases. The second meaning of reliability relates to the equivalence of clauses. The concept is that the test questions are correlated to each other (Gyotsvand, 2008). In order to investigate the reliability of structures, Frenal and Locker (1981) propose three criteria that include: 1. The reliability of each item, 2. The combined reliability of each of the structures, and 3. The average AVE extracted variance.

Regarding the reliability of each item, the factor load of 0.5 and more each item in the confirmatory factor analysis indicates a well-defined structure. Also, the value of the items should be at least at a level of 0.01 (Giffen & Shrove, 2005). To calculate the T statistics, a bootstrap test (with 500 subsamples) was used to determine the significance of factor loads. The Dillon-Goldstein coefficient (ρ_c) was used to check the composite reliability of each of the structures. Since PLS, in contrast to the multiple regression of OLS, uses factor scores for analysis, it is essential to consider the factor load of each item in the calculation of the reliability index. However, the Cronbach Alpha coefficient gives equal weight to the items and lessens reliability, so the ρ_c coefficient was used (Manuel et al., 2009). Acceptable values of ρ_c should be 0.7 or greater (Fresnel and Larker, 1981). The third indicator is the reliability of the extracted mean variance (Fresnel and Larker, 1981). Fresnel and Larker recommend AVE values of 0.5 and more, which means that the structure is about 50% or more of the variance of its markers (China, 1988). Of course Magner and colleagues (1996) consider the values above 0.4 for the AVE to be favorable and satisfactory. In this research, as confirmatory factor analysis is related to comprehensive quality management and job performance, this information is considered for both variables.

According to the results of **Table 3**, all factor load values are acceptable and all values of T-Value greater than 1.96 with a significant level of zero are less than 0.05. Therefore, statistically, all factor loads assessed in each item is significant and confirmatory factor analysis is acceptable in the measurement model for the variable Total Quality Management.

Table 3. Reliability Indicators for Comprehensive Quality Management Components

Components	Factor loadings	T-Value	Significance level
Support and leadership of the organization's top management	0.875	9.043	0.000
Strategic planning	0.896	9.437	0.000
Focus on customer	0.940	10.500	0.000
Measure and analyze quality	0.860	8.226	0.000
Identify and train the staff	0.917	10.292	0.000
Empower employees and team working	0.859	9.815	0.000
Quality assurance	0.882	9.425	0.000
The consequences of improving productivity and quality	0.856	9.723	0.000

$\alpha=0.961$, AVE=0.785, $pc=0.852$

Table 4. Reliability Indicators of Job Performance Components

Components	Factor loadings	T-Value	Significance level
Observe discipline at work	0.919	8.121	0.000
responsibility at work	0.896	8.607	0.000
Cooperation at work	0.789	3.969	0.000
Improve the work	0.782	3.990	0.000

$\alpha=0.883$, AVE=0.720, $pc=0.864$

RELIABILITY OF JOB PERFORMANCE

According to the results of **Table 4**, all factor load values are acceptable and all values of T-value greater than 1.96 with a significant level of zero are less than 0.05. Therefore, statistically, all factor loads assessed in each item is significant and confirmatory factor analysis is acceptable in the measurement model of the job performance variable.

Study of Structural Model (Regression Analysis) of Research

Before entering the test phase of the hypothesis and conceptual model of the research, it is necessary to obtain the validity of the models of measuring the endogenous variable (job performance). The structural model test of the main hypothesis, including the study of path coefficients, is significant. The path coefficients and the values of R². In the inferential analysis, the main hypothesis of the research is to be tested using a confirmatory factor analysis method. The value (T-value) of the significant coefficients of each variable is greater than 1.96 and smaller than 1.96. The model has good fit or, in other words, a reasonable approximation of society. The structural pattern test of the research and the research hypotheses in the PLS method is possible by examining the path coefficients (factor loadings) and the values of R² (Sayed Abbas Zadeh et al., 2012). The bootstrap method (with 500 sub-samples) was used to calculate T-values for determining the path coefficients.

The regression coefficient is used to determine the contribution of the predictor variable to the explanation of the variance of the criterion variable, and the values of R² represent the variance explained by the criterion variable by the predictor variable. After determining the measurement models in order to evaluate the conceptual model of the research and also to ensure the existence or absence of causal relationship between the research variables and the study of the appropriateness of the observed data with the conceptual model of the research, the research hypothesis was also tested using the structural equation model. The research hypothesis test results are reflected in the chart. In **Figure 1**, an independent variable (predictor) regression model of comprehensive quality management and dependent variable of job performance are shown using significant level values.

According to the results of **Table 5**, the regression model of the research with a standard coefficient equal to 0.268 greater than zero is related to the effect of total quality management and the value of T-VALUE equal to 8.89/2 which is greater than the value of 1.96. And a meaningful level of 0/00, which is less than 0/05, is acceptable. Therefore, it can be concluded that comprehensive quality management has a significant positive effect on job performance with confidence of 0.95.

Table 5. Evaluation of coefficients and significance level in regression model

	Standard coefficient	T-Value	Significance level
The Impact of Comprehensive Quality Management on Job Performance	0.268	2.889	0.004

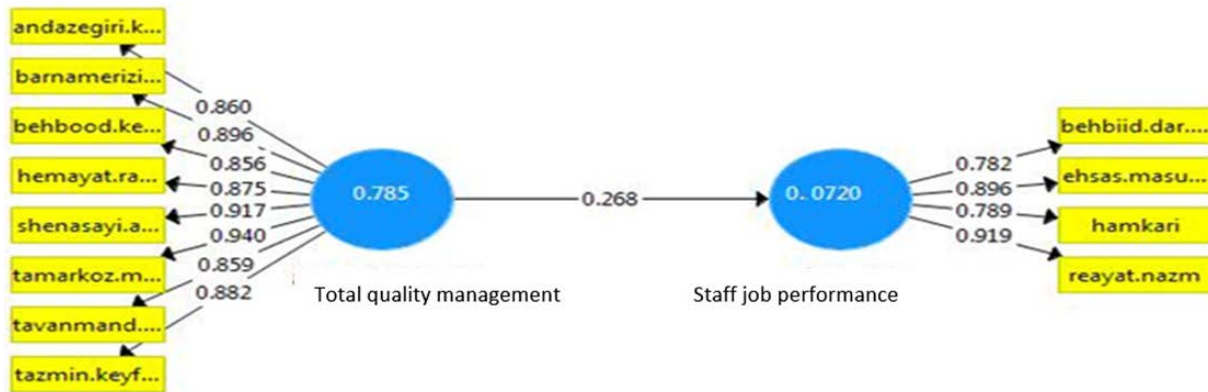


Figure 1. Measurement of general model and hypothesis results in standard state

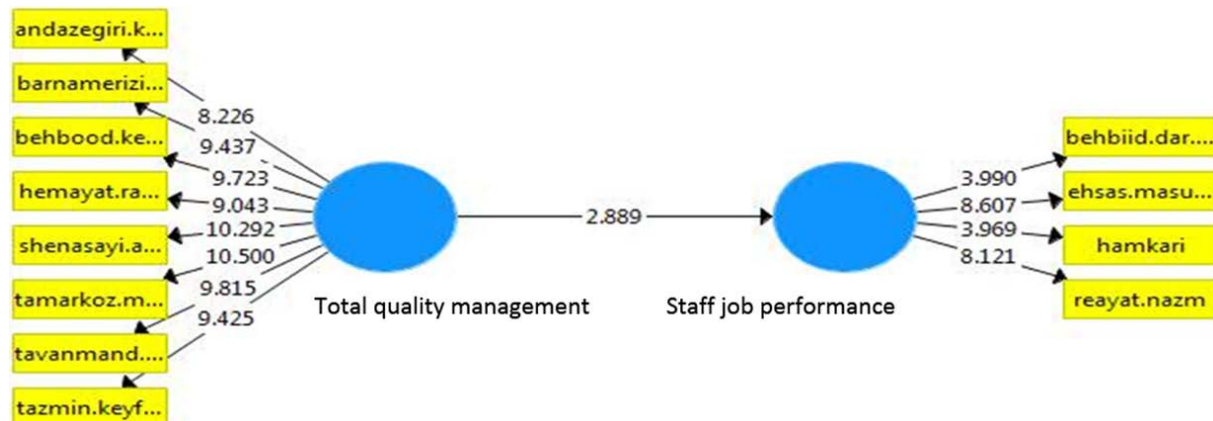


Figure 2. Measure the general model and hypothesis results using the T-VALUE coefficients

The regression analysis method has been used to study the causal relationship between independent variables (predictor) and dependent variables and general confirmation of the model. The variance explained in (1) with the independent variable of total quality management and the dependent variable of job performance is equal to 0.772, which means that 7% of variance of dependent variable of job performance is explained by independent variable. Therefore, the impact of the variable quality management is significant in terms of results, but this effect is weak.

In **Figure 2**, the models with independent variables of total quality management and the dependent variable of job performance are shown by the coefficients T, and, as we can see, all coefficients are higher than 1.96.

DISCUSSION AND CONCLUSION

The findings of the present research confirmed that community quality management has a positive and significant impact on job performance, and through the implementation of comprehensive quality management in cultural universities, it can enhance the performance of the staffing staff. The results of this study are consistent with the results of Azar et al. (2015) and Ahmadi et al. (2012). In their research, they showed that comprehensive quality management influences employee performance appraisal.

Although the concept of performance management is a new concept, performance evaluation over the past decades has been one of the most controversial personnel services and management activities, and it can be said that managing performance by proposing a set of perspectives and stimulating different emotions is one

of the most complex Activities and processes of human resource management. In many organizations, performance appraisal is an inseparable part of human resource management programs and is a very effective tool for professional development and is used for many purposes. According to Bernardine (2003, p. 144), performance measurement information is widely used for compensation, performance improvement, and documentation. It can also be used in staffing decisions (such as promotion, transfer, dismissal and dismissal of service), analysis of educational needs, staff development, program research and evaluation. In the end, it is suggested that quality management should be implemented at the University of Cultural Extensions in order to improve the performance of the staff of the training organization that faces human resource training.

REFERENCES

- Ahmadi, A., Shayan Jahromi, S. A., & Zarei, S. (2012). The relationship between quality management and empowerment and evaluation of staff performance. Volume 3, Number 2 (10), pp. 35-53.
- Amin Beidokhty, A., & Salepoor, M. (2008). *A study of the relationship between organizational justice and organizational commitment: case study, technical engineers of Irans' gas expansion* (Graduate thesis), Tehran, Iran (in Persian)
- Azar, A., Taghizadeh Jourresi, M. R., & Torkharez, M. (2015). Effect of Comprehensive Quality Management on Banks Performance: Mediating role of market orientation. *Quarterly Journal of Research. Prospects for Commercial Management of Shahid Beheshti University*, 14(21), 47-29.
- Barati, A., Abadi, H., Ariati, H. R., & Nouri, A. (2010). Relationship between organizational environment and work conscience with job performance. *Journal of Applied Psychology*, 13-65.
- Chen, D. N., & Liang, T. P. (2011). Knowledge evolution strategies and organizational performance: A strategic fit analysis. *Electronic Commerce Research and Applications*, 10(2), 75–84. <https://doi.org/10.1016/j.elerap.2010.10.004>
- Dubey, R., & Singh, T. (2013). Soft TQM for sustainability: An empirical study on Indian cement industry and its impact on organizational performance, pp.77. Retrieved from <http://link.springer.com/search?facet-author=Rameshwar+Dubey>
- Groves, K. (2007). Integrating leadership development and succession planning best practices. *Journal of Management Development*, 26(3), 239-252. <https://doi.org/10.1108/02621710710732146>
- Heinonen, J., & Korvela, K. (2003). How about measuring Entrepreneurship. *Conference Proceedings of 33rd EISB (Entrepreneurship, Innovation and Small Business)*. Conference in Milan, Italy, September 10–12, 2003, SDA Bocconi and EFMD.
- Ho, Y. C., & Tsai, T. H. (2006). The impact of dynamic capabilities with market orientation and resource-based approaches on NPD project performance. *Journal of American Academy of Business, Cambridge*, 8(1), 215–229.
- Keramati, A., & Al-Badawi, A. (2009). Exploring the relationship between use of information technology in total quality management and SMEs performance using canonical correlation analysis: A survey on Swedish car part supplier sector. *International Journal of Information Technology and Management archive*, 8(4), 442-462. <https://doi.org/10.1504/IJITM.2009.024805>
- Kezar, A., & Eckel, P. D. (2004). Meeting Today's Governance Challenges. *Journal of Higher Education*, 75(4), 371-399. <https://doi.org/10.1080/00221546.2004.11772264>
- Mojtaba Miklaei, T., Mehdi Zadeh Ashrafi, A., & Emami Far, M. (2012). Assess the readiness of the system Comprehensive Quality Management (TQM) in Mazandaran Province Industrial Production Cooperative. *Management Quarterly, ninth year, No. 26*. 78-50.
- Statute of the University of Farhangian. (2011).
- Tari, J. J. (2005). Component of successful total Quality management. *The TQM magazine*, 17(2), 182-194. <https://doi.org/10.1108/09544780510583245>
- Zolfaghari Zaferani, R., & Kalantari, M. (2008). An analysis of the level of implementation of Total Quality Management in Islamic Azad University Roudehen Branch. *The Journal of Modern Thoughts in Education*, 3(10), 63-76 (Persian).

