Education and Science

Vol 41 (2016) No 186 37-51

School Administrator's Cognitive Constructs Related to Ideal Teacher Qualifications: A Phenomenological Analysis Based on Repertory Grid Technique *

Şenol Sezer [1]

Abstract

In this study, it was aimed to reveal school administrators' cognitive constructs related to ideal teacher qualifications. For this purpose, the study was conducted based on phenomenological design which is one of the qualitative research patterns. The study was conducted on 24 school administrators working in 24 different schools in the Giresun and Ordu city centres during 2015-2016 academic year. Criterion sampling technique was used to determine the study group. Data were collected by using repertory grid technique. The school administrators have produced 240 valid cognitive constructs related to ideal teacher qualifications. The most frequently mentioned cognitive constructs are namely, *(1)* communication/communication skills [η=9, 3,8%], *(2)* close attention/closeness to students [η=8, 3,3%], *(3)* self-sacrificing [η=8, 3,3%], *(4)* self-improvement [η=8, 3,3%], *(5)* job enthusiasm [η=8, 3,3%], *(6)* planning [η=8, 3,3%], *(7)* openness to improvement [η=7, 2,9%], (8) collaboration [η=7, 2,9%], *(9)* work devotedly [η=7, 2,9%], and *(10)* responsibility [η=6, 2,5%]. The 240 cognitive constructs produced by school administrators related to ideal teachers' qualifications were collected in eight different groups considering functionality and the similarities.

Keywords

Ideal teacher
Qualification
School administrator
Cognitive constructs

Article Info

Received: 07.12.2015
Accepted: 18.07.2016
Online Published: 04.09.2016

DOI: 10.15390/EB.2016.6173

Introduction

Teaching in contemporary schools involves building relationships with many different students with a variety of backgrounds, needs, expectations, motivations and aspirations. It is impossible to help children in effective learning and insight into their concerns unless the teachers have ideal qualifications. Quality teachers have a critical role to ensure successful learning experiences for all students which they need.

The qualification term is defined as the ability, competence, effectiveness or perfection. It is also identified as the knowledge, skills and competencies which agreed upon within a certain period (Tuck, 2007, p. 42). Quality term on the one hand is used to express entirety of knowledge, skills and abilities on the other hand in business life it is seen as the entirety of characteristics which are necessary to fulfil a business task, successfully (Karadağ, 2011).

* This study was presented at VI. World Conference on Learning, Teaching and Educational Leadership on October 29-31, 2015, Descartes University, Paris.

[1] Ordu University, Faculty of Education, Department of Educational Sciences, Turkey, senolsezer.28@gmail.com

Teacher qualifications are particularly under close scrutiny owing to raise the teaching and learning quality, and therefore school effectiveness. Besides, the defining attempts of teachers' knowledge, skills and abilities ensure to review their performance and support them to continue professional improvement (Jones, Jenkin, & Lord, 2006, p. 4). Additionally, becoming a qualified teacher is not exactly a matter of educating in basic skills and classroom procedures it is also a matter of having various personal and professional qualifications, competences, and even intuitions (OECD, 2005, p. 2; TED, 2009, p. 5; Wayne & Youngs, 2003). Consequently, that is why the teaching is such a challenging as well as alluring and rewarding profession (Dillon & Maguire, 2011, p. 9).

Qualified teaching includes a vast range of social skills such as organisation, communication, collaboration, endurance and to work in a highly pressured environment (Holmes, 2006, p. 11). According to Campbell, Kyriakides, Muijs, and Robinson (2004), the teachers should have to meet required standards namely, *(i)* knowledge and understanding *(ii)* teaching and assessment *(iii)* classroom management *(iv)* monitoring progress *(v)* pupil progress *(vi)* professional effectiveness *(vii)* professional development *(viii)* school improvement, and *(ix)* professional characteristics. Additionally, Stronge, Tucker, and Hindman (2004) state that the qualified teacher as a person should also has the qualifications, such as attentiveness, fairness, respectability, professional commitment, effective communication, job enthusiasm, willingness to learning, and reflective practice. Moreover, quality teachers are able to understand and apply the strategies to increase students' achievement.

Due to its critical importance the teacher quality has long been an important issue for educators, policymakers, practitioners and researchers (Roth & Swail, 2000). Two paradigms have dominated on researches related to teaching qualifications. The first, which has been characterised as the process-product research accounts for the majority of studies. In these studies, the effective teaching by correlating particular processes, or teacher behaviours with particular products usually defined as student achievement have been explored by researchers using standardised tests (Darling-Hammond, 1992; Feiman-Nemser & Parker, 1990; Lutz & Hutton, 1989; Wright, Horn, & Sanders, 1997). The second paradigm includes the diverse groups of qualitative or interpretive studies which provide detailed descriptive accounts by considering participants' cognitive constructs concerning to effective teaching (Cochran-Smith & Lytle, 1993, p. 6). In general, in such kind of studies the teaching profession is discussed in the context of emotional and social quality. Due to being insufficient alone of the rational thought and logical processes, the understanding efforts are gained more importance *which qualifications the ideal teachers should have* (Rivkin, Hanushek, & Kain, 2005; Sanders, 1998; Sanders & Rivers, 1996). Besides, there is an increasing attention among the researchers to understand which internal factors make some teachers more effective than others (Darling-Hammond, 2000; Hanushek, 1992). Although in this type researches it is benefitted from many theories trying to explain how the people think this study was conducted based on 'Personal Construction Theory' which developed by Kelly in 1955. The Personal Construction Theory is a constructivist theory aiming to explain the individual's beliefs and world view by his/her 'personal constructs' in cognitive dimensions formed by two opposite poles. The repertory of a person's constructs and relationships between them provides a basis for predicting his/her beliefs and judgments (Paszkowska-Rogacz & Kabzińska, 2012). Over the years, Kelly's Personal Construction Theory has been thoroughly revised and developed, and it has also been successfully applied to many fields of research and practice (Pervin & John, 2002).

The basic starting point of the Personal Construction Theory is cognitive structure. Cognitive structure is characterised as a mental state that achieved in consequence of many several cognitive processes (Cüceloğlu, 1991, p. 201). The cognitive processes are deeply rooted in the body's interactions with the milieu. Cognition is a conscious process of individual's mind, including different aspects such as awareness, perception, reasoning, and judgment (Wilson, 2002). Cognitive structure system embraces the total network of a person's constructs, and it includes tacit as well as verbal constructs (Bussis, Chittenden, Amarel, & Klausner, 1985, p. 14). The personal constructs, has been thought of as individually created and structured. Teacher qualifications and proficiencies were examined in previous studies such as (Aypay, 2011; Numanoğlu & Bayır, 2009; Özabacı & Acat, 2005; Şişman, 2009)

but these studies are far from being sufficient to demonstrate the ideal teacher qualifications in comprehensive manner. Therefore in this study it is proposed to reveal ideal teacher qualifications by considering the school administrators' personal constructs can be explored via to Kelly's Personal Construct Theory and its methodological extension, the Repertory Grid Technique (Tan & Hunter, 2002). Teachers' professional attitudes and behaviours can be evaluated as the most important factors that shape school administrators' cognitive structures related to the ideal teachers' qualifications. In this context, this study focuses on revealing the school administrators' cognitive constructs stored in their mind as the ideal teacher qualifications. For this purpose the answer was sought following question *what are the cognitive constructs of school administrators related to ideal teacher qualifications?*

Method

In this study, it was aimed to reveal school administrators' cognitive constructs related to ideal teacher qualifications. For this reason this study was designed in qualitative research method. The qualitative research method is used in order to obtain comprehensive knowledge about a topic (Denzin & Lincoln, 2005; Marshall & Rossman, 2006; Singh, 2007). This study was conducted based on phenomenological research pattern which is one of the qualitative research methods. In phenomenological researches, it is aimed to put out individuals' cognitive structures stored in their minds by looking closely the interpretations concerning to their experiences (Creswell, 2003, 2014, 2015; Lodico, Spaulding, & Voegtle, 2006, p. 270).

Data Collection Tool

Data were collected by using repertory grid technique. A theory -Kelly's Personal Construct Theory- and technique -defined as cognitive constructs and its cognitive mapping tool known as the repertory grid technique– was accepted as suitable for the study. The Repertory Grid is a cognitive mapping technique that attempts to describe how people think about the phenomena in their world. Moreover, it can be used to reveal ideal teachers' qualifications (Tan & Hunter, 2002). The function of a personal construct system is to interpret current situation and to anticipate future events. Individuals use their own personal constructs to understand and interpret the events that occur around them and these constructs are also shaped by individuals' experiences. Thus, individuals develop a personally organised interpretation system based on their own experiences and come to understand the world in which they live (Kelly, 2003, p. 88). The alignment of constructs (with respect to the location of the preferred pole as consistently to the right or left) is an important matter for both the analysis of grids and some further investigations based on grids (Bell, 2010).

Study Group

The study was conducted on 24 school administrators working in 24 different schools in the Giresun and Ordu city centres during 2015-2016 academic year. Criterion sampling technique was used to determine the study group. The criterion sampling method is based on the sample group have sufficient knowledge about the researched topics (Patton, 2014, p. 238). To be worked with the teachers at least one year was taken as the prerequisite criterion. This criterion has also been taken as a base-line because school administrators should be able to describe three of them as ideal teachers. School administrators should also be able to identify three of them that they have non-ideal qualifications. Additionally to be working in schools which have different educating programs was also selected as a criterion. School administrators' professional and managerial seniorities were also considered as other criteria. It is assumed that school administrators perceive the ideal teachers' qualifications in different ways because both their professional and managerial seniority were effective on their cognitive constructs. The demographic characteristics of the study group are given in Table 1.

Table 1. The Demographic Characteristics of the Study Group (η=24)

Gender	*η*	*School Type*	*η*	*Professional Seniority*	*η*	*Managerial Seniority*	*η*
Female	7	Primary School	6	1-6 Year	1	1-6 Year	7
Male	17	Secondary School	6	7-12 Year	1	7-12 Year	6
		Academic High School	6	13-18 Year	7	13-18 Year	5
		Vocational High School	6	19-24 Year	7	19-24 Year	2
				25 + Year	8	25 + Year	4

Procedure

The study was conducted in four stages namely, *(i)* definition of the phenomenon *(ii)* preparing the data collection instrument *(iii)* data collection, and *(iv)* data analysis and interpretation (Mayring, 2011, p. 112; Yıldırım & Şimşek, 2013, pp. 93-97).

(i) Definition of the phenomenon: In the first stage the phenomenon was defined. A conceptual framework has been created to be able to classify and compare the ideal teachers' qualifications examined in the study.

(ii) Preparing the data collection instrument: In this phase data collection tool has been prepared. Data was obtained by using "triad repertory grid" technique (Adams-Webber, 1996; Jankowicz, 2004; Bell, 2005). The repertory grid form used in research is shown in Table 2.

Table 2. The Triad Repertory Grid Form Example Used in Research

			Teachers				
Cognitive Constructs		Ideal			Non-Ideal		Cognitive Constructs
Ideal Qualifications	Ali	Veli	Tansu	*Cansel*	*Yiğit*	*Sabit*	*Non-Ideal Qualifications*
	△		△	△			
			△	△		△	

- Imagine that the two teachers in each trio exhibit same qualification in a similar manner but third is different.
- Write your answer as two words, two parts of sentence or two identifications which separated by dashes (-).
- The figure has been named as similar pole (ideal) that two teachers' qualifications are similar.
- The figure has been named as averseness pole (non-ideal) that two teachers' qualifications are different from the third teacher.

(iii) Data collection: Before the interview each school administrator was called by researcher. Then the interviews were fulfilled in different days. In repertory grid technique data are obtained based on different stages (Adams-Webber, 1996; Fransella, Bell, & Bannister, 2004). *Firstly*, it was asked from the school administrators to think about three teachers exhibiting ideal teacher characteristics and three teachers exhibiting non-ideal characteristics. *Secondly*, it was asked from participants to place three ideal teachers using code names in sections of repertory grid form. In the same way, it was asked from participants to place three non-ideal teachers using code names. *In the third stage*, it was asked from each participant to specify ideal qualifications exhibited by teachers according to the importance level and

so ten two-dimensional cognitive constructs were obtained. *In the fourth stage,* the cognitive constructs were scored by each participant among 1-6 points on the repertory grid form. Each interview has lasted about 20 minutes. As an example of this process a repertory grid form completed by a school principal shown in Table 3.

Table 3. The Repertory Grid Form Completed by a School Principal

	Teachers						
Cognitive Constructs	Ideal			Non-Ideal			Cognitive Constructs
Ideal Qualifications	Ali	Veli	Tansu	*Cansel*	*Yiğit*	*Sabit*	*Non-Ideal Qualifications*
Professional ethics	6 △	5	6 △	2 △	1	1	Non-Ethical
Planning	6	6	5 △	1 △	2	1 △	Unplanned
Sedulity							Laziness

(iv) Data analysis and interpretation: Data were transferred to computer via Microsoft Excel programme and analysed by using descriptive analysis method. This method includes four stages namely, characterising constructs, identifying core constructs, assessing relationships, and analysing data (Jankowicz, 2004; Creswell, 2015, p. 197). *In the first stage,* a total of 240 cognitive constructs were characterised related to ideal teacher qualifications. *In the second stage* the cognitive constructs were classified into groups considering similar qualifications. *In the third stage*, ideal cognitive constructs were grouped, in a way that any construct left out. *In the fourth stage,* the scores given by participants were added and the first produced cognitive construct score was multiplied by 10, the last cognitive construct score was multiplied by 1 and thereby the relative importance scores were obtained.

Interpretation of findings was carried out in seven different stages namely, *(i) counting step*: separation of the data to cognitive constructs groups and determination of frequencies *(ii) sampling step*: notation of the examples or ıssues occurred as a result of repetitions *(iii) classification of similarities*: separated grouping of cognitive constructs with similar characteristics *(iv) categorisation*: grouping of variables in accordance with the purpose of the research *(v) association of variables*: identification of relationships between variables *(vi) establishment of cause-effect relationships*: establishing a connection between variables, and *(vii) association of data with the research's theory*: explaining the reasons of specific data occurrence and giving general suggestions (Karadağ, 2011).

Validity and Reliability

These studies have been conducted to ensure the internal validity of the research: *(i)* while presenting in findings section the data was interpreted considering the situation which they are associated *(ii)* the cognitive constructs groups' internal consistency was ensured considering internal homogeneity and external heterogeneity measures. Besides, *(i)* the cognitive construct groups were determined based on the theoretical structure, and *(ii)* following data analysis, all of the findings were presented without comment to ensure internal reliability (Creswell, 2015, pp. 250-254). Additionally, expert opinion was applied in order to verify whether represented the cognitive constructs given under eight different cognitive construct groups aforesaid cognitive construct groups. The lists containing cognitive constructs and cognitive construct groups were given to two faculty members in educational sciences. It was asked from experts comparing the groups with the cognitive constructs in lists. Then, two experts' match-up was compared with the researcher's cognitive construct groups. According to calculation using internal reliability calculation formula (Miles & Huberman, 1994, p. 64) the agreement rate between the matches was realised as 93% and 97%. In method section, the research model, study group, data collection tool and data analysis processes were given in detail to ensure the external validity of study. Besides, *(i)* the procedures include data collecting, data processing, consolidating and presenting of results, and *(ii)* researching topic and method were specified with details in related sections to ensure the external reliability of study.

Results

Data analysis results show that the school administrators have produced 240 valid cognitive constructs related to ideal teacher qualifications. The most frequently mentioned cognitive constructs are namely, (1) *communication/communication skills* [η=9, 3,8%], (2) *close attention/closeness to students* [η=8, 3,3%], (3*) self-sacrificing* [η=8, 3,3%], (4) *self-improvement* [η=8, 3,3%], (5) *job enthusiasm* [η=8, 3,3%], (6) *planning* [η=8, 3,3%], (7) *openness to improvement* [η=7, 2,9%], (8) *collaboration* [η=7, 2,9%], (9) *work devotedly* [η=7, 2,9%], and (10*) responsibility* [η=6, 2,5%]. The cognitive constructs were analysed and then similar constructs were classified. As a result of classification, eight main construct groups were determined according to the 240 valid cognitive constructs. The results are shown in Table 4.

Table 4. The Cognitive Constructs and Groups

(I) PERSONAL CHARACTERISTICS		
• **Respectability [16] 220**	• Good humour [23] 132	• Self-reliance [14] 66
• Reliability [24] 210	• Self-esteem [18] 120	• Reliability [5] 63
• Humanity [17] 207	• Leadership [21] 120	• Participative [3] 60
• Consistency [7] 198	• Empathy [15] 110	• Tolerance [1] 48
• Principled [23] 198	• Solution-focused [20] 110	• Patient [18] 48
• Respected [7] 192	• Entrepreneur [10] 105	• Sociality [6] 44
• Empathetic attitude [2] 176	• Humanity [11] 105	• Sincerity [24] 42
• Impartiality [22] 170	• Consistency [24] 105	• Emphatic attitude [23] 40
• Sedulity [11] 168	• Open-mindedness [23] 96	• Well-groomed [23] 25
• Flexibility [15] 161	• Patience [11] 84	• Respectability[1] 24
• Leadership [17] 160	• Tolerant [15] 84	• Positive attitude [7] 22
• Sensibility [2] 154	• Tolerant [16] 84	• Democratic attitude [15] 22
• Optimism [14] 154	• Resoluteness [24] 84	• Sensibility [3] 21
• Sincerity[11] 147	• Consistency [17] 80	• Awareness [11] 21
• Solution-focused [18] 144	• Sociality [1] 72	• Participative [17] 21
• Heightened awareness [3] 140	• Sociality [23] 69	• Sociality [22] 20
• Patient [12] 132	• Awareness [13] 66	• Confident [10] 19
(II) PROFESSIONAL COMPETENCY		
• **Professional competency [19] 220**	• Self-assessment [1] 154	• Representativeness [5] 100
• Preparation [2] 210	• Teaching skills [4] 147	• Personify [18] 100
• Planning [5] 200	• Preliminary preparation [17] 147	• Personify [6] 88
• Planning [6] 198	• Self-assessment [20] 147	• Problem solving [21] 84
• Exemplifying [22] 198	• Planning [1] 138	• Orderly [12] 69
• Well observer [3] 189	• Motivation skills [14] 132	• Make difference [7] 66
• Planning [11] 189	• Benefit from environment [6] 126	• Representativeness [19] 63
• Knowledge [13] 189	• Social skills [9] 126	• Planning [24] 63
• Preparation [19] 189	• Self-control [15] 126	• Representativeness [4] 60
• Equipped [12] 168	• Preparation [1] 110	• Generating projects [9] 44
• Make difference [12] 168	• Planning [8] 110	• Social activities [10] 42
• Planned [20] 168	• Problem solving [9] 110	• Vision [22] 42
• Equipment [21] 168	• Effective use of time [3] 105	• Social skills [4] 38
• Knowledge [23] 168	• Social activities [13] 105	• Preparation [13] 21
• Coordination [5] 162	• Planning [21] 105	• Regularity [24] 21
(III) ORGANISATIONAL COMMITMENT		
• **Devotion [1] 240**	• Work devotedly [24] 189	• Earn parents' appreciation [3] 84
• **Self-sacrificing [7] 220**	• Ardour and tenacity [6] 176	• High expectation [14] 84
• **Earnestness [15] 220**	• Take responsibility [9] 176	• Ardour and tenacity [5] 76
• Self-sacrificing [3] 210	• Self-sacrifice [14] 176	• Persevering [10] 76
• İdealism [21] 210	• Self-sacrificing [19] 150	• Dedication [16] 66
• Identification with school [8] 200	• Ardour and tenacity [18] 140	• Self-giving [6] 63
• Self-sacrificing [8] 198	• Contributory [10] 133	• Work devotedly [9] 63
• Work devotedly [1] 192	• Energetic [12] 110	• Job involvement [7] 44
• Self-sacrifice [1] 189	• Self-sacrificing [17] 110	• Self-giving [18] 22
• Ardour and tenacity [9] 189	• Struggling [16] 105	• Work devotedly [14] 21
• Self-sacrificing [12] 189	• Work devotedly [4] 88	• Integrated with school [4] 20
• Work devotedly [20] 189		• Contributory [9] 18

Table 4. Continue

(IV) PROFESSIONAL COMMINTMENT		
• **Job enthusiasm [9] 250**	• Occupational identification [6] 154	• Responsibility [1] 96
• **Job enthusiasm [10] 220**	• Responsibility [7] 154	• Professional ethics [18] 84
• Professional enthusiasm [14] 210	• Professional ethics [22] 152	• Responsibility [18] 72
• Professional respect [17] 210	• Job enthusiasm [22] 140	• Responsibility [15] 60
• Professional ethics [11] 210	• Working discipline [5] 126	• Continuity [15] 44
• Job enthusiasm [16] 189	• Working discipline [20] 126	• Responsibility [16] 44
• Responsibility [21] 189	• Working discipline [22] 126	• Sense of responsibility [2] 44
• Job enthusiasm [18] 180	• Disciplined [7] 126	• Job enthusiasm [20] 42
• Job passion [1] 162	• Over responsibility [14] 105	• Excitement of production [16] 24
(V) OPENNESS TO IMPROVEMENT		
• Self-improvement [6] 210	• Openness to improvement [16] 126	• Openness to improvement [22] 68
• Inquiring [3] 168	• Openness to improvement [19] 126	• Openness to learning [10] 57
• Self-improvement [13] 168	• Self-improvement [3] 114	• Self-improvement [14] 44
• Benefit from technology [23] 147	• Self-improvement [2] 105	• Produce new solutions [12] 42
• Innovative [8] 144	• Creative thinking [23] 105	• Openness to improvement [11] 42
• Inquiring [24] 140	• Self-improvement [7] 95	• Inquiring [5] 28
• Self-improvement [5] 133	• Sophistication [9] 84	• Willingness to learn [12] 22
• Openness to improvement [4] 132	• Benefit from technology [12] 84	• Self-improvement [21] 22
• Openness to improvement [17] 132	• Benefit from technology [20] 84	
(VI) STUDENT CENTEREDNESS		
• **Closeness [12] 240**	• Sincerity [16] 154	• Allow time [23] 63
• **Sincerity [23] 240**	• Closeness [13] 147	• Prepare for life [13] 50
• Close attention [4] 210	• Meet their requirement [9] 144	• Supporting [19] 42
• Give importance [14] 189	• Close attention [9] 133	• Student centeredness [17] 42
• Close attention [8] 176	• Improving guidance [24] 126	• Have respect for students [23] 42
• Close attention [10] 176	• Leading and improving [19] 95	• Closeness [20] 21
• Give importance [18] 162	• Caring [2] 88	• Close attention [5] 19
		• Vocational guidance [19] 18
(VII) COLLABORATION/COORDINATON		
• Predisposition to teamwork [15] 192	• Parent collaboration [5] 132	• Win-win approach [17] 63
• Collaboration [2] 189	• Predisposition to teamwork [4] 105	• Parent collaboration [20] 63
• Parent collaboration [4] 189	• Teamwork [22] 100	• Collaboration [3] 42
• Coordination [15] 189	• Solution-focused attitude [8] 84	• Cooperation [8] 36
• Coordination [4] 168	• Sharing of experience [13] 80	• Coordination [8] 24
• Coordination [5] 144	• Teamwork [8] 63	• Informal leadership [2] 21
	• Teamwork [11] 63	• Collaboration [6] 21
(VIII) COMMUNICATION SKILLS		
• **Communication skills [13] 220**	• Dialog with parents [8] 154	• Communication [19] 96
• Effective communication [20] 200	• Communication skills [2] 132	• Communication skills [7] 88
• Openness to communication [24] 176	• Communication [11] 126	• Cogency [2] 63
• Communication skills [16] 168	• Effective communication [10] 114	• Communication skills [22] 63
• Communication skills [21] 168	• Communication skills [6] 110	

In Table 4, eight main cognitive construct groups are seen. The main construct groups and dominant cognitive constructs are follows;

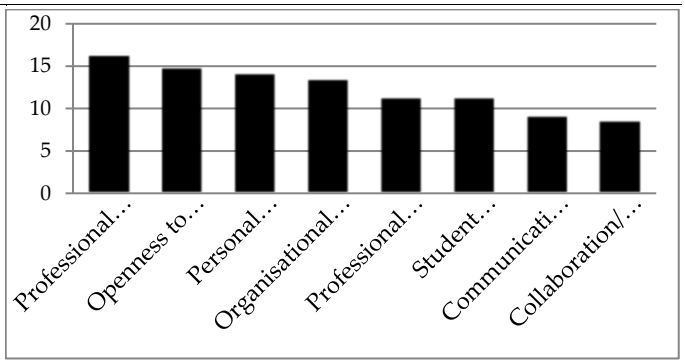
- *Personal characteristics*: This group consists of 51 cognitive constructs. According to relatively importance level the three dominant cognitive constructs are namely, (1) *respectability* [16, 220], (2) *reliability* [24, 210], and (3) *humanity* [17, 207].
- *Professional competency*: In this group, there are 45 cognitive constructs. The three dominant cognitive constructs are namely, (1) *professional competency* [19, 220], (2) *preparation* [2, 210], and (3) *planning* [5, 200].
- *Organisational commitment*: This group consists of 35 cognitive constructs. According to relatively importance level the three dominant cognitive constructs are namely, (1) *commitment* [1, 240], (2) *self-sacrificing* [7, 220], and (3) *earnestness* [15, 220].

- *Professional commitment*: There are 27 cognitive constructs in this group. The three dominant cognitive constructs are namely, (1) *job enthusiasm* [9, 250], (2) *job enthusiasm* [10, 220], and (3) *professional enthusiasm* [14, 210].
- *Openness to improvement*: This group consists of 26 cognitive constructs. According to relatively importance level the three dominant cognitive constructs are namely, (1) *self-improvement* [6, 210], (2) *inquiring* [3, 168], and (3) *self-improvement* [13, 168].
- *Student-centeredness*: There are 22 cognitive constructs in this group. The three dominant cognitive constructs are namely, (1) *closeness* [12, 240], (2) *sincerity* [23, 240], and (3) *close attention* [4, 210].
- *Collaboration/coordination*: This group consist of 20 cognitive constructs. According to relatively importance level the three dominant cognitive constructs are namely, (1) *predisposition to teamwork* [15, 192], (2) *collaboration* [2, 189], and (3) *collaboration with parents* [4, 189].
- *Communication skills*: There are 14 cognitive constructs in this group. The three dominant cognitive constructs are namely, (1) *communication skills* [13, 220], (2) *effective communication* [20, 200], and (3) *openness to communication* [24, 176].

The school administrators' cognitive constructs related to ideal teachers' qualifications were classified in eight different groups. Some participants have produced more than one cognitive construct in the same group. These repeats were assumed as only one construct. The frequencies and percentages of participants in each cognitive construct group are presented in Table 5.

Table 5. The Participants' Number in Cognitive Construct Groups

Construct groups	η	%	*Diagram*
1- Professional competency	23	16.4	
2- Openness to improvement	21	15.0	
3- Personal characteristics	20	14.3	
4- Organisational commitment	19	13.6	
5- Professional commitment	16	11.4	
6- Student centeredness	16	11.4	
7- Communication skills	13	9.3	
8- Collaboration/Coordination	12	8.6	



According to Table 5, the first three construct groups are namely, professional competency [η=23, 16,4%], openness to improvement [η=21, 15%], and personal characteristics [η=20, 14,3%]. Besides, the last three cognitive construct groups are respectively, collaboration/coordination [η=12, 8,6%] communication skills [η=13, 9,3%], and student centeredness [η=16, 11,4%].

The relative importance level of cognitive constructs was obtained according to the sums. The sums were procured by multiplying each cognitive construct's score with descending numbers, respectively "from 10 to 1". The results are presented in Table 6.

Table 6. Relative Importance Level of Cognitive Constructs Groups

School Administrators	**1**-Personal Characteristics	**2**-Professional Competency	**3**-Organisational Commitment	**4**-Professional Commitment	**5**-Openness to Improvement	**6**-Student Centeredness	**7**-Collaboration/ Coordination	**8**-Communication Skills
1	144	402	621	256				
2	330	210		44	105	88	210	195
3	221	294	294		282		42	
4		245	108		132	210	462	
5	63	462	76	126	161	19	276	
6	44	412	239	154	210		21	110
7	214	66	264	280	95			88
8		110	398		144	176	207	154
9		154	446	250	84	277		
10	124	42	209	220	57	176		114
11	525	189		210	42		63	126
12	132	405	299		126	240		
13	66	315			168	197	80	220
14	20	132	281	315	44	189		
15	377	126	220	104			381	
16	304		171	213	126	154		168
17	468	147	110	210	132	42	63	
18	312	100	140	336		162		
19		472	150		126	155		96
20	110	315	189	168	84	21	63	200
21	120	259	210	189	22			168
22	190	240		418	68		100	63
23	557	168			252	345		
24	441	84	189		140	126		176
Total	**4762**	**5349**	**4614**	**3493**	**2600**	**2577**	**1968**	**1878**
Average	**238.1**	**232.6**	**242.8**	**218.3**	**123.8**	**161.1**	**164.0**	**144.5**

In Table 6, the data were analysed in two different ways. Firstly, the relative importance scores of each school administrator's cognitive constructs were analysed and shown on each line. Secondly, the construct groups were shown in grey on each line considering as the main construct group for each school administrator. When the cognitive constructs' relative importance level is considered the first three cognitive construct groups ensue as follows; (1) *professional competency* [η=8, 33,3%], (2) *personal characteristics* [η=6, 25%], and (3) *organisational commitmen*t [η=5, 20,8%]. However, in main construct groups such as openness to improvement, student centeredness, and communication skills a main cognitive construct was not created by any of the 24 school administrators.

In Table 6, total and average scores in the last two lines represent the relative importance level of each cognitive construct group. According to the total scores the first three cognitive construct groups ensue as follows; (1) *professional competency* [total=5349], (2) *personal characteristics* [total=4762], and (3) *organisational commitment* [total=4614]. When the average scores are considered the first three cognitive construct groups come in sight as follows; (1) *organisational commitment* [$\overline{X}$ =242,8], (2) *personal characteristics* [$\overline{X}$ =238,1], and (3) *professional competency* [$\overline{X}$ =232,6].

Discussion

In this study, it was aimed to reveal school administrators' cognitive constructs related to ideal teachers' qualifications. For this purpose, a qualitative research was conducted on 24 school administrators based on repertory grid technique. The 240 cognitive constructs were produced by school administrators and these constructs were collected in eight main construct groups considering functionality and similarities. These main construct groups are namely, *(i)* the personal characteristics, *(ii)* the professional competency, *(iii)* the organisational commitment, *(iv)* the professional commitment, *(v)* the openness to improvement, *(vi)* the student-centeredness, *(vii)* the collaboration/coordination, and *(viii)* the communication skills. Considering the cognitive construct groups it can be said that the school administrators give more priority to *the personal characteristics*, *the professional competency*, *and the organisational commitment* for ideal teaching. In previous studies conducted by Beyer (2002), Coladarsi (2002), Darling-Hammond and Baratz-Snowden (2005), Murphy (2004), and TED (2009) it is seen that these qualifications are given more priority as the main qualifications for ideal teachers. Similarly, Lai (2005) stated that the ideal teachers should have a strong sense of mission, appropriate personal attributes, and adequate academic and professional qualifications.

School administrators have produced multi-dimensional cognitive constructs related to ideal teachers' qualifications. Kelly (2003), states that the new information from external environment changes the individuals' information by adding existing information, and thus their cognitive structures are shaped. Considering this knowledge it can be said that the multi-dimensional cognitive constructs of school administrators have been rooted the information from external environment. According to Hampson (2001), cognitive construct is also associated with an individual's experiences. Thereby the other cause of this multidimensionality is the school administrators' experiences in school environment. Consequently, it can said that the school administrators' cognitive constructs were shaped based on many factors.

When the findings are examined it is seen that some cognitive constructs are repeated frequently. These cognitive constructs are respectively, *(i)* communication skills *(ii)* close attention/closeness to students *(iii)* self-sacrificing *(iv)* self-improvement *(v)* job enthusiasm *(vi)* planning *(vii)* openness to improvement *(viii)* collaboration *(ix)* work devotedly, and *(x)* responsibility. In previous studies conducted by Darling-Hammond (2000), Stronge et al. (2004), Telli, Den Brok, and Çakıroğlu, (2008), and Ulusoy (2013) the ideal teachers' qualifications include also these cognitive constructs. Therefore, it can be said that the cognitive constructs produced by school administrators are concordant with previous studies and literature.

The qualitative data were converted into quantitative values. Thereby the cognitive constructs' relative importance order and relative construct groups were determined based on obtained scores. According to these results the first three cognitive construct groups ensue as follows; *(i)* the professional competency *(ii)* the personal characteristics, and *(iii)* the organisational commitment. However, any of the school administrators were not created a main cognitive construct in some main construct groups such as *openness to improvement*, *student centeredness,* and *communication skills*. Considering these results, it can be said that the school administrators give more importance to the professional competence, the personal characteristics, and the organisational commitment than the openness to improvement, the student centeredness, and the communication skills. The school administrators focus on the professional competencies, the personal characteristics, and the professional commitment. These findings show that the school administrators' cognitive constructs consistent with previous research findings conducted by

Çalışkan, Işık, and Saygın (2013), Darling-Hammond (2000), Gençtürk, Akbaş, and Kaymakçı (2012), and Shuls and Trivitt (2015). In other words, these results show that school administrators have correct cognitive constructs related to the ideal teachers' qualifications.

The results show that the school administrators' cognitive constructs are able to divide into different groups. For example, while *the sociality* represents a personal characteristic in personal characteristics main group it may also be associated with the communication skill in another construct group. This is not because of school administrators have no clear cognitive construct related to the ideal teachers' qualifications, on the contrary it stems from the nature of the ideal teachers' quite different and intertwined qualifications (DeAngelis & Presley, 2011; Dillon & Maguire, 2007; Jones et al., 2006; Taşkaya, 2012). In decision making process regarding which cognitive fiction will be classified in which group name in general, the literature was considered in which the cognitive construct examined. Consequently, the cognitive constructs produced by school administrators are structurally consistent with previous research results. This result can be interpreted as the school administrators have competencies to determine true cognitive constructs related to ideal teachers' qualifications.

The relative importance level of each cognitive construct was evaluated according to total and average scores. The total scores show that the cognitive construct groups such as professional competency, personal characteristics, and organisational commitment rank as the first three cognitive construct groups. But, in average scores this sorting is changed. According to the average scores the organisational commitment, the personal characteristics, and the professional competency rank as the first three cognitive construct groups. When the cognitive constructs' relative importance level was examined, it is seen that school administrators perceive as more important the professional competency, personal characteristics, and organisational commitment than the communication skills, collaboration/coordination, openness to improvement, and student-centeredness. Similarly, in previous studies conducted by Karadağ (2011), Tanhan (2013) the cognitive constructs' relative importance level is changed according to total and average scores. Additionally, in previous studies conducted by Açıkgöz (2005), Kosgei, Mise, Odera, and Ayugi (2013), Shukla (2014), and Walker (2008) the findings related to ideal teachers' qualifications are generally correlated with teaching competency, personal characteristics, and organisational commitment.

Conclusion

240 cognitive constructs were produced by school administrators related to ideal teachers' qualifications. The cognitive constructs were collected in eight different groups considering functionality and the similarities. School administrators frequently emphasis on some constructs such as communication skills, close attention/closeness to students, self-sacrificing, self-improvement, job enthusiasm, planning, openness to improvement, collaboration/coordination, work devotedly, and responsibility. According to relatively importance scores the main cognitive constructs groups rank as the professional competency, personal characteristics, organisational commitment and professional commitment. Considering these construct groups it can be suggested that an ideal teacher should especially have professional competencies, personal characteristics, organisational and professional commitment. Besides, the most cognitive constructs were produced by school administrators in 'personal characteristics' category. Consequently, ideal teachers should have more ideal personal characteristics as well as professional competence and professional commitment. Moreover, the cognitive constructs produced by school principals show structural similarities with the data in related literature. Considering these results it can be asserted that the school principals have produced correct cognitive constructs concerning to the ideal teacher qualifications.

Suggestions

The candidate teachers should be encouraged to grow much better in professional qualifications, personal characteristics, and organisational commitment. In this context, it is quite important that the candidate teachers should be trained adequately in teachers colleges in terms of personal characteristics and professional commitment as well as professional competence. The candidate teachers should be educated as equipped with communication skills. The teachers should be in closeness to the students. Teachers should also have the qualifications such as self-sacrificing, self-improvement, job enthusiasm, planning, openness to improvement, collaboration, work devotedly, and responsibility. In/on repertory grid technique different researchers had conducted many studies such as Easterby-Smith (1980) *the design, analysis and interpretation of repertory grids*, Bradshaw, Ford, Adams-Webber, and Boose (1993) *new approaches to constructivist knowledge acquisition tool development*, Tan and Hunter (2002) *cognition in information systems*, Karadağ (2011) *teachers' cognitive constructs on school principals' qualifications*, Lemke, Clark, and Wilson (2011) *customer experience quality*, Tanhan (2013) *teachers' cognitive constructs on school counsellors' qualifications*, and Bektaş (2014) *school principals' personal constructs on regarding technology*. The Repertory Grid Technique that allows determining the cognitive constructs and multidimensional analysis of beliefs and philosophy of education organisations' stakeholders can be suggested as a qualitative research technique to researchers. Moreover, further researches can be conducted by using different repertory grid techniques related to cognitive constructs of individuals on different phenomenon.

References

Açıkgöz, F. (2005). A study on teacher characteristics and their effects on students' attitudes. *The Reading Matrix, 5*(2), 103-115.

Adams-Webber, J. R. (1996). Repertory grid technique. In R. Corsini & A. J. Auerbach (Eds.), *Encyclopaedia of psychology* (pp. 782-783). New York: John Wiley & Sons.

Aypay, A. (2011). İlk ve ortaöğretim öğretmenlerinin davranış alışkanlıkları ve "iyi öğretmen" özelliklerine ilişkin algıları. *İlköğretim Online, 10*(2), 620-645.

Bektaş, F. (2014). School principals' personal constructs regarding technology: An analysis based on decision-making grid technique. *Educational Sciences: Theory & Practice, 14*(5), 1767-1775.

Bell, R. C. (2005). The repertory grid technique. In F. Fransella (Ed.), *The Essential Practitioner's Handbook of Personal Construct Psychology* (pp. 67-75). New York: John Wiley & Sons.

Bell, R. C. (2010). A note n aligning constructs. *Personal Construct Theory & Practice, 7*, 42-48.

Beyer, L. (2002). The politics of standards and the education of teachers. *Teaching Education, 13*(3), 305-316.

Bradshaw, J. M., Ford, K. M., Adams-Webber, J. R., & Boose, J. H. (1993). Beyond the repertory grid: New approaches to constructivist knowledge acquisition tool development. *International Journal of Intelligent Systems, 8,* 287-333.

Bussis, A. M., Chittenden, E. A., Amarel, M., & Klausner, E. (1985). *Inquiry into meaning: An investigation of learning to read.* London: Lawrence Erlbaum Associaties.

Campbell, J., Kyriakides, L., Muijs, D., & Robinson, W. (2004). *Assessing teacher effectiveness: Developing a differentiated model.* London: Routledge Falmer.

Cochran-Smith, M., & Lytle, S. L. (1993). *Inside/outside: Teacher research and knowledge*. NY: Teachers College Press.

Coladarsi, T. (2002). Is it a house . . . or a pile of bricks? Important features of a local assessment system. *Phi Delta Kappan, 83,* 772-774.

Creswell, J. W. (2003). *Research design: Qualitative, quantitative and mixed methods approaches.* London: Sage Publications.

Creswell, J. W. (2014). *Araştırma deseni.* (S. B. Demir, Trans.). Ankara: Eğiten Kitap.

Creswell, J. W. (2015). *Nitel araştırma yöntemleri.* (M. Bütün & S. B. Demir, Trans.). Ankara: Siyasal Kitabevi.

Cüceloğlu, D. (1991). *İnsan ve davranışı.* İstanbul: Remzi Kitabevi.

Çalışkan, M., Işık, A. N., & Saygın, Y. (2013). Öğretmen adaylarının ideal öğretmen algıları. *İlköğretim Online, 12*(2), 575-584.

Darling-Hammond, L. (1992). Teaching and knowledge: Policy issues posed by alternative certification for teachers. *Peabody Journal of Education, 67*(3), 123-154.

Darling-Hammond, L. (2000). Teacher quality and student achievement: A review of state policy evidence. *Education Policy Analysis Archives, 8*(1), 1-44.

Darling-Hammond, L., & Baratz-Snowden, J. (2005). *A good teacher in every classroom.* USA: Jossey Bass.

DeAngelis, K. J., & Presley, J. B. (2011). Teacher qualifications and school climate: Examining their interrelationship for school improvement. *Leadership and Policy in Schools, 10*(1), 84-120. doi:10.1080/15700761003660642

Denzin, N. K., & Lincoln, Y. S. (2005). *The sage handbook of qualitative research*. California: Sage Publications.

Dillon, J., & Maguire, M. (2011). Developing as a student teacher. In J. Dillon & M. Maguire (Eds.), *Becoming a teacher: Issues in secondary education* (pp. 3-11). New York: Open University Press.

Easterby-Smith, M. (1980). The design, analysis and interpretation of repertory grids. *International Jouenal of Man-Machine Studies, 13,* 3-24.

Feiman-Nemser, S., & Parker, M. B. (1990). *Making subject matter part of the conversation or helping beginning teachers learn to teach.* East Lansing, MI: National Center for Research on Teacher Education.

Fransella, F., Bell, R., & Bannister, D. (2004). *A manual for repertory grid technique*. Chichester, UK: John Wiley & Sons.

Gençtürk, E., Akbaş, Y., & Kaymakçı, S. (2012). Sosyal bilgiler öğretmen adaylarının bakış açısıyla ideal öğretmenin özellikleri. *Kuram ve Uygulamada Eğitim Bilimleri, 12*(2), 1559-1572.

Hampson, S. E. (2001). *The construction of personality.* London: Routledge.

Hanushek, E. A. (1992). The trade-off between child quantity and quality. *Journal of Political Economy, 100*(1), 84-117.

Holmes, E. (2006). *FAQs for NQTs: Practical advice and workable solutions for newly qualified teachers.* New York: Taylor & Francis Group.

Jankowicz, D. (2004). *The easy guide to repertory grids*. New York: John Wiley & Sons.

Jones, J., Jenkin, M., & Lord, S. (2006). *Developing effective teacher performance.* London: Paul Chapman Publishing.

Karadağ, E. (2011). Okul müdürlerinin niteliklerine ilişkin olarak öğretmenlerin oluşturdukları bilişsel kurgular: Fenomonolojik bir çözümleme. *Eğitim ve Bilim, 36*(159), 25-40.

Kelly, G. A. (2003). *The psychology of personal constructs*. London: Taylor & Francis.

Kosgei, A., Mise, J. K., Odera, O., & Ayugi, M. E. (2013). Influence of teacher characteristics on students' academic achievement among secondary schools. *Journal of Education and Practice, 4*(3), 76-82.

Lai, K. C. (2005). Qualifications of the teaching force in the Hong Kong special administrative region, China. In R. M. Ingersoll (Ed.), *A comparative study of teacher preparation and qualifications in six nations* (pp. 29-40). Philadelphia, PA: CPRE.

Lemke, F., Clark, M., & Wilson, H. (2011). Customer experience quality: An exploration in business and consumer contexts using repertory grid technique. *Journal of the Academy of Marketing Science, 39,* 846-869.

Lodico, M. G., Spaulding, D. T., & Voegtle, K. H. (2006). *Methods in educational research: From theory to practice.* USA: Jossey-Bass.

Lutz, F. W., & Hutton, J. B. (1989). Alternative teacher certification: Its policy implications for classroom and personnel practice. *Educational Evaluation and Policy Analysis, 11*(3), 237-254.

Marshall, C., & Rossman, B. G. (2006). *Designing qualitative research*. California: Sage Publications.

Mayring, P. (2011). *Nitel sosyal araştırmaya giriş.* (A Gümüş & M. S. Durgun, Trans.). Ankara: Bilgesu.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis.* Thousand Oaks, CA: Sage Publications.

Murphy, K. (2004). The good teacher and good teaching: Comparing beliefs of second-grade students. Preservice teachers, and in-service teachers. *The Journal of Experimental Education, 72*(2), 69-92.

Numanoğlu, G., & Bayır, Ş. (2009). Bilgisayar öğretmen adaylarının öğretmenlik mesleği genel yeterliklerine ilişkin görüşleri. *Ahi Evran Üniversitesi Kırşehir Eğitim Fakültesi Dergisi, 10*(1), 197-212.

OECD. (2005). *Teachers matter: Attracting, developing and retaining effective teachers*. Retrieved from www.oecd.org/edu/school/34990905.pdf

Özabacı, N., & Acat, B. (2005). Öğretmen adaylarının kendi özellikleri ile ideal öğretmen özelliklerine dönük algılarının karşılaştırılması. *Kuram ve Uygulamada Eğitim Yönetimi, 21*(42), 211-236.

Paszkowska-Rogacz, A., & Kabzińska, Z. (2012). Applications of Kelly's Personal Construct Theory to vocational guidance. *Psychology Research, 2*(7), 408-421.

Patton, M. Q. (2014). *Nitel araştırma ve değerlendirme yöntemleri.* (M. Bütün & S. B. Demir, Trans.). Ankara: Pegem Akademi.

Pervin, L., & John, O. (2002). *Personality: Theory and research*. Cracow: Wydawnictwo Uniwersytetu Jagiellońskiego.

Rivkin, S., Hanushek, E. A., & Kain, J. F. (2005). Teachers, schools and academic achievement. *Econometrica, 73*(2), 417-458.

Roth, D., & Swail, W. S. (2000). *Certification and teacher preparation in the United States.* Washington DC: Pacific Resources for Education and Learning.

Sanders, W. L. (1998). Value-added assessment. *School Administrator, 55*(11), 24-32.

Sanders, W. L., & Rivers, J. C. (1996). *Cumulative and residual effects of teachers on future academic achievement.* Knoxville, TN: University of Tennessee.

Shukla, S. (2014). Teaching competency, professional commitment and job satisfaction: A study of primary school teachers. *Journal of Research & Method in Education, 4*(3), 4-64.

Shuls, J. V., & Trivitt, J. R. (2015). Teacher qualifications and productivity in secondary schools. *Journal of School Choice, 9*(1), 49-70. doi:10.1080/15582159.2015.998964

Singh, K. (2007). *Quantitative social research methods.* New Delhi: Sage Publications.

Stronge, J. H., Tucker, P. D., & Hindman, J. L. (2004). *Handbook for qualities of effective teachers*. Virginia: ASCD Publications.

Şişman, M. (2009). Öğretmen yeterlilikleri: Modern bir söylem ve retorik. *İnönü Üniversitesi Eğitim Fakültesi Dergisi, 10*(3), 63-82.

Tan, F. B., & Hunter, M. G. (2002). The Repertory Grid Technique: A method for the study of cognition in information systems. *MIS Quarterly, 26*(1), 39-57.

Tanhan, F. (2013). Repertory grid görüşme tekniğine dayalı olarak okul psikolojik danışmanlarının niteliklerinin incelenmesi. *Türk Psikolojik Danışma ve Rehberlik Dergisi, 5*(40), 186-197.

Taşkaya, S. M. (2012). Nitelikli bir öğretmende bulunması gereken özelliklerin öğretmen adaylarının görüşlerine göre incelenmesi. *Sosyal Bilimler Enstitüsü Dergisi*, *33*(2), 283-298.

TED (2009). *Öğretmen yeterlikleri.* Ankara: Adım Okan Matbaacılık Basım Yayın.

Telli, S., Den Brok, P., & Çakıroğlu, J. (2008). Teachers' and students' perceptions of the ideal teacher. *Eğitim ve Bilim, 33*(149), 118-129.

Tuck, R. (2007). *An introductory guide to national qualifications' frameworks: Conceptual and practical issues for policy makers.* Geneva: International Labour Office.

Ulusoy, M. (2013). Sınıf öğretmeni adaylarının ideal öğretmen ve mesleki yeterliklerle ilgili değerlendirmeleri. *Uşak Üniversitesi Sosyal Bilimler Dergisi, 6*(4), 324-341.

Walker, R. J. (2008). Twelve characteristics of an effective teacher: A longitudinal, qualitative, quasi-research study of in-service and pre-service teachers' opinions. *Educational Horizons, 87*(1), 61-68.

Wayne, A. J., & Youngs, P. (2003). Teacher characteristics and student achievement gains: A review. *Review of Educational Research, 73*(1), 89-122.

Wilson, M. (2002). Six views of embodied cognition. *Psychonomic Bulletin & Review*, *9*(4), 625-636.

Wright, S. P., Horn, S. P., & Sanders, W. L. (1997). Teacher and classroom context effects on student achievement: Implications for teacher evaluation. *Journal of Personnel Evaluation in Education,* 11, 57-67.

Yıldırım, A., & Şimşek, H. (2013). *Sosyal bilimlerde nitel araştırma yöntemleri.* Ankara: Seçkin Yayıncılık.