Examination of total quality management practices in higher education in the context of quality sufficiency

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Abstract

In this work, so as to determine and evaluate the quality sufficiency of a higher education institution according to students’ feedback, an adequate scale is constructed by reviewing the relevant literature. After performing the tests of reliability and validity on the scale, which poses a means of collecting data, the findings are tested for the statistical analyses such as correlation analysis, and then the relevant comments were provided. This work was conducted at Diyarbakir Vocational High School of Dicle University in the fall semester of 2012.

Keywords: Quality management, higher education, quality sufficiency, student satisfaction;

1. Introduction

In general, quality is defined as consistently meeting customer’s needs and expectations (Ali ve Shastri 2010), conformity to expectations (Mete, 2000) and a journey to excellence (Goetsch ve Davis, 2000). Whereas Total Quality Management (TQM) is a contemporary management approach which expects the participation of employees including top management of enterprises, the regulation in order to meet customer’s expectations in all processes of the organization, being an identical to his work and his firm (Bumin ve Erkutlu, 2002). TQM is a model in which rotating the axis of three main themes: customer, process and human (Mitra, 1998). The basic elements of TQM are listed as the focus on customer, first-human understanding, full participation, continuous improvement, teamwork, and leadership in top management (Gules ve Bulbul, 2004). “Kaizen” referred the concept of continuous improvement of TQM, now appears to be an issue internal and external customer orientation and the innovation with the principles continuity of all of them (Colenso, 2000). In examination of TQM, comparing with the traditional management approaches creates a culture suggesting competition in the innovative and creative construction of business and differs from the other models (Tekin, 2007).

Quality assurance system in higher education institutions are the activities offering quality services to satisfy the minimum needs of all parties benefiting from higher education facilities and giving them confidence such as inspection, evaluation and review. The quality in higher education consists of accreditation system evaluating higher
education’s input, valuation system evaluating output and total quality system designing, planning and implementation of the processes.

There are input, process, output and customers in higher education institutions like enterprises producing goods. Universities, due to mandatory requirements of competition, had to enhance their qualifications of inputs, processes and outputs with the expectation, request and satisfaction of the internal and external customer. The implementation of the management approach of TQM aiming at customer satisfaction (student, faculty member, public and private organizations, families), supporting continuous improvement, allowing the participation of all, encouraging group work in the universities will provide these institutions effectiveness, efficiency, dynamism and economy (Serin and Aytekin, 2009).

The education sector is one of the most important actors in the economy in general and in the services sector in particular. However, it has been noticed too late that education is very important in terms of other sectors. (Ahmed vd., 2010). Education and TQM are identified concepts with each other. With the increasing use of TQM for the purpose of always giving the best education (Gencel, 2001), in the enterprises, the concept of "quality product" replaces with the concept of "qualified person" in the education sector (Kalayci, 2008). The concept of quality in higher education has been one of the most important issues in terms of providing qualified individuals to the country’s economy.

The continuous improvement of quality applications can be successful by changing the education methods in accordance with the objectives of learning, making improvements in education environment or changing education organization. Here, the most important thing will be to determine the developing issues and projects and to create the teams to improve the process (Sozmen, 2004). The implementation of TQM mentality aiming at constant improvements in the education has been proven in many studies to have positive effects to ensuring equality of opportunity in education, reducing learning time and education costs, increasing the number of individual experts or professionals, providing social awareness (Eroglu, 2000).

Education and total quality management concept are identified with each other. The use of total quality management for the purpose of always giving the best education is the intersection of the main objectives of total quality management and education (Kalayci, 2008). The concept of quality in higher education is one of the most important issues providing qualified individuals to country’s economy.

While the concept of quality in higher education concerns to student, family, industry and all stakeholders of the society (Ali and Shastri, 2010), there are facts such as accreditation and quality assurance systems basically in higher education applications. The quality in higher education consists of accreditation system evaluating higher education’s input, valuation system evaluating output and total quality system designing, planning and implementation of the processes. Quality assurance system in higher education are the activities offering quality services to satisfy the minimum needs of all parties benefiting from higher education facilities and giving them confidence, and evaluation and review activities (Skolnik, 2010).

The development of quality culture in higher educational institutions which aims to educate qualified professional staff to labor market (Tufan, Mizrak and Celik, 2007) is an effective and important tool for changing perceptions of society and for the employers being external stakeholders of education / training service. In accordance with the principles of focus on customer, as the students are very important customers to higher education services, it is very important to examine students’ quality perceptions, expectations and satisfactions in order to improve the quality of higher education (Icli and Vural, 2010).

In this respect, in order to create student-centered schools based on the total quality management in higher education, total quality management and ISO 9000 standards intertwined with it will mandatory remain up to date even increase the importance of it gradually in spite of some problems with applicability. This research is very important in terms of identifying to current practices and determining the problems of these applications.

2. Materials and methods

The purpose of the study is to evaluate the physical conditions of higher education institutions, social areas and activities, the content of education and training, career support, teaching staff, the management and staff
competency, briefly, the evaluation the adequacy of higher educational quality in six sub-scales in terms of student satisfaction.

The main mass of the study is approximately 2500 students being educated in different sections of Diyarbakir Vocational School of Dicle University in the first semester of 2012-2013 educational years. 243 students of this main mass were randomly selected and were assumed to represent all students being educated in Higher Educational Schools.

2.1. Research method

Face-to-face questionnaire method was chosen as a data collection tool. The literature primarily has been scanned in the preparation of the questionnaire, examined the questionnaire used in the earlier studies (Altas, 2006; Okay, 2009; Tekin ve Gul, 2007; Gulec vd., 2011; Karahan, 2013; Tekin vd., 2010) and in this study, it is decided to use the questionnaire titled “the assessment of college quality competency and student satisfaction” studied on the validity and reliability studies. This questionnaire used in the research consists of two sections; one section for determining the demographic characteristics of the students being educated in college, one section for measuring the student’s satisfaction.

There are a total of 43 questions on the survey scale. The result of Cronbach Alpha reliability account done on these 43 articles is found as 0.94. This result shows that this questionnaire is highly reliable. In the result of the surveys, the data obtained from the students being educated in college (243) has transferred to the computer environment and statistical analyzes were carried out by SPSS multitask program.

3. Research findings

In this section, it is determined respectively the demographic characteristics of surveyed college students, then it is measured the students' satisfaction level on colleges quality qualifications. Then, reviews and comments on these findings are exhibited.

3.1 Findings Related to Demographic Characteristics

63% of the students answering the questionnaire (154) are male, 37% (89) are female, and so the majorities are male students. 56% (135) of the students participated in the survey are second-year students, 44% (108) are first class, and the total number is 243 students. 67% (162) of them are the primary education students and 32% (78) are the secondary education students. 76% (184) of the students participated in the study are staying with their family, 12% (30) are staying in State Residence and 7% (16) are staying with friends. The monthly expenditure of 39% of the students is 0-250TL, 34% (82) of them is 251-500TL and 16% (38) of them is 501-750TL.

22% (53) of the students participated in the survey had courses, seminars and lessons on QMS apart from the college, 78% (190) of them did not have any course, so the majority of the students did not have any course, seminar and lesson apart from the college. 78% (190) of them do not know whether their schools have the quality management system certificate, 14% (34) of them are not the owner of the document, 8% (19) of them stated that they are the owner of the document.

75% of the students (182) stated that they are not aware of the structures such as the ISO quality management representative or rules, 20% (48) know that there is not structure and 5% (13) know that there is a structure. We can say that nearly half of the students have knowledge of that there is not any structure like this in their colleges.

20% (48) of the students participated in the survey had some courses, seminars and lessons on ISO QMS in colleges, 76% (186) did not have any course so the majority of the students did not have any course, seminars and lessons in colleges. 65% of students (157) stated that the representatives of the school did not hold regular meetings with them or class representative, 31% (75) did not know and 4% (9) of them stated that the meeting was held. Therefore, it is possible to say that such activities are mostly not done in college.
3.2. Analysis of factors affecting the relationship between quality competencies

Correlation analysis is used to determine the relationship between the two variables. Correlation is the answer to the question “When there is a change in one variable, is there any change in the other variable at the same rate?” (Altunışık vd., 2005). The correlation coefficient (r), takes a value between 0 and 1. If this value is zero, there is no relationship between the variables, if it is 1, it means that there is a complete relationship. The correlation coefficient may be (+) or (-). If the coefficient is (+), there is positive relationship between the two variables. At positive relationship, when the value of one of the variables increases, the other one also increases. At negative relationship, when the value of one of the variables increases, the other one decreases. Correlation is not a cause-and-effect relationship (Odyakmaz, 1997).

Pearson correlation analysis was conducted to determine the relationships among six factors (physical conditions, social space and activities, the content of education and training, career support, teaching staff qualifications, management and staff qualifications) derived from the survey questionnaire and these six factors are accepted to affect the college’s quality adequacy. The results are evaluated as follows.

3.2.1. Correlation relationships among the factors affecting the adequacy of college quality.

Pearson correlation analysis showing the relationship among the factors affecting the adequacy of college quality is shown below Table 1.

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Correlation</th>
<th>Physical conditions</th>
<th>Social space and activities</th>
<th>The content of education and training</th>
<th>Career support</th>
<th>The adequacy of teaching staff</th>
<th>The adequacy of the management and staff</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pearson Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical conditions</td>
<td>1</td>
<td>0.676**</td>
<td></td>
<td>0.546**</td>
<td>0.557**</td>
<td>0.460**</td>
<td>0.507**</td>
</tr>
<tr>
<td>Social space and activities</td>
<td>0.676**</td>
<td>1</td>
<td>0.524**</td>
<td>0.616**</td>
<td>0.383**</td>
<td>0.502**</td>
<td></td>
</tr>
<tr>
<td>The content of education and training</td>
<td>0.546**</td>
<td>0.524**</td>
<td>1</td>
<td>0.628**</td>
<td>0.621**</td>
<td>0.522**</td>
<td></td>
</tr>
<tr>
<td>Career support</td>
<td>0.557**</td>
<td>0.616**</td>
<td>0.628**</td>
<td>1</td>
<td>0.519**</td>
<td>0.650**</td>
<td></td>
</tr>
<tr>
<td>The adequacy of teaching staff</td>
<td>0.460**</td>
<td>0.383**</td>
<td>0.621**</td>
<td>0.519**</td>
<td>1</td>
<td>0.489**</td>
<td></td>
</tr>
<tr>
<td>The adequacy of the management and staff</td>
<td>0.507**</td>
<td>0.502**</td>
<td>0.522**</td>
<td>0.650**</td>
<td>0.489**</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

** Correlation significant at 0.01 level (2-tail)

According to the correlation analysis results shown in Table 1. The correlation coefficient (r) value, it appears to be a statistically significant and positive relationship between Physical conditions to social space and activities (68%), the content of education and training (%55), career support (%56), the adequacy of teaching staff (%46) and the adequacy of the management and staff (%51) factors. Accordingly, the physical conditions factor is related the highest proportion to social space and activities (r=0.68, p<0.01).

According to the correlation analysis result, it appears to be a statistically significant and positive relationship between social space and activities condition and physical conditions (%68), the content of education and training (%52), career support (%62), the adequacy of teaching staff (%38), and the adequacy of the management and staff (%50). Accordingly, the social space and activities condition factor is related the highest proportion to physical conditions (r=0.68, p<0.01). According to the correlation analysis result, it appears to be statistically significant and positive relationship between the adequacy of content of education and training and physical conditions (%55), social space and activities condition (%52), career support (%63), the adequacy of teaching staff (%62), and the adequacy of the management and staff (%52). According to this result, the adequacy of content of education and training is related the highest proportion to career support (r=0.63, p<0.01).

According to the correlation analysis result, it appears to be statistically significant and positive relationship between the factor of the adequacy of career support and physical conditions (%56), the adequacy of social space and activities (%62), the adequacy of content of education and training (%63), the adequacy of teaching staff (%52),
and the adequacy of the management and staff (%65). According to this result, career support factor is related the highest proportion to the adequacy of the management and staff ($r=0.65$, $p<0.01$).

According to the correlation analysis result it appears to be statistically significant and positive relationship between the factor of the adequacy of teaching staff and physical conditions (%46), the adequacy of social space and activities (%38), the adequacy of content of education and training (%62), the adequacy of career support (%52), and the adequacy of the management and staff (%49). According to this result, the adequacy of teaching staff factor is related the highest proportion to the adequacy of content of education and training ($r=0.62$, $p<0.01$).

According to the correlation analysis result, it appears to be statistically significant and positive relationship between the factor of the adequacy of the management and staff and physical conditions (%51), the adequacy of content of education and training (%52), the adequacy of career support (%65), and the adequacy of teaching staff (%49). According to this result, the factor of the adequacy of the management and staff is related the high proportion to the adequacy of career support ($r=0.65$, $p<0.01$).

5. Results and suggestions

Total quality practices in higher education, are the activities offering quality services to satisfy the minimum needs of all parties benefiting from higher education facilities and giving them confidence and evaluation, and review activities. It has become a very important issue that universities whose main aim is to investigate, transfer and renew the knowledge and information, to benefit from total management philosophy in terms of training skilled and qualified individuals. From this point of view, the studies of higher educations on identification and development of competencies provide significant contribution to the operation and continuity of the quality services.

According to the results of analysis of the adequacy of the quality of higher education for student satisfaction, the students participating in the study generally find college’s physical and environmental conditions sufficient. In social areas and activities, the majority of students are not satisfied with the cleaning of college canteen, cafeteria services, a fitness facility, and services, cultural and social activities. Students are glad about the content of education and training, resources and technological capabilities.

Students agree on the benefit effectively from the research and application areas, and share the same idea that the lessons make important contribution to professional development and career preparation and good contribution to the development of creative and innovative ideas. It appears that most students are not satisfied with the tours, seminars, and conferences, organizations that ensure the individual to know the sector more closely.

It can be said that most students agree that higher education programs are insufficient to find an internship area and dissemination of internship areas. The majority of the students participated in the study are undecided or not satisfied about the support of colleges in arranging someone a job after graduation. Thus, most of the students are not happy about their colleges’ mentality on competitive and entrepreneurial providing internships, projects and careers such as finding a job.

According to the results of the correlation analysis to determine the relationships among the six factors in order to measure the adequacy of the quality of college, physical conditions is related highest proportion to the social space and activities. Accordingly, it can be defined that the students are more sensitive to physical conditions and social space and activities.

As a result, it may be suggested that college administration surveyed should work more effectively on the cleaning at common areas such as cafeteria, canteen, and gym, supporting for the project and maintaining the relationship after graduating. Hence, the proposed solutions would be the activities organized by the managers to improve the communication between students, career support for the students graduated from the college, more efforts to improve the quality of college.

Evaluating only student’s satisfaction in determining the college quality competence not evaluating manager, staff and parents of students’ views and not giving to students the quality awareness before the survey are listed as this study’s limitations. In future studies, large-scale and objective assessments after the elimination of the limitations mentioned above provide important contributions to the literature.
References


