Analyzing the Administration Perception of the Teachers by Means of Logistic Regression According to Values

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Abstract
This study aims to analyze the administration perception of the teachers according to values in line with certain parameters. The model of the research is relational screening model. The population is applied to 470 teachers who work in 25 secondary schools at the center of Sivas with scales. 317 questionnaires which had been returned have been taken into consideration. Next, extremes values have been removed. As a result of the extreme value analysis, sample has been defined as 302. In order collect data, “Administration Scale According to Values” which is developed by Yılmaz (2007) and “Reposing in School Scale” which is developed by Polat (2007) have been used in this research. “Double Logistic Regression” analysis has been used in this research. The proposal which may be presented according to results of this research is: It is brought to book in the schools and a transparent administration may increase the trust for the school. If an accountable, answerable and transparent social structure is designed and constructed in a school, it may increase trend to organizational values by increasing the trust for the school.

Keywords: Values, administration, repose in school, administration according to values

1. Introduction
Values can be defined in a comprehensive framework so that it includes various different meanings like principals, moral obligations, beneficial situations and qualifications which arrange the behaviors. Value frame includes the expectations of the human which reveal when beneficial, good and desired situation is expected as a result of certain behaviors. Since the values vary from one person to another, it may also be included in de facto. Some people think that happiness is pleasure whereas other people may think that they are the behaviors which are beneficial for human and which are obtained reasonably. Each person may attribute different meaning to the cases in their life. A belief which is considered as important and is attributed to the case by a person may be used to define the value.

When the different definitions for value are examined, it may be defined as it is based on fundamental moral principle and belief like “it is an abstract criteria which is used to determine the importance of something, it is a reward that corresponds to something, it is a worth, high and beneficial quality (Turkish Language Society [TDK] 2009), it is generally a quality stemming from the relation of a person with an object (Wikipedia, 2015), it is a reference principal or belief to which is referenced when an action is realized (Önal, 2006; Schwartz and Sagie, 2000), they are standards which direct the behaviors (Hodgkinson, 2008), being precious (Atay, 2003), good or desired standards (Halstead and Taylor, 2000). Values care their meanings as determinant guide of the human being behaviors together with humans in our world. According to Mengüşoğlu (1997) “the behaviors of humans aren’t independent from the values”. Values may be considered as the guide of the behaviors (Feather, 1975). The groups, communities and schools in which humans live are fed from values in order to realize their aims. As organizations have their own aims, they need to administration whereas administration moves together with mental or emotional decision mechanism to manage their organizations. According to Şişman (2000), “organizations benefit from values when they realize their aims”. While people reflect their values to their employees, they are also affected by the values of their employees.

The activity aim in the organizations is: provide productive and beneficial environment by increasing the motivation and satisfaction of the employees; to reach the defined objectives; to be open to improvement and changes in order to obtain beneficial and sustainable success.

Organizations may reach their objectives more effectively with employees who are more competent and more sensitive to humanistic and organizational values. A foundation of an organization is realized by producing and glorifying the values whereas a demolition of an organization is realized by damaging and eroding the values (Yurgun and Öztöp, 2011, 218).

A value-based administration notion in a school as an organization may leads desirable or undesirable results since it affects the attitudes and behaviors of the teacher to their school, to their students, to their profession and to educational activities. Values have an important place in determining the character of a school. A values swirl of a school may be mentioned for establishing distinctive characteristics of each school. The administrative attitude according to values of the directors may be made much of teachers since the directors are considered as the carrier of the value swirl of the school. According to Bursalıoğlu (1994), “schools are not only an educational center they also intermediary to integrate each human with society and bring each person in conformity the society”.

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The attitude of the directors is affected by values. The background of the administrative attitudes and behaviors aren’t independent from values’ effect (Aydın, 2001; Altınkurt and Yılmaz, 2010; Sağnak, 2005; Turan and Aktan, 2008). It is possible to look for irrational behaviors in the correlation of directors’ success and values. In other words, it may be considered as a method to motivate the employees to better and to create a synergy. When we order some intermediate values to increase the motivation of the employees, the order may be established as justice, tolerance, love, respect, trust, loyalty, trueness, courage, self-confidence, responsibility, equality, helpfulness and honesty.

Directors may undertake certain responsibilities for realizing the objectives of the school by taking the values of school, teachers, social environment, families and even students. In order to bring existing qualifications of the school in an upper point, principals may bring the school administration into force by being conscious about the social effect scope and they also help to establish strong cultural relations by influencing the effects of the values on organizational environment qualification of the school. The answer for the question of “what the important and effective points are for schools?” may be considered as intersection of desirable common expectations of the employees for school. Values form a basis for the expectations by revealing the characteristic of the school. Values may even be considered as the compass of organizations. While the absence of the localized and commonly agreed values on the school culture of the schools may lead to certain chaotic situations, their presence may undertake the charge of harmonization and service for effectiveness.

Administration according to values may help school to reach their objects efficiently and effectively. Values require to create an association and to make positive and desirable contribution to this association. Çelik (2011) states that “the basic hypothesis under the administration with values is human is a creature which acts upon the values rather than being a creature which acts rationally. It is also possible to search the values at the basis of actions of the humans within organizational structure. Common values may help to reach the objectives of the school efficiently by providing a common and conscious doings of organization members.

If educational organizations’ directors become the people who apply to administration according to values, they will provide administration intelligence which takes the contribution of the team to the success, which shares the information and responsibility with administered people, which shares sorrows, troubles and happiness together, of which relations are close and sincere, which gives priority to just and equal applications and which prioritize the trust (Töremen and Akdemir, 2007, 363).

The quality of organizational life can be increased with value-based administration behaviors. The schools with values based directors may influence the whole partners of the school especially the teachers. The directors who bring certain values like honesty, respect, love, justice, dignity, trueness, trust and trust into school may influence value-based behaviors and value-based perception of the teachers and other employees in school positively. In line with the truths above, the object of this study is based on examining the administration perception of the teachers according to values with regard to certain variables.

2. Method
2.1. Research Model
The model of the research is relational screening model. Relational researches are the correlational researches in which the relationship between two or more variables is examined. The relational model that may be used in this research is logistic regression model. According to Çokluk, Şekercioğlu and Büyüköztürk (2010), the cases- in which dependent variables of the logistic regression (predicting variables) aren’t continuous or quantitative variable that is, it is a categorical or rating type - is considered as beneficial. Logistic regression is significant for categorical data analysis. The logistic regression aims to take the measure of categorical dependent variable. The basic focus of the logistic regression is to establish a regression equation to use in the determination of the group in which people are its member. One of objects is classification and the other object is to examine the relations between dependent and independent variables. Logistic regression analysis is used for categorical data analysis since it has an advantage to provide more comfort rather than other analysis with its regression type logic. This analysis aims to predict the value of categorical dependent variable.

In this study, a double logistic regression analysis has been realized for determining the combination of independent variables in order to the will used to determine the administration levels of the directors according to value who are the dependent variables. Therefore independent variables are presented below:
1. Age (AGE) is a Continuous Variable
2. Field of Study (FOS) is Sectional Variable .They are encoded as Class master= 0, Other fields=1.
3. Organizational trust perception of the teacher (OTPT) is a Continuous Variable

The dependent variable of administration perception of the teacher according to values has been defined as a variable with two categories which consists of lower and upper levels by taking the second quarter of the group into consideration.
2.3 Population and Sample

The population of the research is the students who are education in Cumhuriyet University. The following formula has been used to determine the sample. According to this situation, the margin of error has been determined as α = 0.05, the deviation amount (d) has been determined as 0.03. P (to be absent from school) which refers to presence of a characteristic has been determined as 0.30 and q which refers to absence of a characteristic has been determined as 0.70.

\[
\frac{Nt}{pq} = \frac{(N-1)d^2 + \pi^2pq}{Nt}
\]

The population is applied to 470 teachers who work in 25 secondary schools at the center of Sivas with scales. 317 questionnaires which had been returned have been taken into consideration. Next, extremes values have been removed. As a result of the extreme value analysis, sample has been defined as 302.

2.4 Data Collection Tool

In this study according to the results of the Factor Analysis (Principal Components Analysis) which is developed by Yılmaz (2007) as factor analysis of “Administration Scale According to Value” it has been seen that the teacher’s form of the scale has unique factor and the items which have less than .35 factor overload point have been removed from the scale. Therefore, only 25 items have been rest after factor analysis of the scale although they were 29 at the beginning. The factor overload point of the items in the scale varies from .36 to .87. Accordingly, unique factor which has been established by the items in the scale has explained 40% of total variance. It is seen from the reliability analysis that the Cronbach Alpha Reliability Coefficient has been determined as α = .94. It has been seen that the director form of the scale has also unique factor and the items which have less than .35 factor overload point have been removed from the scale. Therefore, only 25 items have been rest after factor analysis of the scale although they were 29 at the beginning. The factor overload point of the items in the scale varies from .37 to .90. Accordingly, unique factor which has been established by the items in the scale has explained 39% of total variance. It is seen from the reliability analysis that the Cronbach Alpha Reliability Coefficient has been determined as α = .96. The answer scales of the scale consisted of (1) Totally disagree, (2) Agree to a degree, (3) Agree reasonably, (4) Agree and (5) Totally agree. While one of the items in the scale has been marked reversely, the rest has been marked simply.

The repose in School has been adapted to Turkish by Polat (2007) and it has been used in this study. At the end of this study, the Alpha value has been found as 0.96 in reliability test of the scale In reliability analysis which has been conducted at the end of test application of the scale, the reliability coefficient of scale has been determined as .97. In factor analysis conducted, since any of the items haven’t a factor less than .45, all of the items in test scale have been transferred to main scale. As a result of the application, the Cronbach’s Alpha Coefficient of the repose in school scale has increased to .96. In factor analysis conducted 21 items in the repose in school scale has been combined in one item and since any of the items haven’t a factor less than .45, all of the items have been taken into consideration.

2.5 Data Analysis

Dependent Variable

In this study the teachers have been divided into two groups as lower administration perception according to values and upper administration perception according to values in accordance with the points that were taken from administration scale. The arithmetical average has been determined as 98.4554 while this division was being conducted. While the group which is under the arithmetical average has been called “0”, the other group which is over arithmetical average has been called “1”. The teachers who are under the arithmetical average have been taken to “lower administration perception level according to values” and the teachers who are over the arithmetical average have been taken to “upper administration perception level according to values” categories. Therefore a dependent variable with two categories has been obtained.

Since dependent variable has two categories, “Double Logistic Regression” has been used. The groups in Double Logistic Regression Analysis are encoded as “0” and “1”. “0” category has been considered as “reference category”. In this study reference category includes administration perception according to lower values. Accordingly, the coefficients obtained reflect their effects on the possibility of upper values of administration perception levels for teachers.

Model Selection

In this research, standard (enter) model has been preferred. In this model the whole common variables which are included in regression model as a block are less than other methods (Çokluk, 2010).

Preparation of the Data

Before start to analyze, first of all extreme values and missing values analysis have been realized. The result of the extreme values analysis has been determined by the data which are out of [-3, +3] range. Model has been tested with 302 data which were obtained as a result of extreme values and missing values analysis.
In order to determine that whether there is connection problem between predictive variables in the analysis, increase increment of tolerance and variance have been examined. If VIF value is less than 10 and tolerance value is more than 0.2, it means that there is problem. It is observed that the predictive variables which have been used in this research don’t have any multi-connection problem.

3. Findings

3.1. Null Model Estimate
It is the starting model which enables the comparison in logistic regression analysis. There is no independent variable in this model. -2LL possibility is an index of model conformity. The measurement of best conformity of best possibility estimation is measurability. The -2LL value of starting model is presented in Table 1.

<table>
<thead>
<tr>
<th>Iteration</th>
<th>-2 Loglikelihood Coefficients</th>
<th>Constant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 0</td>
<td>-2LL</td>
<td>.185</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.186</td>
</tr>
</tbody>
</table>

The perfect conformity of -2LL is equal to zero. The -2LL of starting model refers a high value (416.061) for model at the beginning.

In Table 4, logistic regression analysis conducts a classification by considering every people in the same category.

<table>
<thead>
<tr>
<th>Predicted Situation</th>
<th>Accurate Classification Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Values Perception Level 0</td>
<td>137</td>
</tr>
<tr>
<td>Higher Values Perception Level 0</td>
<td>165</td>
</tr>
<tr>
<td>Total Accurate Classification Percentage</td>
<td>54.6</td>
</tr>
</tbody>
</table>

As can be seen in Table 4, all of the students have been firstly classified in absence behavior category. Accordingly the accurate classification percentage has been found as 54.6%.

The variables which aren’t in equalization are presented in Table 5.

<table>
<thead>
<tr>
<th>Variables Out of Starting Model/Equalization</th>
<th>Score</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.119</td>
<td>1</td>
<td>.730</td>
</tr>
<tr>
<td>Field of study</td>
<td>.687</td>
<td>1</td>
<td>.407</td>
</tr>
<tr>
<td>Trust</td>
<td>110,345</td>
<td>1</td>
<td>.000</td>
</tr>
<tr>
<td>Error chi-squared</td>
<td>110,835</td>
<td>3</td>
<td>.000</td>
</tr>
</tbody>
</table>

The variables which aren’t present in starting model are considered as predictive variables. Starting model is a model in which only constant term presents. When the results about the variables that aren’t present in starting model are examined, it is seen that the “chi-squared statistic” in Tables 5 (\(\chi^2=110.835, \ p<.05\)) is significant. In other words, it is seen that if one or more of these variables are included to model, the predictability power of the model may be increased. As the value of \(\chi^2=59.708, \ p<.05\) is significant, it can be said that the coefficients related to predictive variables which aren’t present in the model will be significantly different from zero (0). It is supposed that if one or more of these variables are included to model, the predictability power of the model will be increased. Wherein it has seen that the variable of repose level is significant (p<.05). It means that predictive variables will contribute to model, whereas since the point statistics related to other variables are not significant (p> .05) it means that predictive variables will not add a potential contribution to the model.

In Table 6, the result of Omnibus Test related to model coefficients is presented. The calculated chi-squared for model only represents the difference between aimed model and starting model in which constant term is included. The significant of model chi-squared statistic means that the hypothesis (H0) that there is no difference between starting model in which only constant term presents and aimed model which is established by including the predictive variables to analysis is rejected and that the relation between predictive variable and predicted variable is supported.
Table 6. Omnibus Test Related to Model Coefficient

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Chi-Square</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step</td>
<td>146,442</td>
<td>3</td>
<td>.000</td>
</tr>
<tr>
<td>Block</td>
<td>146,442</td>
<td>3</td>
<td>.000</td>
</tr>
<tr>
<td>Model</td>
<td>146,442</td>
<td>3</td>
<td>.000</td>
</tr>
</tbody>
</table>

In Table 7, the summary for conformity statistics of aimed model is presented.

Table 7. Summary of Aimed Model

<table>
<thead>
<tr>
<th>Step</th>
<th>(-2 LL)</th>
<th>Cox&amp;Snell R²</th>
<th>Nagelkerke R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>269,619</td>
<td>.384</td>
<td>.514</td>
</tr>
</tbody>
</table>

When the values of Cox&Snell R² and Nagelkerke R² in Table 7 are examined, it is seen that the predictive variables explain 38% and 51% of the absence in the school trend respectively as they are included into the model.

The result of Hosmer and Lemeshow test in Table 8 included the conformity results between model and data. Since the result of the significance test is p>.05, it shows that logistic regression model is consistent with data. In this study it is observed that the model-data conformity hasn’t been provided (X²=18.463, p<.05).

Table 8. Hosmer and Lemeshow Test

<table>
<thead>
<tr>
<th>Step</th>
<th>Chi-Square</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18,463</td>
<td>8</td>
<td>.018</td>
</tr>
</tbody>
</table>

The regression model which is produced to predict memberships of the group is presented in Table 9.

Table 9. Classification Table

<table>
<thead>
<tr>
<th>Real/Observed Status</th>
<th>Expected Status</th>
<th>Lower Values Perception Level</th>
<th>Higher Values Perception Level</th>
<th>Accurate Classification Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Values Perception Level</td>
<td>94</td>
<td>43</td>
<td>68.6</td>
<td></td>
</tr>
<tr>
<td>Higher Values Perception Level</td>
<td>24</td>
<td>141</td>
<td>85.5</td>
<td></td>
</tr>
<tr>
<td>Total Accurate Classification Percentage</td>
<td>77.8</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In Table 9, while 94% of teachers are accurately classified with regard to lower values perception levels, 43% of teachers are classified wrongly and accurate classification percentage is 68.6%. While 141 of teachers are accurately classified with regard to higher values perception levels, 24 of teachers are classified wrongly and accurate classification percentage is 85.5%. Total Accurate Classification Percentage is also 77.8%. When this ratio is compared with classification ratio (54.6%) in starting model, it is observed to be higher. In other words, addition of the trust variable to model increases the classification ratio with regard to lower and higher absence attitudes.

By adding the repose in school administration variable to model, the changes in attitudes against the administration with values are explained according to Table 10.

Table 10. Coefficient Estimation for the Variables of Aimed Model

<table>
<thead>
<tr>
<th>Step 1°</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>p</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.079</td>
<td>.299</td>
<td>.069</td>
<td>1</td>
<td>.793</td>
<td>1,082</td>
</tr>
<tr>
<td>Field of Study</td>
<td>.249</td>
<td>.257</td>
<td>.941</td>
<td>1</td>
<td>.332</td>
<td>1,283</td>
</tr>
<tr>
<td>Trust</td>
<td>.183</td>
<td>.023</td>
<td>62,947</td>
<td>1</td>
<td>.000</td>
<td>1,200</td>
</tr>
<tr>
<td>Constant</td>
<td>-14,707</td>
<td>1,885</td>
<td>60,891</td>
<td>1</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

According to Table 10, one unit increase in reposing in school variable leads to 20% [(1-1.200)/100] increase in administration (upper value trends were encoded with 1) odds according to values. It may be accept for this situation that repose variable has significant effect on administration perception according to values.

5. Discussion and Results

In this study, the finding obtained for administration perception of the teachers and directors with the values have been examined statistically.

In this study, administration perception views of the teachers and directors with the values are divided into two groups as lower perception level and higher perception level. When this division was conducted, 50% of zone has been based as the interception point. The rest which fall to another 50% zone are classified as positive attitudes and the others who are below the thresholds are classified as negative attitudes and the variables which are effective in this classification are determined by logistic regression analysis.

According to analysis results, the reliability perception of the teachers related to their school has a significant effect on directors’ administration with the values. The repose in school variable leads a positive effect on their directors’ administration perception with the values. As a result of the examination of aimed
model variables, it is seen that as repose in school perception of the teacher’s increases, the perception of the directors related to administration with values also increases more and more. One unit increase in reposing in school variable according to values has 20% effects on the administration. İşcan and Sayını (2010) state that no institution may reach object without reliability. No institution may also be administered in this way. At the same time trust is one of the effective factors in efficient relations. The mutual trust has a crucial importance. In order to benefit from the positive result of inter-organizational reliability, it needs to provide a work environment in which every employee is perceived equally and to increase the professional satisfaction of the employees. According to Demirel (2008), the repose in school also increases the loyalty behaviors with school. Lipponen, Olkkonen and Myyry (2004) stated in their study that there is a positive relation between the values and organizational justice. In the study which was conducted by Bütė (2011), the effects of the organizational trust on individual performance had been tested and positive results had been obtained.

According to Demirtaş and Kılıç (2015), “Administration according to values may keep up the institution by rendering the administration process more efficient and functional”. Trust influences various organizational variables and it also has an influence on administration variables according to values. For instance, one of these factors is organizational citizenship attitude and the people -who have organizational citizenship attitude- have a strong relation with their organization by high a high value perception and they may even provide voluntary service for their organizations. In various studies (Tokğöz and Aytemiz Seyhan, 2013; Yücel and Samancı, 2009) it is stated that there is a positive predictive relation between trust and organizational citizenship. In a study which has been conducted by Baltaş (2008) related to directors’ attitudes and organizational reliability, it is emphasized that “in order to convince employee that they are precious for organization, it needs to provide environmental trust firstly”. It may be stated that administration according to values and reliability has a mutual relation. Baltaş (2008) highlights in his study that there is significant relation between the reliability of the teacher to their directors and their trust that their directors may make right decisions and that their organizations may keep their promises.

As a consequence of the reliability in an organization, certain values like sensibility, transparency, honesty, trueness and loyalty increase (Dirks, 2000; Tüzün, 2006; Yılmaz, 2005). The result of this study shows that when environmental trust is provided in schools, the administration behavior of the directors with values is increased more. A mutual positive relation may be observed between the reliability of the teachers for their schools and values. As a result, reliability-based relations and communication increase the values. It is already agreed that reliability is a value independently. The provision of the reliability in school as a value factor can help to explain value perception and the structure of other values integrally.

It needs to incorporate all of the partners of the school when the environmental trust is established in a school. Accountable, transparent administration will increase the repose in school. If an accountable, answerable and transparent social structure is designed and constructed in a school, it may increase trend to organizational values by increasing the repose in the school.

References


