



## APPLICABILITY OF BALANCED SCORECARD SYSTEM IN PRIMARY SCHOOLS ACCORDING TO OPINIONS OF EDUCATION INSPECTORS, MANAGERS AND TEACHERS

Seda Gündüzalp<sup>1iii</sup>,  
İmam Bakır Arabacı<sup>2</sup>

<sup>1</sup>Assist Prof. Dr., Munzur University,  
Pertek Sakine Genç Vocational School, Tunceli, Turkey

<sup>2</sup>Associate Prof. Dr., Fırat University,  
Faculty of Education, Elazığ, Turkey

### Abstract:

This study was carried out in order to specifying the opinions of the staffs working as manager, teacher and educational inspectors at primary schools about the implementation of balanced scorecard in education institutions. To perform that aim the staffs serving as manager, teacher and inspector at the primary Schools nearby center of Elazığ Province was determined as the population. In the research, the descriptive survey model was used. The sampling subjects consisted of 110 managers, 340 teachers, 20 inspectors, which was specified by the Random Sampling Method. For the purpose of reflecting the viewpoint of participants, a balanced score card was prepared. In order to determine the reliability and validity of the scale analysis was been done and it was found to be reliability coefficient was Cronbach Alfa=0.963, standartize reference value was =,965. The data shows that scale was very reliable and valid that feature was. The researcher personally kept track of this scale and collected by going to the schools. At the end of this research, it was realized that the participants generally approve the implementation of the balanced score card. That the participants attend the matters in the balanced scorecard scale and that the matters are implemented will be effective in terms of specifying the school performance and development.

<sup>1</sup> Correspondence: email [ipeksseda@hotmail.com](mailto:ipeksseda@hotmail.com)

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## 1. Introduction

Organizations must keep their steps with the innovations, developments and changes brought by the era to maintain their presence. Organizations have difficulty in following the innovations due to advancing technologies and competition environment. Today, dynamic organizations that can rapidly keep their steps with the surrounding changes have the ability to maintain their presence. Continuous improvement is equivalent to surviving in terms of the organization. Experiencing the technological transformations will never be adequate for surviving. The way to more actively benefiting from people without offending them depends on establishing an effective performance management and assessment system. An effective performance management and assessment system will be possible by means of a dynamic organizational structure where all-round feedbacks are continuously received (Bayram, 2005). As a result of the continuous developments, organizations need to tend towards innovative systems and methods that are convenient to the era instead of traditional performance management and assessment methods. Managers have realized that they can be stay out of the system if they do not change their management systems and begun to research and implement new performance assessment systems. Performance assessment concepts that lose their significance and that gain more importance have arisen in this process. This development can be briefly defined as transition from a traditional management concept that aims the highest production and high profit with the lowest costs to a management concept that aims the organization of the future by (Akal, 1996).

Performance assessment is review of working, activities, lacks, competences, redundancies, inadequacies – briefly all aspects as whole – of the individuals regardless of their duties in the organization. This requirement comes from the nature of human. Humans are social beings. They are in a continuous and systematic exchange with their environment. Humans are in need of being informed about themselves in their relations with others, being confirmed and even encouraged and praised. These are the natural requirements in terms of human (Barutçugil, 2002). There are two purposes of performance assessment. First one provides giving feedback that bases on the job qualifications to the evaluated about their performances. And the second one creates a forum that enables information exchange and contribution of employees between the evaluators and the evaluated. Performance assessment is not only a technique but it is a process that requires penetration of people into the dialogues on the basis of the data.

This process should have a meaning for both parties. The purpose of assessment should be mainly to mentor and provide information about how to develop the insufficient aspects of employees and improve the culture of “*continuous improvement-based assessment*” (Akşit, 2006).

An effective performance assessment provides benefits both for the employee and the organization. These define how the individuals can benefit from their strong and weak aspects. They help explaining the reasons of ineffective business practices and processes. They provide the discussions about the current situation and effectiveness of the precautions to be taken basing on the performance. They provide information about planning of human resources. They improve communication and interaction between the personnel. Expectations are identified and the ways how to improve the process in a better way are discussed (Cemaloğlu, 2010).

In the recent years, the concept “Balanced Scorecard”, which is defined as “KurumsalKarne” in Turkish, has entered into the literature in assessment of organizational performance. After the article of Robert S. Kaplan and David P. Norton (1992) named “The Balanced Scorecard-Measures that drive performance” published on Harward Business Review, Robert S. Kaplan and David P. Norton published the article named “Putting the Balanced scorecard to Work” in 1993. Robert S. Kaplan and David P. Norton improved balanced scorecard more and more with their studies and in in 1996 they presented this methodology called “Using Balanced Scorecard as Strategic Management Systems”. The book named “Balanced Scorecard” written by Kaplan and Norton in 1996 was translated into Turkish in 1999. In this book, the authors present Balanced Scorecard as “the method for transforming organization strategies into actions”. According to Kaptan and Norton, balanced scorecard is the method for transforming organization strategies into actions (Devrim, 2006). Kaplan and Norton carried out a study titled “performance measurement in future organization” that bases on dilemmas of financial measurements that can help decision making in short term and on low investments on the assets that cannot be material such as process improvement or improvement of skill levels of the personnel. They used the balanced scorecard concept systematically as a result of the findings they obtained from this study. Using balanced scorecard, Kaplan and Norton present an innovative management perspective that is used to transform improvement strategy into functional subjects. Measurement focused on the future with the concept of balanced scorecard posed in 1992. Benefiting from this power, organizations integrate their new success criteria with a management system (Ensari, 2005). Balanced scorecard that grounds on the principle “non-measured cannot be managed” came up as a performance measurement system basing on measurement of multiple performance

components and summary reporting of each performance measurement result by giving the weight to each of them and is widely used (Çoşkun, 2006; Erkul et al, 2015). Balanced scorecard approach integrates and balances the financial and nonfinancial information with which both short and long term purposes are effectively achieved. Importance of a scorecard system focuses on financial performance, customers, internal process and knowledge. It is a management system that plans facilitating achieving the financial and nonfinancial balanced targets of an organization (Bean and Jarnagin, 2003).

Balanced scorecard defines the vision and strategy of the organization for the future, focuses on the desired-expected results, and balances between shares of stockholders, financial management, internal processes and organizational capacity. Each key element of these perspectives is defined to show the effect of one element on another (Grayson, 2004). Approximately 50% of the North America and approximately 40% of Europe use some versions of balanced scorecard (Smith and Kim, 2005).

Kaplan and Norton stressed as a result of their study that organizational performance metrics should be presented in at least four aspects in a balanced way (Ahn, 2001; Çoşkun, 2006):

- a) Financial aspect - How do the shareholders see the enterprise?
- b) Customer aspect - How do the customers see the enterprise?
- c) Internal Processes (Operational) aspect - What are the processes that should be improved by the enterprise?
- d) Learning and improvement aspect - How can sustainability of value creation and improvement ensured?

Many organizations that use balanced scorecard system use these four aspects without modifying them, while some organizations use some different aspects when creating balanced scorecard due to their structural features or nature of their business. In fact, each organization has its own conditions and they should follow a path that fits them best in balanced scorecard application.

Balanced scorecard, which is a performance measurement and strategic planning method originally developed for organizations acting in the private sector, can be directly implemented in education services and education organizations. Like other sectors, education sector has also been under pressure in terms of both performance improvement and strategic management for the last 30 years. The most significant development in this sector is the rapid technological advancements that has been causing to globalization of the enterprises particularly for the last 15-20 years. These developments originate from a set of factors including the progresses in computer and communication technologies, structural changes in organizations and organizational

processes (such as downsizing, merger, etc.) and significant changes in demographic structure of student population (Hocalar, 2007). Organizations providing education services began to attach importance to quality, performance management and organizational assessment. All stages of the education system use balanced scorecard as a performance management tool to increase effectiveness and efficiency in their activities (Çoşkun, 2006). The main purpose of performance measurement and management in educational institutions is to accountability, handle with changing environmental and compete with the other institutions. In order to ensure educational institutions to deliver their main mission, they should measure whether they have achieved their objectives or not (Yüksel and Coşkun, 2013). Educators whom implement the balanced scorecard achieve balance in their accountability and management processes (Robinson, 2015).

An effective performance assessment system largely affects performance of the employees and the organization as whole. Basing on this view, a research was carried out on applicability of balanced scorecard system that is shown as an alternative to performance assessment systems in education organizations in this study. In this context, applicability of balanced scorecard system in primary schools is determined according to opinions of education inspectors, managers and teachers in thus study.

Answers were sought for the following questions to achieve this goal:

1. What are the opinions of managers, teachers and inspectors towards implementation of balanced scorecard system in primary schools?
2. Do the opinions of the managers, teachers and inspectors towards implementation of balanced scorecard system in primary school significantly change according to gender, duty, place of duty, seniority and educational background?

## **2. Method**

### **2.1 Research Model**

Descriptive survey model was used in this research. Descriptive survey model is the research model that aims at describing a past or current situation in the exact way. The individual or object that is the subject of the research is tried to be defined in its own conditions and in the exact way. They are not tried to be change or be affected in any way (Karasar, 1999). Therefore, current situation is tried to be reflected. Generally scale and interview techniques are used in survey researches to collect data (Akdağ, 2010).

## 2.2 Research Population and Sample

Research population of the research was constituted by 2917 teachers and 153 managers serving at 153 formal central primary schools within the borders of the province of Elazığ. It was decided to work on the sample due to the higher number of the teachers in the research population and difficulties in accessing the population. Sampling calculation of the research was made basing on the formula calculated by Krejcie and Morgan (1970). According to that, sample of the research was formed by 340 teachers and 110 managers. Additionally, 42 education inspectors serving at Elazığ National Education Directorate were reached to receive their opinions and procedures were performed on 21 scales obtained from them.

44.6% of the respondents were class teachers, 27.6% were branch teachers, 23.4% were managers, and 4.50% were inspectors. 64.50% of the respondents were male and 35.50% female, and 85.40% of them work for city primary schools while 14.60% work for village primary schools. 3.40%, 14.40%, 15.90, 26.8%, and 19.50% of the respondents had a seniority of less than 1 year, 1- 5 years, 6-10 years, 11-15 ears, 16-20 years, and 20 years and above, relatively. 9.80% of the respondents had associate degree, 80.90% bachelor's degree, 7.20% post graduate degree, and 2.10% doctorate degree.

## 2.3 Data collection tool

Basing on the publication of Robert S. Kaplan-David P.Norton named Balanced Scorecard in development of scale items created towards identifying the sizes of the balanced scorecard, foreign resources for implementation of Balanced Scorecard (BSC) in education organizations; article of Garyson (2004) named "An Example: A Management Strategy for a Private School Balanced Scorecard", book of O'Neil and Benmison (1999) named "Designing And Implementing An Academic Scorecard", article of Karathanos and Karathanos (2005) named "Applying the Balanced Scorecard to Education", article of Storey (2002) named "Performance Management in Schools: could the Balanced Scorecard help?", and primary school organization standards, EFQM criteria, postgraduate thesis of Yazır (2007) named "research on a model development towards organizational performance measurement for education organizations", and book of Ensari (2005) named "High Quality in Education Handbook BSC application in 21<sup>st</sup> Century Schools" were benefited. Field experts for scope and face validity of the prepared items: expert opinions of five academicians serving at Firat University Education Management Inspection Planning Department were received. Additionally, opinions of education inspectors, managers and teachers working in the area were benefited. Number of items in the item pool was reduced from 153 to 59.

## 2.4 Analysis of Data

As a result of Kaiser-Meyer-Olkin (KMO) test conducted to determine sample adequacy and whether the data are compatible with the factor analysis, it was observed that KMO value was significant with .941;  $p = ,000$  Bartlett's Test of Sphericity=17046,222;  $p = ,000$  and it reveals that factor analysis can be performed. It was observed that the scale was collected under 4 (four) factors as a result of the conducted vertical rotation varimax procedure and these aspects were formed by financial, customer, internal processes and learning and improvement and item load values varied between .36 --.69. Since the factor load of item 16 included in internal processes aspect was .25, it was removed from the scale. Therefore, the scale was formed by 58 items. Reliability coefficient of the scale was Cronbach Alfa=0.963, and standardized value was .965. The data show that the scale has a relatively reliable characteristic. In calculation of internal consistency coefficient for reliability, the items in the measurement tool were divided into odd and even items without bias and total scores in both groups were calculated for the persons that were applied the test. The correlation between the divided scores was calculated using Pearson product moments correlation coefficient. The information indicating this correlation is shown in Table 1.

**Table 1:** Correlation Between Arithmetic Means of  
 Odd and Even Items in The Scale

Items	Odd items	Even items
Odd items	1.00	,956(**)
Even items	,956(**)	1.00

\*\* $p < .01$

Correlation coefficient takes a value between -1 and +1. Power of correlation increases in the positive direction as Correlation Coefficient value approaches +1. When the correlation coefficient between the two groups divided as odd and even in the scale was calculated, it was found as 0.956. Since this value is relatively close to +1, it shows that correlation power is very high.

On the other hand, correlation of the items in the scale to the overall of the scale was calculated using Spearman's Rho correlation coefficient and the results are shown in Table 2.

**Table 2:** Correlation Between Arithmetic Means of  
 Odd and Even Items in The Scale

Items	Odd items	Even items
Odd items	1.00	,931(**)
Even items	,931(**)	1.00

\*\* $p < .01$

As shown in Table 2, correlation of even and odd items in the scale to the overall of the scale is relatively high (0.931). This situation shows that the items are consistent with each other. 5 questions were asked to the respondents in the first part to identify their demographic features: "duty", "gender", "place of duty", "seniority", and "educational background". The second part consists of four sections and 59 items. These items were assessed using five-point Likert type scale. The assessment contained values between 1 and 5 and consisted of "Strongly disagree", "Disagree", "Neutral", "Agree", and "Strongly Agree" options. Grading intervals were defined as  $5-1=4$ ,  $4/5=.80$  in calculation of minimum 1 and maximum 5 values. Among the obtained values, 1-1.79 means "strongly disagree", 1.80-2.59 "disagree", 2.60-3.39 "neutral", 3.40-4.19 "agree", and 4.20-5.00 "strongly agree". The third part was allocated for expressing comments, if any, on Balanced Scorecard (BSC) by the respondents.

The data obtained from the scales were transferred to computer medium using SPSS 16.0 package program and necessary statistical operations were made by means of this program. Arithmetic mean, standard deviation, t test and One Way ANOVA, Kruskal Wallis H test for non-parametric data, and Mann Whitney U test analyses were carried out. Significance level was taken as .05.

### 3. Findings

Findings on the opinions of respondents about BSC(Balanced Scorecard) are given in Table 3.

**Table 3:**Arithmetic Mean and Standard Deviation of  
 The Opinions About BSC of Respondents

Aspects	N	$\bar{x}$	SD
Financial	471	3,6970	,76213
Customer	471	3,8938	,64140
Internal processes	471	3,8762	,62406
Learning and improvement	471	3,9497	,70588
General	471	3,8541	,6833

Respondents have generally agreed with BSC ( $\bar{x}=3.85541$ ,  $SS=.6833$ ). Respondents have agreed with all levels. The fact that respondents have agreed with general scale shows that they have strongly adopted assessment of elementary schools via BSC.

Findings on whether respondents' levels of agreement with BSC make any significant difference in terms of gender variable are given below.



**Table 4:** The T Test Results of The Opinions About BSC of Respondents in  
 Terms of Gender Variable

Aspects	Gender	N	$\bar{X}$	SD	t	p
<b>Financial</b>	Female	167	3,6968	,71631		
	Male	304	3,6973	,84143	-,008	,994
<b>Customer</b>	Female	167	3,9085	,57312		
	Male	304	3,8672	,75109	,668	,505
<b>Internal processes</b>	Female	167	3,8890	,57443		
	Male	304	3,8529	,70678	,600	,549
<b>Learning and improvement</b>	Female	167	3,9796	,68941		
	Male	304	3,8952	,73389	1,241	,215

\*p< .05

As a result of independent t-test analysis of whether there is any significant difference among respondents' opinions about BSC in terms of gender variable, it has been concluded that there is not any significant difference found at the level of .05 in terms of gender variable. Therefore, it has been concluded that both genders have highly adopted the implementation of BSC.

Findings on whether respondents' level of agreement with BSC make any significant difference in terms of duty place variable are given in Table 5.

**Table 5:** Comparison of The Opinions About BSC of Respondents in  
 Terms of Duty Place Variable

Aspects	Duty Place	N	$\bar{X}$	SD	t	p
<b>Financial</b>	City	402	3,6879	,75348	-,621	,535
	Village	69	3,7497	,81452		
<b>Customer</b>	City	402	3,8862	,63826	-,627	,531
	Village	69	3,9386	,66240		
<b>Internal processes</b>	City	402	3,8688	,61921	-,622	,534
	Village	69	3,9194	,65464		
<b>Learning and improvement</b>	City	402	3,9332	,70563	-1,222	,222
	Village	69	4,0455	,70477		

\*p< .05

It has been found out that there is not any significant difference in respondents' opinions about balanced scorecard in terms of duty place variable according to the duty places of the respondents. As seen in Table 5, even though there is no significant difference between aspects, it is seen that respondents working in elementary schools located in villages for each of four aspects have a higher aspect average than respondents working in elementary schools located in cities. The fact that elementary

schools located in villages have less criteria subject to inspection and that elementary schools in villages are exposed to less social pressure might have caused managers and teachers of elementary schools in villages to express way more positive opinions about assessment via BSC.

Findings on whether respondents' levels of agreement with BSC make any significant difference in terms of duty variable are given below.

**Table 6:** Comparison of The Opinions About BSC of Respondents in  
 Terms of Duty Variable

Aspects	Duty	N	Mean ranks	$\chi$	p
<b>Financial</b>	Manager	110	227,91	1,127	,770
	Class teacher	210	241,78		
	Branch teachers	130	236,37		
	Inspector	21	218,31		
	Total	471			
<b>Learning and improvement</b>	Manager	110	283,47	23,739	,000*
	Class teacher	210	233,87		
	Branch teachers	130	210,80		
	Inspector	21	164,60		
	Total	471			
<b>Customer</b>	Manager	110	267,89	11,808	,008*
	Class teacher	210	237,00		
	Branch teachers	130	215,34		
	Inspector	21	186,86		
	Total	471			
<b>Learning and improvement</b>	Manager	110	304,15	41,892	,000*
	Class teacher	210	226,78		
	Branch teachers	130	205,60		
	Inspector	21	159,48		
	Total	471			

\*p< .05

As a result of KWU test conducted, it has been found out that respondents' opinions about BSC are significant in any aspects other than financial aspect. Groups were compared dyadically through Mann-Whitney U test in order to determine which group resulted in this difference. It has been found out through this MWU test that there is not a significant difference of opinions among managers and class teachers in financial aspect (U=1,092 p>.05) and internal procedures aspect (U=1,010 p>.05); that there is significant difference of opinions between managers and class teachers in favor of managers in customer and learning & development aspects (U=9,152 p<.05) and

( $U=7,859$   $p<.05$ ). Managers might have expressed more positive views about assessment via BSC than class teachers as they work for administrative affairs and conduct institutional assessment.

According to the results of MWU test conducted for determining whether there is significant difference in respondents' opinions about BSC in terms of manager and branch teacher variables, no significant difference has been observed between managers and branch teachers in financial aspect among other BSC aspects ( $U=6,845$   $p<.05$ ). In customer, internal procedures and learning & development aspects, it has been found out that there is significance difference of opinions in favor of managers ( $U=4,906$   $p<.05$ ), ( $U=5,500$   $p<.05$ ) and ( $U=4003,000$   $p<.05$ ). Managers might have expressed more positive opinions about assessment via BSC compared to branch teachers as they are closely interested in administrative procedures and performance assessment affairs.

According to the results of MWU test conducted for determining whether there is significant difference in respondents' opinions about BSC in terms of manager and inspector variables, no significant difference has been observed between managers and inspectors in financial aspect of BSC ( $U=1,108$   $p<.05$ ). However, it is seen that there is significant difference of opinions about customer, internal procedures and learning & development aspects, which are other aspects of BSC, in favor of managers ( $U=575,500$   $p<.05$ ), ( $U=752,500$   $p<.05$ ) and ( $U=496,500$   $p<.05$ ). Managers might have expressed more positive views about assessment via BSC than the inspectors since they think that BSC may facilitate assessment-related works and improve institutional performance as they personally work for administrative issues and they conduct institutional assessment. Inspectors might have expressed more negative opinions about assessment via BSC than the managers as they find their own inspection criteria more useful than assessment via BSC.

MWU test was conducted in order to determine whether there is significant difference in respondents' opinions about BSC in terms of class teacher and branch teacher variables. Accordingly, no significant difference in opinions about BSC has been found between class teachers and branch teachers in terms of duty variable in financial, customer, internal procedures and learning & development ( $U=1,328$   $p<.05$ ), ( $U=1,234$   $p<.05$ ), ( $U=1,243$   $p<.05$ ) and ( $U=12524,500$   $p<.05$ ). The fact that average of class teachers' opinions is really close to the average of branch teachers' opinions may show that these teachers have strongly adopted inspection of their schools with BSC. It might be said that teachers regardless of their branches view that school performance should be inspected and such inspection could be performed via balanced scorecard.

According to the results of MWU test conducted for determining whether there is significant difference in respondents' opinions about BSC in terms of class teacher

and inspector variables, no significant difference has been observed between managers and inspectors in financial and internal procedures aspect of BSC ( $U=1,988$   $p<.05$ ) and ( $U=1,756$   $p<.05$ ); significant difference of opinions have been found in terms of customer, learning and development aspects in favor of class teachers ( $U=1,568$   $p<.05$  and  $U=1576,500$   $p<.05$ ). Due to the fact that inspectors work outside the school and because of their inspecting duties, they might have expressed more negative opinions than class teachers in terms of customer aspect. The fact that class teachers are closely related and in direct communication with students and their parents, whom we call customer might have caused them to give much more importance to customer aspect of the balanced scorecard and express more positive opinions in this regard compared to the inspectors.

As a result of MWU test conducted for determining whether there is significant difference in respondents' opinions about BSC in terms of branch teacher and inspector variables, no significant difference in opinions about BSC has been found between branch teachers and inspectors in terms of duty variable in financial, customer, internal procedures and learning & development ( $U=1,257$   $p<.05$ ), ( $U=1,082$   $p<.05$ ), ( $U=1,184$   $p<.05$ ) and ( $U=1045,000$   $p<.05$ ). It has been found out that inspectors and branch teachers have similar opinions about BSC. That there is no difference found between inspectors' and branch teachers' opinions about BSC shows that these two respondent groups have adopted BSC completely.

Findings on whether respondents' levels of agreement with BSC make any significant difference in terms of seniority variable are given below.

**Table 7:** The Results of KWU Test Aimed at Comparisioning of The Opinions About BSC of Respondents in Terms of Seniority Variable

Aspects	Seniority	N	Mean ranks	$\chi$	p
Financial	Less than 1 year	16	191,94	10,758	,056
	1-5 year	68	269,54		
	6-10 year	75	258,07		
	11-15 year	126	227,93		
	16-20 year	94	234,30		
	20 year and above	92	213,67		
	Total	471			
Customer	Less than 1 year	16	187,00	9,829	,080
	1-5 year	68	264,49		
	6-10 year	75	240,01		
	11-15 year	126	243,44		
	16-20 year	94	239,20		
	20 year and above	92	206,74		

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	Total	471		
Internal processes	Less than 1 year	16	206,62	
	1-5 year	68	245,38	
	6-10 year	75	244,59	
	11-15 year	126	246,05	3,414
	16-20 year	94	227,91	,636
	20 year and above	92	221,67	
	Total	471		
Learning and improvement	Less than 1 year	16	179,69	
	1-5 year	68	245,08	
	6-10 year	75	229,44	
	11-15 year	126	245,81	10,422
	16-20 year	94	258,56	,064
	20 year and above	92	207,93	
	Total	471		

\*p< .05

As a result of KWU-H analysis conducted, no significant difference has been found in respondents' opinions about BSC with regard to seniority variable. The fact that there is no significant difference in all respondents' opinions about BSC regardless of their seniority level may be evaluated as their adoption of BSC. Based on the general view that respondents at 16 seniority level and above tend to be not open minded and are supposed to express more negative opinions about BSC; this exact opposite situation may show that they view school assessment via BSC as useful for themselves.

Findings on whether respondents' levels of agreement with BSC make any significant difference in terms of educational background variable are given below.

**Table 8:** The Results of KWU Test Aimed at Comparing of The Opinions About BSC Of Respondents in Terms of Educational Background Variable

Aspects	Educational background	N	Mean Rank	$\chi$	p
Financial	Associate degree	46	224,04		
	Undergraduate	381	235,54		
	Postgraduate	34	270,15	3,541	,315
	Doctorate degree	10	192,40		
	Total	471			
Customer	Associate degree	46	235,62		
	Undergraduate	381	235,68		
	Postgraduate	34	253,41	1,677	,642
	Doctorate degree	10	190,60		
	Total	471			

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	Associate degree	46	192,61		
	Undergraduate	381	239,70		
Internal processes	Postgraduate	34	273,41	10,078	,018*
	Doctorate degree	10	167,55		
	Total	471			
	Associate degree	46	225,41		
	Undergraduate	381	236,97		
Learning and improvement	Postgraduate	34	262,41	4,905	,179
	Doctorate degree	10	157,80		
	Total	471			

\*p< .05

As a result of KWU-H analysis conducted, even though no significant difference has been found in respondents' opinions about BSC with regard to education background variable during comparison in terms of financial, customer, learning and development aspects; significant difference has been detected in their opinions about internal procedure aspect. MWU test was conducted to determine which education background variable caused such variation. As a result of this test, no significant difference at the level of .05 has been found in opinions about internal procedure aspect between undergraduate and postgraduate respondents ( $U=5,5548$ ,  $p>0.5$ ). Close opinions about BSC by undergraduate and postgraduate respondents show that such respondents have adopted school assessment via BSC. Closeness of education levels to each other affected the opinions here. A significant opinion difference was not found between the bachelor's degree and doctorate degree holder respondents in terms of the internal processes in MWU test ( $U=1.332$ ,  $p>0.5$ ). This difference may have arisen from lack of effectiveness of education levels of respondents on their opinions towards inner processes aspect of BSC.

A significant difference was found in terms of internal processes aspect towards BSC between the associate degree and bachelor's degree holder respondents for the internal processes aspect ( $U=6,999$   $p>0.5$ ). The presence of difference between the education of associate degree and bachelor's degree holder respondents may be the reason for arising of this difference.

According to MWU test conducted to determine whether there is a significant difference between the opinions of postgraduate and doctorate degree holders towards the internal processes in terms of BSC, a significant difference was found between the opinions of postgraduate and doctorate degree holders towards the internal processes in terms of BSC ( $U=92,500$   $p>0.5$ ). While it was expected that a similarity would exist in the opinions of postgraduate and doctorate degree holders, presence of the exact

opposite condition may arise from the difference of fields of doctorate degree holders and fields of postgraduate holders.

When the opinions of the respondents towards balanced scorecard are analyzed according to education background variable of the respondents, a difference of opinion is not observed in terms of financial, customer, learning and improvement aspects of BSC. Presentation of close opinions by associate, bachelor's, postgraduate and doctorate degree holders shows that educational background is not significant and all of the respondents support BSC.

## **5. Discussion, Conclusion and Recommendations**

As a result of the research, the respondents consisting of primary school managers, teachers and inspectors expressed their thoughts with "Agree" level for BSC applications and financial, customer, internal processes, learning and improvement aspects of BSC and showed that they supported the aspects and items of BSC in high level in assessment of organizations with BSC. In others words, both males and females and those serving at village and city highly agree with assessment of primary schools with BSC regardless of their duties, seniorities and branches. According to the study carried out by Hocalar (2007), it is revealed that Balanced Scoreboard which is a method developed mainly for and implemented frequently by private sector enterprises can also be implemented for public organizations. Positive view of the personnel serving in education organizations, which are public organizations, on BSC system supports this result. Balanced Scoreboard method was successfully implemented as a result of BSC implementation in an enterprise in a study of Güner (2009) and it was concluded that BSC method positively affects activities of the enterprise.

There are differences of opinions on behalf of the managers between the managers and class teachers in terms of customer, learning and improvement aspects of BSC. This situation shows that managers adopt school assessment with BSC with a higher level than the class teachers do. A significant difference of opinion exists on behalf of managers between the managers, inspectors and branch teachers among the respondents in terms of customer, internal processes, learning and improvement aspects of BSC. Managers adopt primary school assessment with BSC with a higher level than the inspectors and branch teachers do. Adoption of BSC by managers at a higher level than other respondents shows that managers will facilitate the activities towards assessment and they think it will raise the organizational performance. With this result, results of the study of Coşkun (2005) overlap with each other. According to Coşkun (2005), it was observed that managers of enterprises that use BSC are more

satisfied about profitability of their enterprises, fulfillment of social responsibilities, satisfaction of their employees, improvement of the skills of their employees, market value, market share, capacity usage and borrowing area performances than managers of enterprises that do not use BSC.

A significant difference of opinion exists on behalf of the class teachers between the class teachers and inspectors in terms of customer, learning and improvement aspects of BSC. This situation shows that school teachers adopt BSC with a higher level than the inspectors do. It can be said here that there may not be an effective communication between teachers and inspectors due to non-presence of inspectors in education/learning environment continuously. According to Akgül (2004), it is clear that an important step is also taken after BSC application in an enterprise in terms of management with targets and processes where more cooperation can be ensured should be designed by executing the interaction and relations between units in a clearer way. In addition, according to the result of the study of Kettunen (2005), it was revealed that clear knowledge and implementation by the employees of BSC application in the enterprise together with the strategy would lead BSC to ensure effective communication between the employees.

Education background was not effective on the opinions of respondents in terms of financial, customer, learning and improvement aspects of BSC. However, differences between the opinions towards internal processes arose. The difference on behalf of the bachelor's degree holders among the bachelor's degree and associate degree holders shows that bachelor's degree holders adopt BSC at a higher level than the associate degree holders do. A difference of opinion was observed on behalf of postgraduate degree holders between postgraduate degree holders and doctorate degree holders.

It is concluded as a result of this study that BSC can be implemented in educational organizations and education personnel support BSC application. This result overlaps with the result of the study of Yazır (2007). Yazır (2007) concluded that BSC application is applicable in education organizations.

From the point of research findings, following recommendations can be brought for implementers and researchers:

**a. For Implementers:**

1. Switching of the Ministry of National Education (MEB) to BSC applications can be recommended considering high level of adoption of BSC at developed countries in terms of assessment of organizational performance and high level of agreement by the respondents as a result of this research on assessment of primary schools with BSC.



2. The scale developed by the researcher or another scale with ensured validity and reliability can be used in assessment of BSC applications. Computer supported package software of the mentioned scale can be developed and thus effectiveness and efficiency of the application can be ensured.
3. Differences of opinions of respondents in terms of education background variable about BSC show that there is a need to give place to educational activities about this subject.
4. Introductory training can be delivered for the teachers for customer, learning and improvement aspects of BSC.
5. It was observed that education inspectors have different opinions in the negative direction about BSC when compared to other duty groups. Therefore, introductory activities can be performed towards education inspectors.

**b. For Researchers:**

1. This study is a quantitative study about BSC. Qualitative studies can be conducted about this subject.
2. Our research is limited to managers and teachers serving at formal primary school organizations. Similar studies can be conducted for general and technical secondary education schools and private schools and comparisons can be made.
3. A software program can be developed to move BSC to electronic environment

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