Quality Improvement in Secondary Schools: Developing a School Self-evaluation Scale

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ABSTRACT The objective of this study is to develop a "School Self-evaluation Scale", which can be used to determine the needs andperceptions of all education stakeholders. The school self-evaluation scale was administered to 600 students studying in grades 9, 10, 11 and 12. The results of the exploratory factor analysis and confirmatory factor analysis indicate that School Self-evaluation Scale is valid and reliable (KMO= 0.94, Bartlett's test, Chi-square= 16.918, $\div^2$/df= 3.08, RMSEA= 0.06, GFI= 0.94, CFI= 0.93, NFI= 0.96, split half test reliability calculated with Spearman Brown formula= 0.85 and calculated with Guttman split half technique= 0.94, Cronbach alpha coefficient for overall scale= 0.95 and reliability coefficient of sub items was between 0.75 and 0.92). The school self-evaluation scale consists of 38 items and 7 dimensions including teaching staff, school activities, testing and evaluation, school achievement, school administration, school physical environment and school guidance and counseling.

INTRODUCTION

Globalization brought an expanding interest in a number of the contemporary culture areas, from financial matters and governmental issues to morals and anthropology in the last decades (Matei 2014) and has become one of the major topics within anthropology. Today, in the process of globalization, new developments are being witnessed in cultural, economic, political, ecological and technological fields. These developments have created the information society at the center of which people stands. Communication between individuals increases on a daily basis and with increased communication individuals must adapt to all witnessed developments. Companies, which produce goods and services, are struggling for survival in rapidly growing competitive environment for which reason they need qualified employees who can use improved technologies and speak foreign languages. The development and progress of societies, their ability to reach welfare levels and the ability to meet the increased demands of companies depend on the personal development of individuals. This fact increases the responsibility of education institutions on a daily basis. Adaptation to the age of education institutions as well as their development and progress has led to an increase in educated manpower, which in turn allows for society to reach the standards of information society, which are being shaped throughout globalization.

New fields of business emerge every day. In these fields of business the increase in qualified employees who are highly educated in their fields brings to the fore the topic of quality in education. Individuals want to have contemporary information and success, and have sufficient equipment to enable them to compete with other individuals. If countries want to meet the need for a qualified workforce they must pioneer an increase in efficiency in all education institutions that serve the general public. The holistic approach of anthropology shows that service quality must be located in the wider contexts of education. The key to increasing efficiency in education institutions is increasing service quality. Schools must conform to the requirements of total quality management so as to increase service quality.

Özevren (2000) states that exemptions of educational organizations for quality help them acquire power to compete and adapt to different environmental conditions. Total Quality Management considers expectations of all members of an organization and results in developments in all steps (Özer 2011). Creating a quality culture is crucial to apply Total Quality Management in education (Militarua et al. 2013).

Students, parents, teachers, and managers are the customers of education and are classified as internal or external customers (Sallis 2002; Imanova 2006). Quality in education is to identify the needs of not only students as primary customers, but also all stakeholders (Hwarng and Teo 2001; Lagrosen et al. 2004; Imanova 2006; Okay 2009). There are three basic tools that monitor the effectiveness and function of schools, which aim at control, recognition, and quality improvement. They are external evaluation, school internal evaluation, and local and international tests.

Due to globalization and developments in technology and improved communication between countries, institutions are working with external supervision agencies so that their quality can be accredited in order to survive the competitive environment. They also appeal to quality awards, which are among the most effective activities in publicizing their quality and creating a brand. Institutions and associations have contributed to the quality improvement of companies with their reports, which ensure the quality of institutions. The awards given to institutions that pioneer quality topics include Baldrige criteria, International Organization for Standardization 9000: 2000, Capability Maturity Model Integration, Six Sigma, European Foundation for Quality Management, European Council of International Schools, and Deming Award. Quality systems such as the International Organization for Standardization 9000 series and European Quality Awards are very important disciplines for an institution. However, these disciplines tend to implement the responsibility for accountability instead of improving quality (Sallis 2002).

According to the European Foundation for Quality Management, self-evaluation is a comprehensive, systematic and orderly review of activities of an institution. Self-evaluation helps an institution realize its strengths and points for improvement and climax is reached in development. A meaningful evaluation is a good device for ensuring quality assurance of schools. Self-evaluation of a school must be attended by all school staff and employers. The existing situation of the school, including its tendencies, strengths, weaknesses, threats and desired changes, must be defined (Bilcik and Kadnar 2011). According to the Assuring Quality in Education Report of European Commission, the status of internal school evaluation in Europe have grown and shifted from recommended to compulsory over the last ten years. The Organization for Economic Cooperation and Development stated that the direction is towards self-evaluation by schools in most countries rather than school evaluations. Self-evaluation is a tool, which ensures improvement in schools.

Different models have been developed in order to measure service quality (for example, the CRITICAL EVENTS model based on the studies performed by Flaganan (1930-1954) on work performance, the GRONROOS model developed by Lehtinen and Lehtinen (1982), and the SERVQUAL model promoted by Parasuraman et al. (1988) and the SERVPERF model produced by Cronin and Taylor (1992).

Many researchers used the SERVQUAL scale and measured satisfaction of students who are considered to be primary customers of education in universities (Tan and Kek 2004; Özgül and Devebakan 2005; Airey and Bennett 2007; Ting and Abella 2007; Yilmaz et al. 2007; Archambault 2008; Hasan and Ilias 2008; Okumuº and Duygun 2008; Khodayari and Khodayari 2011; Sökmen 2011; Sukuadi et al. 2011; Wong et al. 2012; Koni et al. 2013; Yousapronpaiboon 2014; Zainuddin et al. 2014; Kamble and Sarangdhar 2015; Kassim et al. 2015; Wael 2015; Sahney 2016), in secondary schools (Ahmad and Garg 2012), in lycee (Güllü and ªahin 2015), and in primary schools (ªahin 2015).

Some of the researchers also used the SERVPERF model to measure the satisfaction of the students in universities (Karami and Olfati 2012; Diedericks 2015; Adedamola et al. 2016).

It is also being witnessed that some researchers at universities develop their own scales instead of existing ones, and use these scales with university students in order to measure service quality and student satisfaction (Sallis 2002; Ling et al. 2010; Moro-Egido et al. 2010; Asaduzzaman et al. 2013; Al-Refai et al. 2015; Darrin 2015; Elhadary 2016).

Some of the researchers conducted studies in secondary schools. Leading studies in this field are measuring student satisfaction by Yildiz et al. (2006); Yenel et al. (2008), expectation and satisfaction levels of students by Demirtaº and Kahveci (2010), secondary school headteachers' quality assurance strategies and challenges by Mobegil et al. (2010), educators' expectations and perceptions of service quality by Munhurrun and Naidoo (2010), performance management

by Atamtürk et al. (2011), teachers' conceptions about understanding and improving the quality by Jidamva (2012), perceptions of teachers by Shankar 2012), relationship between students' satisfaction and motivation by Hassan et al. (2013), principals and parents partnership for sustainable quality assurance by Joshua (2014), perception of secondary school teachers towards total quality by Wani (2014), educational service quality using analytic hierarchy process by Atsan (2015), application of total quality management by Ejionueme and Oyoyo (2015), service quality by Güllü and ªahin (2015), and total quality management practices by Nawelwa et al. (2015).

Some of the researchers also conducted their studies in high schools about total quality management (Jamaa 2010; Islek et al. 2014; Gullu and Sahin 2015).

Many studies have been conducted by the researchers in primary schools to measure quality in education. Leading studies are measuring service quality by Ene and Tatar (2010), perceptions of parents by Karadag (2010), perceptions of students by Sumaedi and Bakti (2011), satisfaction of parents by Incesu and Asikgil (2012), evaluation of total quality practices with opinions of teachers and administrators by Akan and Savas (2014), perceptions of inspectors by Çolak (2015), illustration of school self-evaluation project by Karagiorgi et al. (2015), perceptions of principles about school development management team by Sahin (2015), and perceptions of teachers about total quality management (Yasin 2015).

Objectives

The objective of this study is to try to develop a "School Self-evaluation Scale", which can be used to determine the needs and perceptions of all education stakeholders so as to allow for internal control at secondary schools, which is a part of total quality management.

Significance of the Research

External and internal evaluations are two methods that display the existing situation in schools and they complement each other. External evaluation of secondary schools is performed by inspectors of the Ministry of National Education in *North Cyprus*. However, there is

no internal control system, which ensures that schools take a look at themselves. School self-evaluation for school improvement is highly recommended by many organizations and researchers. Different models have been developed in order to measure service quality such as the Critical Events Model, the Gronroos Model, the Servperf Model and the Servqual Model. Some of the researchers used these models and some developed their own scales to measure quality in education. When the studies about total quality in education are examined, no study has yet considered the expectations of all education stakeholders. The School Self-evaluation Scale developed in this study can help schools determine the needs and expectations of all education stakeholders.

METHODOLOGY

Participants

The research population constitutes students at several official secondary state schools in North Cyprus. It is difficult to reach the entire population because of factors like time, cost and control.Hence, a stratified random sampling method was used to determine the sample, which can represent the entire population. In stratified sampling, the universe is divided into homogeneous strata in itself. Random samples can be taken from each stratum (Özdamar 2001). In the research universe, there were 6,364 students. The universe was stratified according to the percentage of students in four regions in *North Cyprus*. The names of the regions are *Lefkosa, Gazi Magusa, Girne, Güzelyurt* and *Iskele*. 600 students were chosen at a ninety-five percent confidence level and 3.81 percent sampling error. Forty-seven percent of the students who participated in the study were from *Lefkosa*, twenty-four percent from *Gazimagusa*, eleven percent from *Girne*, eleven percentfrom *Güzelyurt* and seven percent from *Iskele*. 61.8 percent of the students were female, 38.2 percent of the students were male. 18.7 percent of the students were from Grade 9, 22.3 percent from Grade 10, 29.8 percent from Grade 11, and 29.2 percent from Grade 12.

Development of School Self-evaluation Scale (SSES)

In the first stage, models Servqual, Servperf, Gronroos, Critical Events for for measuring ser-

vice quality were examined in order to develop a school self-evaluation scale. In the second stage, the scales developed to measure service quality were examined. In the third stage, websites and formsprepared within total quality by universities and secondary schools in Turkey and abroadwere examined, along with printed books on International Organization for Standardization. In addition, law on national education, law on teachers, sports branches by-law, discipline by-law, bylaws on school councils and federations, by-laws on grade passing and test at secondary schools and secondary education institutions, by-laws on school libraries, bylaws on school guidance and psychological counseling, and obligatory transportation bylaws for secondary schools in *North Cyprus* were examined.

With the aim of determining the expectations of education stakeholders from quality education, 50 students, 20 teachers, 50 parents, two inspectors and five school management staff in secondary education were asked to write a composition, which would answer the question, *"In your opinion, what are the factors that prove the existence of quality in education offered at schools?"* At the end of the study, a draft scale was created which consisted of 74 items in total. Scale items were prepared in 5 Likert type responses (where "5" was strongly agree, "4"agree, "3"undecided, "2" disagree and "1" strongly disagree). In the draft scale, the first part consisted of the items for determining the demographic information of the participants, whereas the second part consisted of quality items.

Content Validity of the Scale

In order to ensure content validity, a draft scale and an expert opinion form were given to three specialists in education management, control, planning and economy and threeexperts in testing and evaluation,so as to ensure content validity. The experts were asked to examine the draft scale prepared and state their opinions about the ordering of questions, number of items, ordering of answer options, script format, scale presentation section, survey answering directives, usefulness of the scale, convenience of personal information part and purposefulness of items and write their suggestions. After the

scale items were prepared, the opinions of two academicsat the Turkish Language Teaching department were sought so as to control every draft item in terms of conformity to grammar rules, clarity, and monosomy.

Pilot Study

The prepared draft was applied to 50 secondary school students who were randomly selected. It was emphasized to the participants that they could ask questions and make suggestions in case of any unclear parts in the scale items. This preliminary test application was performed by the researchers in person and it was determined whether there were unclear items that needed clarification, whether the directive was understood, whether the Likert scale was suitable for items, whether the application period was sufficient and the impact on the students. Necessary changes were made on the draft scale taking into consideration the data collected from experts and the preliminary testing. An application and a material pool was finalized consisting of 69 items in total.

Data Collection

The researchers informed the participants about the purpose and importance of the research before data collection. The school self-evaluation scale was administered to 600 participants as face-to-face interviews during the 2015-2016 academic year.

Data Analysis

SPSS 21 and AMOS 21 were used to analyze the data. The researchers used frequency analysis and descriptive statistics to determine demographic features and responses of the participants to the survey items. The reliability of the scale was determined by using an internal consistency test and half-split method. The validity structure of the scale was determined by using exploratory factor analysis and confirmatory factor analysis.

RESULTS

Exploratory Factor Analysis

Büyüköztürk (2003) stated that exploratory factor analysis is used to determine the

number of separate components for agroup of items. Pallant (2010) suggested that a significance value of more than .05 shows normality and as a result of the Kolmogorov-Smirnov test, the data distribution was normal. Bartlett's test of sphericity should be significant (p<.05) for the factor analysis. The KMO index ranges from 0 to 1. It is suggested that the minimum value .6 is for a good factor analysis. The KMO value should be .6 or above (Tabachnick and Fidell 2007). Theresearchers calculated the KMO value as 0.94 and the Bartlett's test, Chi-square value was calculated as 16.918. This indicated that Bartlett's test was significant (p= 0.00), and therefore, factor analysis was appropriate.

Pallant (2010) stated that in Catell's scree test, all factors above the elbow could explain the variance in the data set.The Scree Plot analysis was examined and it was determined that there were 8 factors above eigenvalue of 1 (Fig. 1).

The results of the EFA, which are used for principal component analysis and varimax rotation, showed that the 8th factor explained 1.2 percent of the total variance and it was decided that the school self-evaluation scale consisted of 7 dimensions (subscales). Items having a factor value below 0.5 were deleted from the scale. 23 items were deleted from the total scale due to the evaluation of the exploratory factor analysis. It was determined that there were 46 items and 7 subscales,which could explain 63.2 percent of the total variance as shown in Table 1.

Confirmatory Factor Analysis

The factors determined after the exploratory factor analysis were reanalyzed by using confirmatory factor analysis and 8 more items were deleted from the school self-evaluation scale. As a result, a school self-evaluation scale con-
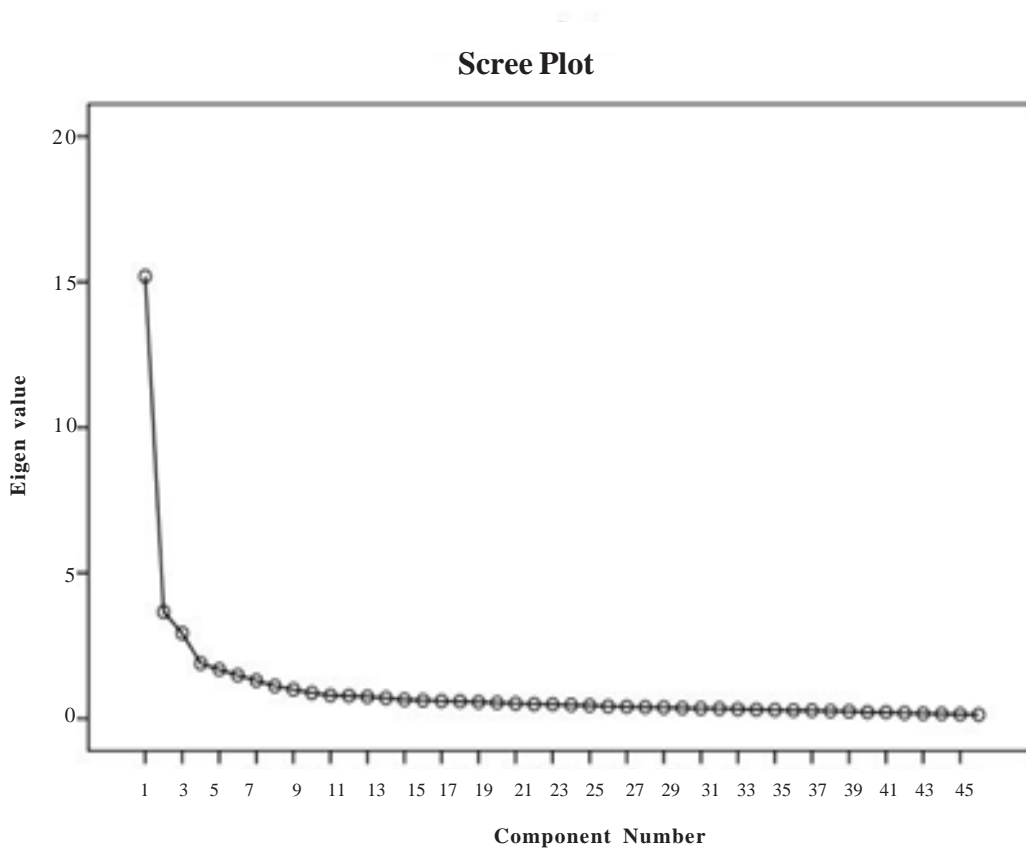
Scree Plot

Fig. 1. Scree plot analysis

Table 1: Factor structures and loading of the items

Items	Factor I	Factor II	Factor III	Factor IV	Factor V	Factor VI	Factor VII
Item 4	0.75						
Item 3	0.69						
Item 5	0.69						
Item 6	0.68						
Item 8	0.66						
Item 7	0.65						
Item 1	0.64						
Item 2	0.58						
Item 19	0.53						
Item 10	0.53						
Item 15	0.51						
Item 21		0.75					
Item 22		0.67					
Item 23		0.66					
Item 24		0.62					
Item 33			0.79				
Item 34			0.76				
Item 36			0.72				
Item 41				0.72			
Item 40				0.70			
Item 43				0.67			
Item 48					0.77		
Item 47					0.76		
Item 50					0.73		
Item 49					0.72		
Item 51					0.72		
Item 46					0.70		
Item 44					0.59		
Item 45					0.51		
Item 54						0.74	
Item 53						0.71	
Item 58						0.68	
Item 55						0.67	
Item 59						0.59	
Item 52						0.56	
Item 56						0.54	
Item 57						0.52	
Item 62							0.84
Item 67							0.82
Item 64							0.79
Item 68							0.78
Item 63							0.75
Item 61							0.70
Item 69							0.65
Item 66							0.64

sisting of 38 items was obtained. If x^2/df value is 5 or below 5, this shows acceptable adequacy (Hooper and Mullen 2008). The result of the confirmatory factor analysis was x^2/df value: 3.08. If the root mean square residual (RMR) value is .08 or less, the model is acceptable. The RMSEA value of the model developed was 0.06, and hencethe school self-evaluation scale was deemed to be an acceptable model. If the goodness of fit index (GFI) value is over .9, this indicates an acceptable model fit, where a value of over 0.95 indicates a perfect acceptable model fit (Çokluk et al. 2010). The GFI value of the school self-evaluation scale was 0.94 and this shows that this model has perfect acceptable model fit. The comparative fit index (CFI) analyzes the model fit. This index examines the discrepancy between the data and the model hypothesized (Gatignon 2010). Tabachnick et al. (2001) stated that CFI values between 0.97 - 1.00 indicate a good fit. The values between 0.95 - 0.97 indicate an acceptable fit. The CFI value of the scale developed was 0.93, which indicated as a better fit. Sümer (2000) indicated that the normed fit index (NFI) values range between 0 and 1. A value of 1 indicates a perfect fit and a value of 0 indicates that there is no fit. GFI values between 0.95 and 1.00 indicate a perfect fit and values between 0.90 and 0.95 indicate an acceptable fit. The NFI value of the school self-evaluation scale was 0.96 and this indicates a good model fit as indicated in Table 2 and Figure 2. Based on these results, 8 more items were deleted from the school self-evaluation scale and a school self-evaluation scale consisting of 38 items was obtained. The 7 dimensions (subscales) in the scale are teaching staff, school activities, testing and evaluation, school achievement, school administration, school physical environment, school counseling and guidance.

Table 2: Results of confirmatory factor analysis

x^2/df	3.08
RMSEA (Root Mean Square Error of Approximation)	0.06
GFI (Goodness of Fit Index)	0.94
NFI (Normed Fit Index)	0.96
CFI (Comparative Fit Index)	0.93

Reliability

The researchers used Cronbach's coefficient alpha and split-half methods to test the reliability of the school self-evaluation scale. In addition, the total-item score analysis, based on correlation, was also used by the researcher. Field (2005) suggested that two halves of the questionnaire should correlate perfectly. Large correlation between the two halves is a sign of reliability. The result of the split-half test reliability calculated with the Spearman Brown formula was
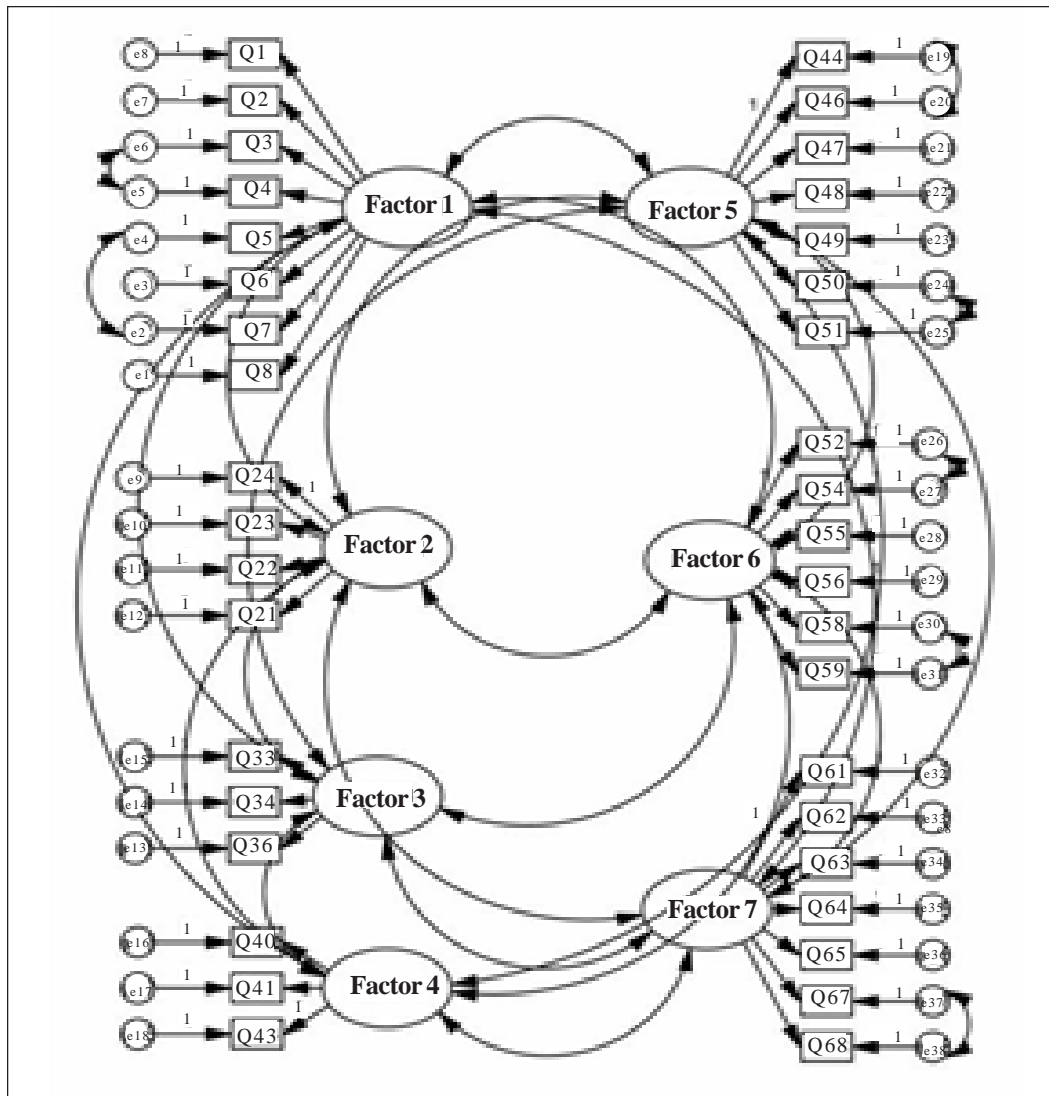
Fig. 2. Path diagram of model

0.85 and calculated with the Guttman split-half technique was 0.94. If there are three or more responses to test items, the Cronbach coefficient of alpha is calculated. The Cronbach coefficient of alpha .70 or above shows reliability of the test scores (Büyüköztürk 2009). The Cronbach alpha coefficient was 0.95 for the overall scale and the reliability coefficient of the sub items was between 0.75 and 0.92. According to the results of item-total item correlations, no item was deleted.

DISCUSSION

Due to changes in all fields of anthropology and globalization, the importance of total quality management in education has been increased dramatically over the last decades to meet the needs of developing societies. There are three basic tools that monitor the effectiveness and function of schools. They are external evaluation, school internal evaluation, and local and international tests.

According to the United Nations Educational, Scientific, and Cultural Organization, schools need cooperation in order to ensure improvement in education. However, national and international tests, which judge the performance of schools and rank them in several countries, places significant pressure on schools, including choosing schools and competition between schools instead of cooperation.

Many institutions are working with external supervision agencies such as International Organization for Standardization 9000:2000, European Foundation for Quality Management and European Council of International Schools so that their quality can be accredited in order to survive the competitive environment. Quality systems such as the International Organization for Standardization 9000 series and European Quality Awards are very important disciplines for an institution. However, these disciplines tend to implement the responsibility for accountability instead of improving quality (Sallis 2002).

McNamara (2008) states that cost of external inspection systems for evaluation of schools is high so that direction is towards self-evaluation of schools.

The "Quality School Improvement" titled report of the European Commission (2000) points out that evaluation can be external or internal or a combination of both. Most European countries seek the most efficient combination of these two types of evaluation. Ideally, internal and external evaluation would complement each other in terms of being sources of information. Monitoring the performance of schools is necessary in order to raise standards but doing this externally is costly. If schools manage to develop expertise for self-evaluation and specialize in this area with required tools, strategies grow and the role of supervision changes.

The external agents can aid schools to see their blind spots but can reflect important elements in the real day-to-day experiences of internal stakeholders. An open dialogue is necessary between them (Devos and Verhoeven 2003).

School self-evaluation is a good device for ensuring the quality in education and needs the involvement of all school partners (Nicolescu and Dima 2010; Bilcik and Kadnar 2011). The self-evaluation systems can be developed by the practitioners (Sallis 2002) and the development of self-evaluation system specifically for each country is highly recommended (UNESCO 2004).

Different models have been developed in order to measure service quality but there is no model that has been developed for measuring quality in education (for example, the CRITICAL EVENTS model based on the studies performed by Flaganan(1930-1954) on work performance, the GRONROOS model developed by Lehtinen and Lehtinen(1982),the SERVQUAL model promoted by Parasuraman et al. (1988) and the SERVPERF model produced by Cronin and Taylor (1992).

Many researchers used the SERVQUAL scale and measured satisfaction of students who are considered to be primary customers of education in universities (Kamble and Sarangdhar 2015; Kassim et al. 2015; Wael 2015; Sahney 2016). Some of the researchers also used the Servperf model to measure the satisfaction of the students in universities (Karami and Olfati 2012; Adedamola et al. 2016). It is also being witnessed that some researchers at universities develop their own scales instead of existing ones, and use these scales with university students in order to measure service quality and student satisfaction (Al-Refai et al. 2015; Darrin 2015; Elhadary 2016).

Some of the researchers conducted studies in secondary schools. Leading studies in this field are measuring educational service quality using analytic hierarchy process by Atsan (2015), application of total quality management by Ejionueme and Oyoyo (2015), service quality by Güllü and ªahin (2015), and total quality management practices by Nawelwa et al. (2015).

There are also many studies that have been conducted by the researchers in primary schools to measure quality in education. The latest studies are measuring perceptions of inspectors by Çolak (2015), illustration of school self-evaluation project by Karagiorgi et al. (2015), measuring perceptions of principles about school development management team by ªahin (2015) ,and perceptions of teachers about total quality management by Yasin (2015).

Quality in education is to identify the needs of not only students as primary customers, but also all stakeholders (Hwarng and Teo 2001; Lagrosen et al. 2004; Imanova 2006; Okay 2009). When the studies about total quality in education are examined, no study has yet considered the expectations of all education stakeholders. The researchers developed a School Self-Evaluation Scale (SSES), which considered the expectations of all education stakeholders so as

to allow for internal control at secondary schools. This scale may help schools determine the needs and perceptions of all education stakeholders about the quality improvement. This is a crucial part of total quality management.

For construct validity, the researchers used the exploratory factor analysis and confirmatory factor analysis in this study. The result of the Kolmogorov-Smirnov test showed that the distribution of the data was normal. The KMO value was calculated as 0.94 and the result of Bartlett's test, Chi-square value was calculated as 16.918. Bartlett's test was significant (p= 0.00) andthe factor analysis was appropriate. The Scree Plot analysis was examined and it was decided that there were 8 factors above the eigenvalue of 1. Based on the factor analysis, it was determined that there were 46 items and 7 factors, which could explain 63.2 percent of the total variance. As a result, a school self-evaluation scale consisting of 38 items was developed. The result of the confirmatory factor analysis was $\div^2$/df value: 3.08. The RMSEA value of the model developed was 0.06, which means that the school self-evaluation scale is an acceptable model. The GFI value of the school self-evaluation scale was 0.94 and this shows that this model has a perfect acceptable model fit. The CFI value of the scale developed was 0.93, which indicates a better fit. The NFI value of the school self-evaluation scale was 0.96 and this indicates a good model fit.

The result of the split-half test reliability, calculated with the Spearman Brown formula was 0.85 and calculated with Guttman split-half technique was 0.94. The Cronbach alpha coefficient was 0.95 and the reliability coefficient of the sub items was between 0.75 and 0.92. According to the results of the item-total item correlations, no item was deleted. The reliability of the school self-evaluation scale was tested in this research and shown to have high validity and reliability. The school self-evaluation scaleconsists of 7 dimensions (subscales) and a total number of 38 items. The seven dimensions in the scale are teaching staff, school activities, testing and evaluation, school achievement, school administration, school physical environment and school guidance and counseling.

Dimension 1 (Teaching Staff): This includes 8 items that measure the perceptions of the students about the service quality provided by teaching staff in their schools. The minimum score is 8 and the maximum score is 40 that can be obtained from this dimension. The maximum score obtained from this dimension gives the idea that the students have positive opinions about the service quality provided by their teachers.

Dimension 2 (School Activities): This includes 4 items that measure the perceptions of the students about school activities. The minimum score is 4 and the maximum score is 20 that can be obtained from this dimension. The maximum score obtained from this dimension gives the idea that the students have positive opinions about the activities in their schools.

Dimension 3 (Testing and Evaluation): This includes 3 items that measure the perceptions of the students about the service quality in testing and evaluation in their schools. The minimum score is 3 and the maximum score is 15 that can be obtained from this dimension. The maximum score obtained from this dimension gives the idea that the students have positive opinions about the testing and evaluation in their schools.

Dimension 4 (School Achievement): This includes 3 items that measure the perceptions of the students about their school achievements. The minimum score is 3 and the maximum score is 15 that can be obtained from this dimension. The maximum score obtained from this dimension gives an idea that the students have positive opinions about the achievement of their schools in exams and competitions.

Dimension 5 (School Administration): This includes 7 items that measure the perceptions of the students about the service quality in school administration. The minimum score is 7 and the maximum score is 35 that can be obtained from this dimension. The maximum score obtained from this dimension gives the idea that the students have positive opinions about school administration.

Dimension 6 (School Physical Environment): This includes 6 items that measure the perceptions of the students about physical environment of their schools.The minimum score is 6 and the maximum score is 30 that can be obtained from this dimension. The maximum score obtained from this dimension gives the idea that the students have positive opinions about the physical environment of their schools.

Dimension 7 (School Guidance and Counseling): This includes 7 items that measure the perceptions of the students about school guidance and counseling. The minimum score is 7 and the maximum score is 35 that can be obtained from this dimension. The maximum score

obtained from this dimension gives the idea that the students have positive opinions about the service quality of their schools' guidance and counseling services.

CONCLUSION

In this research, a school self-evaluation scale with high validity and reliability was developed. The school self-evaluation scale consists of 7 dimensions (subscales) and a total number of 38 items.The seven dimensions in the scale are teaching staff, school activities, testing and evaluation, school achievement, school administration, school physical environment and school guidance and counseling.

This is the first study, which has taken steps towards at measuring the education service quality at secondary schools in *North Cyprus*. That there were no previous studies that have measured service quality in secondary education at this level adds importance to this study. In addition, the existing literature has displayed some elements of focusing on students or parents only during education service quality measurements. While these groups are among the customers of education, there are no studies, which have focused on other groups such as the Ministry of National Education, school managers, teachers, students and parents together, who are stakeholders of education services.

RECOMMENDATIONS

Educational institutions can use the School Self-evaluation Scale (SSES) or can modify it in order to suits their own culture. The School Self-evaluation Scale developed in this study can help schools determine the needs and perceptions of all education stakeholders, and reveal the strengths and weaknesses of schools by evaluating the existing processes. Schools can prepare strategic plans in order to eliminatetheir weaknesses and increase the satisfaction of education stakeholders depending on the obtained data.Institutions can employ the SSES at intervals to measure progress in attempts to improve quality in education.

LIMITATIONS

This research is limited in terms of the following features, that is, the research findings are limited to the academic year of 2015-2016, and the study was conducted only with students in grades 9, 10, 11and 12 in the state schools of North Cyprus.

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