



## Cognitive Structures of Teachers in Relation to 'Ideal School' \*

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### Abstract

There are various factors influencing teachers' perceptions of the ideal school concept, but the school they work has a foremost impact shaping cognitive structures of the ideal school quality. However, the research on school and qualities of schools are limited with metaphor analysis. This research addresses this gap by elucidating the similarities and differences between the cognitive structures of teachers working at primary schools regarding the qualities of the ideal school, using the repertory grid technique. The participants of this research are twenty teachers who are working for three years in the same school. The study employs a mixed research design. Decision making grid technique was used as a data collection tool and content analysis and exploratory factor analysis were used in data analysis. Findings show that the structures formed by teachers are composed of two dimensions: individual and institution. The factor that comes to the fore in the individual dimension is the ideal school, and the factor that stands out in the institution dimension is the non-ideal school. The structures that represent the ideal school factor are the managers, teachers, students, parents, satisfaction, trust and hierarchal relations in the individual dimension. Teachers' cognitive fictions are more prominent in the institution dimension of non-ideal schools. In non-ideal schools, teachers' cognitive fictions showed that factors such as socio-economic environment, physical condition of the school, equipment and in-service training opportunities are influential.

### Keywords

Ideal school  
Cognitive fiction  
Repertory grid  
Constructs  
Cognitive structure theory

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### Introduction

Schools can be defined as institutions that provide service to meet the educational needs of communities. They are meant to be inclusive, deliver quality education through programmes and syllabus with the aim of creating sustainable change in the society (Boehm, 1982). Schools are often regarded as social institutions that hold responsibilities towards the society. For instance, Emile Durkheim school of thought stresses the social character of the school and argues that schools raise individuals based on the expectations of the societies. In other words, schools play an important role in socialisation process (Blackledge & Hunt, 1985; Durkheim, 1985). On the other hand, Max Weber school of thought sees schools as institutions where individual gain skills to adapt to their life roles (Islam, 1958). In addition, some scholars define schools as institutions where symbolic, cultural

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and spiritual rituals are carried out. According to these researchers, schools are based on the values of societies and communities and therefore they stress that schools are not only places for skill and knowledge acquisition and they also play a significant role in shaping the personality.

Organisations are institutions established to deliver a service or a product and therefore, they are divided into two: organisations producing a product and organisations delivering a service. Schools belong to the latter group. Therefore, schools can be defined as institutions delivering education and training (Erdağ & Karadağ, 2017). Traditionally, schools are often seen as institutions transferring knowledge to individuals and teachers are recognised as actors who transfer this knowledge. Yet, such understanding is problematic as schools changed from knowledge-based system to student-centred system where the focus is on active participation of students and encouraging students to be autonomous learners. This change was accompanied by concepts of culture, character, personality, skills and labour production to ensure that schools function both at the individual and national level.

School and education can be taken as a process and a social institution. They reflect the cultural values of the societies and therefore play a significant role in socialisation process. In addition to this, they also interact with social, political and economic systems. There are different approaches to define the aims and functions of school and education. From a *Humanistic perspective*, the schools exist to address the needs and expectations of individuals. Therefore, in defining the aims and functions of schools, all stakeholders' opinions and expectation should be taken. From a *rational/functional perspective*, education institutions are like other organisations and they are established for a purpose. This perspective requires that everything related to the school should be planned in advance, including aims, programs and teacher education. The role of school and education can be read as establishing social cohesion and integrity. From *system theory perspective*, school use the environmental inputs such as knowledge, human resource, technology etc to provide education to the society. This perspective emphasizes that there is a continuous interaction between school and the environment/communities. The schools bear responsibilities towards the environment and community they exist in and therefore they try to address their needs and expectation. *Critical Theory* defines the schools as places where critical consciousness is gained. This school of thought argues that critical knowledge is essential to create social, political and economic change. Accordingly, education and school is seen as a tool for reproduction (Baker, 1991; Freire, 1991; Illich, 1998; Spring, 1997). *Objective approach* aims to develop general and valid model regarding the school process through a universal lens. In doing so, it highlights the commonalities rather than difference among schools and argues that central models, approaches and changes in relation to management and education program can be applied to all schools. From a *subjective approach*, schools are considered to have some differences and each school is socially constructed by the people and stakeholders in it. Therefore, not everything about school can be pre-defined and this understanding locates the schools at a local level and focuses on locality (Blackledge & Hunt, 1985; Bowles & Gintis, 1976; Neill, 1996).

Many values of society are indoctrinated individuals through education system and schooling. Schools are valuable in raising mature individuals for the society and they are the intersection point for both individualism and collectivism (Dewey, 2008). Therefore, the effort of redefining the aims of education and the functioning of schools arises from the changes in beliefs, values and techniques in the structure of society. These changes produce new paradigms (Özden, 2005). Paradigms about schools show a transition from the conventional management strategy that is based on factory mentality to a more modern multidimensional approach. (Beare & Caldwell, 1989; Caldwell, 2005). Despite all the efforts,, a complete consensus on the qualifications of modern schools are not reached; this is mainly due to the differences between the expectations of pedagogues and other stakeholders (Schlechty, 2005).

Although schools are official public institutions, that does not mean that all activities and interactions in schools are consistent with the structural requirements. Moreover, the individual is the principal element of all social systems. Students, teachers and school administrators improve their individual adaptations and roles with their intellectual mentalities by bringing their own individual needs, aims, beliefs and values to the school (Hoy & Miskel, 2010).

People use different structures to interpret the same subject and these results from the individual structure systems that they hold. The similarities between human relations and mutual

understanding of social issues play an important role in improving and maintaining the roles that they present. The personal structures of individuals also have a dynamic character because they are open to change (Ravenette, 2000). When studies (Borko, Wolf, Simone, & Uchiyama, 2003; Desimone, 2002; Fleming & Kleinhenz, 2007; Lunenburg, 2010; Mintrop & Trujillo, 2007; Stefl-Mabry, Doane, Radlick, & Theroux, 2007) conducted on school are examined, it can be seen that different point of views and approaches about the subject result from the dynamism in people's perception systems. The question of what ideal school should be like or what the characteristics of an ideal school should be has always been an issue of discussion. While the researchers of education has a theoretical approach to ideal school, the practitioners (teachers and school leaders) focus on the roles and aims of the school. Yet, conceptualisations based on theoretical underpinnings and roles-aims dichotomy may not produce useful explanations for the stakeholders. Therefore, to address this issue, cognitive theory is an effective method in identifying what stakeholders see school and how they interpret their experiences and understand their roles within the school system.

### *Cognitive Structure Theory and the Ideal School*

The efforts of understanding the world of emotions that directs the nature and behaviours of human beings indicate the need for a deeper inner vision. Especially in studies based on school, the individuals' tendency to go towards his/her inner world gradually gains more significance. This kind of study, where the school structure is generally treated in terms of the development of emotional and social qualities, arises from the effort to understand which humane and emotional factors bring success in cases where rational thought and logic dominated processes are inadequate alone (Karadağ, 2011).

This study aims to explore teacher ideas regarding the ideal school qualities by drawings on *cognitive structure theory* devised by Kelly (1955). In cognitive structure theory, Kelly (1991) addresses individuals' personal perceptions rather than on the common perceptions of people in groups. Cognitive structure theory is based on making a choice among different situations to get information that is more detailed from the individual's cognitive perceptions. This requires the considering individual as a starting point to explain the related concept rather than considering the individual as a purpose.

Cognitive structure theory aims to reveal the phenomenon in individuals' psychological system through their experiences. Individuals develop perception system after every experience, therefore they are expected to make more valid estimations of real events and facts as they experience more (Kelly, 1991). Besides, similarities and differences based on the individuals' perception systems reveal other people's personal perceptions about related concepts, which enables a concept to be better understood (Adams-Webber, 2003).

The essential point of cognitive structure theory is *cognitive structure*. Cognitive structure has an importance for learning and recalling. This structure determines how the general framework with which recently gained information merges and identifies the relations between information networks. The individuals can understand new information when they previously acquired information related to subject. This is because old information is a starting point for the individual (Driscoll, 1993). Davidson (1977) defines cognitive structure as interrelated categories that the individual uses to distinguish the received messages. However, in this study, cognition is used as the expression of a general structure of the individual's way of representing or interpreting the world. It is shaped by the individual's interaction and working process; even though it is realized in the subconscious; it is expressed as holding an opinion and an attitude about reality. Kelly (1955) expressed the importance of the individuals' expression of their experiences with their own sentences. He states that individuals use various theories to express their phenomena and the size of their experiences. These phenomena are emotions, thoughts, cases etc. These 'fictions' produced by individuals are defined using adjectives in extreme points - such as good-bad, beautiful-ugly and adequate-inadequate. Thus, it reveals how individuals understand their worlds and how they portray them, and it presents a representative example of the personal fictions that an individual uses regularly to interpret the important events. Besides, every individual wants events to be convenient for them and develops a characteristically original and innovative fiction system (p. 56).

Even though various factors are effective on teachers' perceptions of an ideal school concept, firstly the school where they work plays a pivotal role in formation of their cognitive structures concerning the qualities of an ideal school. However, when the literature is reviewed, it could be seen that the studies focusing on teachers and stakeholders' perceptions regarding the ideal school are limited with metaphor analysis. For instance, the research of Balcı (2007) shows that school system is knowledge and teacher oriented and schools have an authoritarian and chaotic atmosphere. On the other hand, Cerit (2006) looked into the metaphors used by students, teachers and school principals regarding the school concept. They all used positive metaphors about the schools such as family and team or a site for enlightenment and knowledge, and change and development, and a pleasant place. A further research conducted by Levine (2005) stressed that metaphors revealed students' perceptions and provided information about their past experiences, current ideas and aspirations for future. Aydoğdu (2008) found that students and teachers defined the fundamental role of schools as transferring knowledge, providing time for leisure activities, boosting confidence and raising new generations. Özdemir and Akkaya (2013) showed that high school teachers and students held negative attitudes towards school and defined schools as places that prevented people from self development and as a site that forced people to obey rules and people. Participants also used prison metaphor for schools and argued that schools did not provide spaces of freedoms for them and did not foster democratic environment yet they also expressed the metaphor of 'family/house' indicating that schools were places for love, respect and peace and develops a sense of belonging. Unlike previous research, this study did not explore metaphors but explored the ideal school qualities in cognitive structures of teachers.

## Method

### *Design*

This research aims to determine the ideal school qualities drawing on teachers' perceptions. The study employs mixed method where qualitative and quantitative models are used together (Adamson, 2005). As the aim is to obtain quantitative results from qualitative data, exploratory research design was used. An exploratory research design enables the quantitative expression of the similarities and relations between phenomena using qualitative methods (McMillan & Schumacher, 2006).

### *Participants*

Criterion sampling method was used to recruit participants for in-depth analysis (Neuman, 2007, p. 322). The principal criterion of the criterion sampling method was 'to be working in the same school for at least three years' so that participants could have a better idea about the school where they work and about the other schools in the neighbourhood. Twenty primary school teachers who had worked in the same schools for at least three years are recruited. Eleven (55%) teachers who participated in the study are female while nine of them (45%) are male and the average year of experience was 13.85. The nature of repertory grid technique allows the research to be conducted with a small sample size. Therefore we worked with 20 participants in this research. Likewise, the methodological literature also suggest that a sample size of fifteen to twenty will be sufficient to provide a good amount of data and increasing the number will not necessarily add new constructs (Ginsberg, 1989). Dunn, Cahill, Dukes, and Ginsberg (1986), generated a total of twenty-three unique constructs. Although they conducted seventeen interviews, these constructs came out from the first ten interviews and no new constructs were generated from the rest of the interviews (Dunn et al., 1986). Moreover, drawing on the research using the repertory grids, instruments such as questionnaire can be developed to be used with a large number of participants (Tan & Hunter, 2002).

### *Procedure*

The study was conducted in five stages: (i) defining the phenomenon, (ii) developing the data collection instrument, (iii) collecting data, (iv) data analysis and (v) interpreting the data.

**(i) Defining the phenomenon:** The necessary conceptual instruments were determined with the teachers to determine the qualities of ideal school. The data obtained in this research formed the basis of the research.

**(ii) Preparing the data collecting instrument:** Repertory grid was used in the research (Shaw & McKnight) and it was adapted according to the interview schedule. The repertory grid includes both

qualitative and quantitative data. The qualitative aspect refers to the relationship between the structure and elements whereas quantitative aspect (Bell, 2003; McQualter, 1986; Zuber-Skerrit, 1987). Repertory Grid of Kell (1955, 1991) aims to identify the main cognitive constructs of the individuals through the words that describe the people within the interaction environment. Kelly (1991) considers the perceptions of individuals in cognitive structure theory. The cognitive structure theory is based on the choice between different situations in order to obtain more detailed information from the individual's cognitive perceptions, which takes the individual as a point of departure for explaining the concept beyond the goal. As individuals develop a perception system that is based on their interaction with the events they encounter in the world they live in, they can have more valid predictions regarding real events (Kelly, 1991). In this context, the similarities and differences that arise from the perception systems of individuals can lead to a clearer understanding of concepts as they shape the personal perceptions of other people (Adams-Webber, 2003).

Repertory grid form is composed of two parts: structure and element. Structure includes the perception of individuals about the relevant concept whereas element section includes the institutions/persons that the participants are familiar with (Bell, 2003; McQualter, 1986; Zuber-Skerrit, 1987). Thus, both structure and element are shaped by the perception of the participants. Despite its different forms of use (Shaw & McKnight, 1981), this research employs grid form. The main feature of the decision-making grid form is that participants decide on the levels of exhibiting or representing these structures by the bodies recognized and known by the participants. The teachers who participated in the pilot study were asked to comment on qualities for an ideal school in order to structure dimension of the data collection tool. These were analysed by content analysis (see Table 1). In the second phase of the study, six components/elements convenient for the repertory grid technique were finalized with teachers and field experts. Elements were identified as; the school they work at, the school where friends/colleagues of the participants work, the nearest school to their school, the most ideal school they know, a non-ideal school that they know and another school that they know in the neighbourhood (Ilbery & Hornby, 1983).

**Table 1.** Repertory Grid Questionnaire Sample Used in the Study

	Components/Elements					
	1	2	3	4	5	6
<b>Structures</b>	The school where participants work	The school where friends of the participants work	The nearest school to their school	Ideal school	Non-ideal school	Another school that they know in the neighbourhood
1-Principal						
2-Teacher						
3-Student						
4-Socio-economic environment						
5-Parents						
6-Equipment						
7-Cooperation						
8-in-service training opportunity						
9-Satisfaction						
10-Confidence						
11-Hierarchical relations						
12-Physical structure						
13-Educational planning						
14-Vision						
15-Dynamic-continuous improvement						

**(iii) Data collection:** A repertory grid questionnaire was developed for the participants. Before asking the participants to fill in the questionnaire, a researcher explained it by completing a sample. Then the participants were asked to identify the school and to score these schools according to the structures which they had previously created. Participants were asked to score the level of efficiency on the ideal school concept from 1 to 5 based on their observations. Teachers were asked for instance, to give the highest score to the school where they think that the cooperation structure was efficient and to give the lowest score to the schools where they observed the cooperation structure was least efficient.

**(iv) Data analysis:** There are several techniques that can be used to reorganize repertory grid data (Beal, 1985; Bell, 1990; Easterby-Smith, 1980; Gaines & Shaw, 1980; Leach, 1980; Stewart & Stewart, 1981). They help researchers to work within and between the elements and constructs. Based on this, the data collection form was taken into consideration, and similarity formulae were used to produce smaller structure through principal component analysis. Researchers of ten use factor analysis to analyse grids (Bell, 1990; Easterby-Smith, 1980; Leach, 1980). Bell (1990) argues that most of the time two and three factors would be satisfactory to reveal the basic structure of the grid (Tan & Hunter, 2002).

The data were analysed in two phases. The first phase is presented in table 1. As depicted in table 1, a similarity formula<sup>1</sup> was used in the calculation of the similarities/relations between structure and elements in data collection form (Jankowicz, 2004). The scores obtained from the formula forms were applied separately and the average similarities (relations) between the structure and the elements were determined in the end.

In the second step, explanatory factor analysis based on the analysis of basic components was applied in order to provide more detailed information about the relation between structure and elements. In the factor analysis phase of the study, 300 structure data from 20 teachers and 120 element data were collected. Principal Component extraction and Varimax orthogonal rotation are calculated to reduce the data to simpler models in order to facilitate the interpretation of the relationship between the factors. The number of factors deduced from each network is determined by the Kaiser Criteria. Only factors with eigenvalues greater than one were obtained. Factor loadings below 0.40 were not considered (Child, 1970). As a result, through the factor analysis, the polarities between the elements and structures, the structures that are perceived between the perceived ideal and the non-ideal school qualities have been determined (Ilbery & Hornby, 1983).

#### **Validity and Reliability**

Creating an assessment instrument with participants is an important element in increasing the validity of the instrument used in qualitative studies (McMillan & Schumacher, 2006). In this context, firstly the structure part of the study was created by the participants to increase the validity of the research. The element part was limited to six schools that participants knew so that they could make a choice by presenting the differences in their cognitive perceptions in accordance with the repertory grid. Processes of the study, formulas used in the study and operations made were presented in detail. For the reliability of the study, ideal school qualities as stated by the participants were examined by three experts in educational administration along with teachers and the researcher. The school qualities in the assessment instrument were calculated according to the reliability calculation of Miles and Huberman (1994) until 90% agreement was reached. All the formulas used in the study were recalculated by two different researchers and the data were finalized after getting the same results.

### **Results**

The average similarities of grids that teachers created for ideal school qualities are presented in Table 2. It was seen that the similarity percentage of six schools varied between 34% and 80%. The highest similarity percentage [80%] was between the school where teachers work and the nearest school to their school. The lowest similarity percentage [34%] was found between the ideal school and the non-ideal school. Moreover, the similarity percentages between the school where teachers work and the ideal [61%] and non-ideal [59%] school had almost same values.

$${}^1 \text{Element} = 100 - \frac{SD}{(LR-1) \times C} \times 100$$

$$\text{Structure} = 100 - \frac{SD}{(LR-1) \times E} \times 200$$

**Table 2.** Repertory Grid Average Element Similarities According to Teachers' Perceptions

Schools	1	2	3	4	5	6
1-The school where participants work	-	.77	.78	.61	.59	.71
2-The school where friends of the participants work		-	.80	.63	.65	.76
3-The nearest school to their school			-	.56	.62	.74
4-Ideal school				-	.34	.79
5-Non-Ideal school					-	.67
6-Another school that they know in the neighbourhood						-

Similarities between structures that teachers developed for ideal school qualities are presented in Table 3. The similarities that the teachers developed for school qualities varied between 37% and 70%. The highest similarity percentage between structures was [70%] between the socio-economic environment and equipment. The principal structure had 50% or more similarity with all other structures. This shows that all structures related to school are closely associated with the principals. It was determined that similarities have increasing and decreasing values between all other structures. In addition to the similarities of teachers and principals with other structures, they have similar values with the achievement of the students. The biggest similarity with the achievement of the students is parental structure.

**Table 3.** Repertory Grid Average Structure Similarities According to the Teachers' Perceptions

Structures	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1-Principal	-	.67	.59	.56	.51	.52	.55	.50	.59	.60	.60	.60	.66	.61	.50
2-Teacher		-	.56	.46	.38	.49	.47	.45	.47	.52	.57	.56	.63	.55	.55
3-Student			-	.43	.68	.61	.57	.54	.47	.63	.58	.48	.59	.61	.66
4-Socio-economic environment				-	.52	.70	.60	.55	.54	.65	.53	.41	.58	.56	.60
5-Parents					-	.55	.57	.55	.60	.60	.53	.37	.50	.51	.52
6-Equipment						-	.50	.53	.60	.56	.53	.48	.69	.64	.64
7-Cooperation							-	.47	.59	.68	.67	.55	.52	.56	.55
8-in-service training opportunity								-	.51	.57	.52	.49	.57	.53	.52
9-Satisfaction									-	.51	.65	.49	.57	.57	.62
10-Confidence										-	.59	.63	.61	.65	.65
11-Hierarchical relations											-	.50	.52	.60	.57
12-Physical structure												-	.48	.68	.65
13-Educational planning													-	.52	.67
14-Vision														-	.55
15-Dynamic-continuous improvement															-

Kelly (1955) developed a nonparametric method of factor analysis for repertory grids based on the idea of matching one construct with another construct's row. Kelly quite reasonably based his factoring approach on use of the binomial distribution to establish the probabilities of various observed numbers of matches between patterns of incidents and voids for the constructs of a repertory grid occurring by chance. Simply put, constructs in grids such as the ones that exhibit a large number of matches with other constructs are likely to be members of the same construct subsystem (Coshall, 2000). The research shows that conventional and parametric factor analysis does not produce more factors than Kelly's nonparametric approach (Potter & Coshall, 1986). The factor analysis results of the repertory grid graph structure and elements developed by teachers are presented in Table 4. According

to the exploratory factor analysis based on component analysis, structures in the instrument can explain 38% of the first dimension, 28% of the second dimension and these two dimensions can explain 67% of total variance. Bursalıoğlu (2008) emphasizes that the school can be addressed in two dimensions: individual and institution. Two dimensions obtained as a result of factor analysis are the individual and the institutional dimension. When dimensions were examined, it was seen that ideal and non-ideal school perceptions were in different dimensions. While the ideal school was in the individual dimension [.85], the non-ideal school took place in the institutional dimension [.80].

When factor points were examined, it was seen that they were distributed between ideal and non-ideal schools. In addition, the structures related to school qualities in the individual dimension include such factors as principal [.71], teacher [.73], student [.69], parents [.85], satisfaction [.64], confidence [.63] and hierarchical relations [.85]. The structures related to non-ideal school qualities in the second dimension include factors such as socio-economic environment [.82], physical condition of school [.76], equipment [.74], in-service training opportunity [.70].

**Table 4.** Factor Analysis Results of the Repertory Grids Developed by Teachers

<b>Structures</b>	<b>Individual</b>	<b>Institution</b>
1-Principal	.70	.46
2-Teacher	.72	.33
3-Student	.68	.39
4-Socio-economic environment	.31	.81
5-Parents	.84	.17
6-Equipment	.28	.74
7-Cooperation	.50	.58
8-in-service training opportunity	.31	.70
9-Satisfaction	.64	.51
10-Confidence	.63	.49
11-Hierarchical relations	.84	.10
12-Physical structure	.40	.75
13-Educational planning	.57	.57
14-Vision	.53	.57
15-Dynamic-continuous improvement	.58	.61
<b>Elements</b>	<b>Individual</b>	<b>Institution</b>
1-The school where participants work	.14	.79
2-The school where friends of the participants work	.74	.25
3-The nearest school to their school	.61	.51
4-Ideal school	.84	.00
5-Non-Ideal school	.06	.80
6-Another school that they know in the neighbourhood	.70	.07
<b>Total varyans [%]</b>	38.93	28.34
<b>Cumulative varyans [%]</b>	38.93	67.28



## Discussion

This research aimed to identify the cognitive fictions of teachers about ideal school qualities and to determine the structures related to the ideal school. In parallel with this aim, the structure and element/components of the repertory grid questionnaire that teachers answered were analyzed using exploratory factor analysis techniques based on principal components analysis using an element-structure similarity formula. The findings show that the highest similarity was between the school where friends of the participants work and the nearest school to the school they work [80%]. Teachers found a medium level of similarity between the school where they work and ideal and non-ideal schools. This result can be considered as the expression of the teachers' perception in their cognitive structure that schools where they work have both ideal and non-ideal aspects. Şişman and Turan (2001) state that schools create their own social facts based on social interaction without ignoring the personal facts of individuals, and, in this context, schools have unique social facts and identities. Thus, it can be said that each school is unique and different

When the similarities between structures are examined, similarity percentages except for the administrative structure are calculated. The administrative structure showed at least 50% similarity with all other structures. When the studies were examined, it was seen that principal and leadership concepts are closely related with many variables when compared to other structures of the school (Cotton, 2003; Jones, 2004; Karadağ, 2009; Leithwood & Riehl, 2003; Thomas & Martin, 1996). The leadership behaviours such as developing a mission and vision, determining education objectives, expecting achievement from students, cooperation, time management, conflict management, school staff, work satisfaction, enabling a positive culture and atmosphere are the main issues (Everard, Morris, & Wilson, 2004; Gold & Evans, 2005; Şişman, 2002).

As a result of the exploratory factor analysis based on a principal component analysis to get more detailed information about similarities between components and structures, structures used in the study are grouped in two dimensions: the *individual* and the *institution*. When these dimensions were examined, it was observed that the prominent factor in the individual dimension was the ideal school and the factor in the institution dimension was the non-ideal school. It was determined that structures which represent the ideal school factor are the principal, teachers, students, parents, satisfaction, confidence and hierarchical relations. Teachers' cognitive fictions was more prominent in non-ideal school aspect of institution dimension. It showed that in non-ideal schools there are factors such as the socio-economic environment, the physical state of the school, equipment, and in-service education opportunities. The factors which are important to run the schools efficiently are management, the students, the teachers, the program, the teaching process, the school culture, the school environment and parents. Similar findings are also found in metaphor research conducted in Turkey (Aydoğdu, 2008; Cerit, 2006; Özdemir & Akkaya, 2013). Balcı (2007) also stated that important factors on efficiency of schools are management, teachers, students, program, school culture, school environment and parent but the focus is generally on management, teacher, students and quality education.

Smith (2002) states that school organizations have their internal and external structures. While internal structures consist of individually based structures such as task sharing, performance management, study groups; external structures include the school budget, salaries of employees and the education programs. Besides, as a basis of a successful school organization, he also underlines the importance of individual dimension in schools emphasizing managing the people who have common values. The studies on school qualities, structures where individualism stands out such as the principal, teachers, students, parents, a safe atmosphere and connectedness are often mentioned (Creemers, 1996; Cuttance, 1997; Çubukçu & Girmen, 2006; Hussami, 2008; Türkyılmaz & Kuş, 2010; Ross & Gray, 2006).

The findings also closely reflect the structure of Turkish education system. For instance, the study showed that the the individual factor, also known as the internal structure of the school organisation is closely related with the ideal school features whereas the institutional factor, which is known as external structure of the school organisation, is associated with less ideal school features. The external structure of the school organisation usually includes structures such as school budget, employee salaries and training programs. These structures do not differ between schools due to the central administration structure of the Turkish education system. In all of the teaching experiences, it is expected that institutional factor will not be dominant in ideal school fiction of teachers who have worked in schools with the same external structures.

Teachers' perceptions regarding the non-ideal school are generally related to the concept of structure. This aligns with the hypothesis of some scholars regarding how modern schools operate (Durkheim, 1985; Freire, 1991; Illich, 1998). Ivan Illich (1998) argues that there should not be an institution called school, but a service unit called the Learning Networks should be developed instead. Schools provide institutionalization of education, and equips students with technical knowledge, bureaucracy and expertise instead of improving their cognitive development and critical thinking skills. According to Illich (1998), the school narrows the behaviour and living spaces of individuals, and the behaviours of the individual are determined by the institutions around them. The school is an organization that is created and functioned according to the rules of the bureaucracy. A compulsory program, the role of the teacher and the student, the compulsory attendance, a set of records and documentation are typical examples. Like the components of the Institutional Factor obtained in factor analysis, the school has become an enterprise marketing that packages goods, the program evolved into an information package that is marketed to customers, and the consumers (students) are expected to regulate their lives accordingly. The school puts students in a race, constantly promoting their consumption desires (new courses, new courses, etc.). The school consumes most of the resources of the society (human, money, physical resources) and serves more teachers than students. The individual factor also aligns with Freire's (1991) argument in the pedagogy of the oppressed. According to Freire, both teachers and students should learn from one another. This categorical distinction is based on power. Teacher holds more power compared to student. The teacher-student relationship is like the subject-object relationship and therefore this relationship based on power should be dismantled. People need emancipatory education to develop critical thinking skills. A problem-based education should be introduced instead of banking model of education that prevents critical and creative thinking. In problem-based model, both teachers and students participate in the dialogue on equal terms and the aim of education is not to transfer knowledge but to encourage students to think and reflect on the knowledge.

Robbins (1994) states that apart from humanizing the organizations, the improvement efforts of organizations can make members more qualified and increase the satisfaction of members by promoting personal development. He also states that an organization needs to have characteristics such as cooperation, confidence, support and transparency for a better quality organization. While the traditional school focuses on the teacher and knowledge, the modern way of supports the participation of all parties who are affected or influenced by education. The new education mentality focuses on considering each individual as a unique, exclusive beings, it considers individual and individualization (Şişman & Turan, 2001). This mentality shows that school focuses on the institutional structure of the school, principals, teachers, students and parents all of whom are influenced by individualism (Tatar, 2006).

### *Directions for Future Research and Limitations*

The findings show that the resources reserved for education can be used to increase individualism to shape future schools. Teachers particularly adopt schools which are not prototype and each school is unique. Therefore, there should be unique strategies for each school, and efforts must be made with the collaboration of education experts and the school staff who are important actors of devising relevant and functional solutions. Besides, usage area of the repertory grid technique can be expanded to identify cognitive structures and to provide further information about these structures.

The data was collected using self-report, which may have caused subjectivity. This leads to common method bias and can be listed as one of limitations of the method. The data was collected only from teacher and this could be identified as the potential reason for the limitation. Although this limitation cannot be completely eliminated in research, errors can be reduced to minimum levels. Therefore, necessary measures were taken in the data collection stage. Firstly, the decision-making grid form was used in the data collection phase of the study. Later on, it was expressed during the face-to-face interviews that the responses would be in full confidentiality and would not be fully disclosed.

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