



Evaluation of Alternative Assessment Methods Used in Elementary Schools

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Abstract

This literature review investigate alternative assessment in order to highlight key findings in this research field; to identify challenges and facilitate its adoption; to illustrate gaps or shortcomings in the literature, and to further contribute to the body of research on alternative assessment. Descriptive content analysis was used to review, identify and describe the general trends and research results in a particular scope. Using the content analysis, 42 studies regarding alternative assessment were collected and analyzed. Multiple variables including: study method, participants, research area, research design, context of the study were extracted, and categorized according to teacher perceptions related to pedagogy, student impact, challenges in implementation and teacher competency on alternative assessment methods. The major findings were that although some teachers do not feel competent in using alternative assessment; they nevertheless have positive attitudes towards these methods, and they believed that the methods improve students' higher-level thinking and creativity.

Keywords

Alternative assessment
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Introduction

Alternative Assessment in Turkey

Before providing the definition of alternative assessment, there needs to be stressed that terms "complementary and alternative" are interchangeably used in measurement and assessment. That is, Turkish Ministry of National Education preferred 'complementary' term to 'alternative' one (Ministry of National Education of Turkey [MoNE], 2013). However, the use of "complementary" term is quite new for related literature under investigation. For this reason, we deployed 'alternative' term to access much more papers in this review study.

Alternative assessment actively requires students to participate in the process of "what is taught, how it is taught, and how it is evaluated" (Kreisman, Knoll, & Melchior, 1995, p. 114). Therefore, over the past two decades, numerous studies have been conducted to examine alternative assessment methods on teaching and student learning in primary education. In 2004, Turkey overhauled its pedagogical approach to make learning a more active process. One of the step in the change was adoption of alternative assessment methods. Several Turkish studies investigated how teachers have implemented the alternative methods since 2004 (Sağlam Arslan, Devocioğlu Kaymaç, & Arslan, 2009; Kolomuç & Açıslı, 2013), as well as surveyed teachers' qualifications regarding alternative assessment methods (Yayla, 2011). Many studies also point out teachers' concept of self-efficacy about their performance (Ören, Ormancı, & Evrekli, 2011) and the problems facing teachers' planning and implementation of alternative assessment (Çakır & Çimer, 2007; Anıl & Acar, 2008). Most studies focused primarily on teachers' perceptions (Toptaş, 2011; Alkan, 2012). However, the Turkish studies of alternative assessment have been limited in focus. What seems lacking are empirical studies that measure the effectiveness of alternative assessment methods, its impact on student motivation, performance, and achievement, and that explore influences on a teacher's choice to use alternative assessment methods (Turan, 2007; Vurkaya, 2010).

What Constitutes Alternative Assessment

Alternative assessment can be described as "performance assessment", "direct assessment" and "authentic assessment" (Culbertson, 2000, p. 32). Students are evaluated with a variety of methods such as project-based assignments, peer assessment, self-assessment, portfolios, performance-based task, rubrics, and other types of open-ended approaches (Zimbicki, 2007). The concept of alternative assessment was developed as a consequence of teachers' dissatisfaction with the lack of tools to show students' actual improvement and strengths (Balliro, 1993). Alternative assessment methods aim to provide complex assessments and multiple, rich evaluations (Bachman, 2002). These methods also provides rich, realistic information about students' achievement, encourages their active participation and holds them to high expectations for in-depth understandings of challenging academic content (Stiggins, 1994; Svinicki, 2004).

Alternative assessment, which serves as a supplementary component for students who have different learning styles, gives students a way to construct their answers in way that traditional assessment does not (Stiggins, 1994). Alternative assessment emphasized opportunities for teachers to foster students' reasoning and critical thinking (Baxter, Elder, & Glaser, 1996), create their own solutions for complex problems (Herman, Aschbacher, & Winters, 1992), and present their own perspectives using multiple presentation methods for daily life problems (Herman, Klein, & Wakai, 1997). In addition, these assessment methods way help students become more discerning and innovative, and help them determine what they have learned and what they still need to learn (Atta-Alla 2013), by enabling them to use and assess their pre-existing knowledge and skills more effectively (Wiggins, 1998).

Use of alternative assessment has become more widespread and has been embraced by different educational communities across the last two decades. Across different disciplines and interdisciplinary courses (Elharrar, 2006). However, the application of alternative assessment process has encountered challenges (DiMartino, Castaneda, Brownstein, & Miles, 2007) such as unclear descriptions of what constitutes alternative assessment, inconsistent policies regarding implementation, and adequate preparation to adopt and implement new methods (Huh et al., 1999). Furthermore, sophisticated criteria for evaluating students via alternative assessment are markedly more complicated, labour-intensive and time-consuming. Successfully meeting these challenges and implementing alternative assessment depends on teachers' knowledge, confidence, and competence to be effective and consistency used in practice. (Brindley, 2001). Teachers' attitudes and experience of support regarding alternative assessment application must be considered.

Alternative assessment has been used as a means for educational reform in curriculum and instruction since 2005 in Turkey as a more informative method of feedback. Although there has been movement toward these assessment tools, traditional testing is still most often used in schools, though traditional testing rarely capture growth and development as well as alternatives (Law & Ecke, 1995). Many studies have shown that elementary teachers in Turkey are still using traditional methods (i.e. Bal, 2009; Köklükaya, 2010; Karakuş, 2010) despite the change in public education policy in 2005. However, traditional methods demonstrate basic knowledge but do not assess higher order-thinking (Dandis, 2013), whereas alternative assessment focuses on students' learning strategies, problem solving, and task completion, using direct and holistic measurements of what students know (Wiggins, 1998). This study is conducted on alternative assessment and its application in Turkey's elementary educational system because traditional assessment tools are still primarily used across the country. Because of this,, the research has fully included in Turkish educational research to identify challenges, shortcomings and facilitate its adoption by developing a strategic plans to overcome Turkish educational problems regarding alternative assessment methods. Therefore, the aim of the research is to highlight key findings in this research field; identify challenges and facilitate its adoption; to illustrate gaps or shortcomings in the literature, and to further contribute to the body of research on alternative assessment. The studies analyzed here highlight opportunities for more rigorous studies and inform future research regarding alternative assessment. Thus, the review provides a broader perspective of alternative assessment and can inform or complement the assessment policies in Turkey and other countries. In this way, it can attain a conceptual frameworks to enhance and improve the functionality and applicability of alternatives methods by conducting the research to best accomplish an informative review, to guiding questions were used:

1. What are the general characteristics of the studies conducted on alternative assessment within elementary educational settings?
2. How are the distribution of field of the studies conducted on alternative assessment?
3. How are the distribution of type of studies conducted on alternative assessment?
4. How are the distribution of design and method of research used in the studies?
5. How are the distribution of context of the studies?
6. What are the most significant findings of the studies on alternative assessment?

Method

This review was conducted using a variety of academic electronic databases: EBSCO Host, Elite, ERIC, Google Scholar, the Turkish Academic Network and Information Center, the Turkish Council of Higher Education for related theses and assorted Anadolu University databases. The following keywords were used “*education*”, “*elementary schools*” “*primary schools*”, “*curriculum*”, “*alternative assessment*” and “*evaluation*”. Descriptive content analysis was employed to summarize on selected studies and analyze studies, which met the following inclusion criteria: a) conducted in Turkey, b) related to alternative assessment, c) conducted between 2005 and 2015, d) reported via articles published in refereed journals, presentations in national and international symposia, conferences, master theses and dissertations, and e) at the elementary and primary school levels and student teachers at that levels. Twenty-nine studies were selected using these criteria. Using “snow-ball sampling” thirteen additional studies from the reference sections of the selected articles met the criteria, and were thus included in the review.

Descriptive content analysis provides a opportunity to review, identif and describe the general trends and research findings in a particular discipline (Çalık & Sözbilir, 2014) and breadth of distinct categories of interest (Panadero & Jonsson, 2013). The content analysis suggests purposeful and explicit criteria for inclusion within a specific research topic (Dochy, 2006), and it was found to be the most appropriate method for analyzing the see researches. First, each study was read in order to determine whether they considered relevant information and whether it fulfilled the inclusion criteria. Second, using the methodology of descriptive content analysis for each study (Panadero & Jonsson, 2013), the research focus was determined and entered into a table based on authors, type of study, participants, subject/task, research area and research design, and context of study (see Table 1). Third, to ensure the validity of the research, the findings that obtained from the literature were categorized by three qualified researchers. The researchers have independently encode the findings, and then they clustered together to discuss the categories and codes. Finally, It was reached to a common final coding decisions pertaining to teacher perceptions in the following categorizes: alternative assessment in pedagogy and student impact (Table 2); teacher perceptions of challenges to pedagogical and institutional control (Table 3) in implementing alternative assessment, and teacher perceptions of their own competency in using alternative assessment methods.

Results

Data for 42 studies were gathered as appropriate criteria for our study. The general properties of those studies are shown in Table 1; the distribution field, type, design and method and context of the studies are shown in the figures, and the significant findings of the studies are also shown in the Table 2 and Table 3.

Table 1. Characteristic Features of the Selected Studies

Authors	Year	Type of Study	Participant	Field	Design	Context of Study
Parmaksız & Yanpar	2006	Article	119 teachers	Social Science	Descriptive	Availability
Turan	2007	Dissertation	30 teachers 78 student teachers	Science	Mix.-Quasi experimental	Investigation
Çakır & Çimer	2007	Article	20 teachers	Science	Qualitative	Problems
Anıl & Acar	2008	Article	96 teachers	N/A ¹	Descriptive	Problems
Duban & Küçükylmaz	2008	Article	64 student teachers	N/A	Qualitative	Perceptions
Ersoy	2008	Master Thesis	200 teachers	Science	Mix. Descriptive	Perceptions
Adanalı	2008	Master Thesis	206 teachers-547 5th students	Social Science	Mix. Descriptive	Perceptions

¹ N/A: Not Available

Table 1. Continued

Authors	Year	Type of Study	Participant	Field	Design	Context of Study
Bal	2009	Dissertation	226 class teachers-881 5th students	Math	Mix. descriptive	Perceptions
Tatar & Ören	2009	Article	70 class teachers	N/A	Case study	Perceptions
Metin & Demiryürek	2009	Article	20 teachers	Turkish	Qualitative	Perceptions
Çoruhlu, Nas, & Çepni	2009	Article	40 teachers	Science	Mix- Descriptive	Problems
Bekçi	2009	Master Thesis	32 teachers	Science	Mixed	Proficiency
Karakuş & Kösa	2009	Article	10 teachers	Math	Case Study	Perceptions
Sağlam Arslan et al.	2009	Article	10 teachers	Science	Case Study	Problems
Kuran & Kanatlı	2009	Article	255 class teachers	N/A	Descriptive	Perceptions
Yalçınkaya	2010	Article	138 teachers	Social Science	Descriptive	Perceptions
Çepni & Çoruhlu	2010	Article	2 Science teachers and 65 students	Science	Qualitative	Perceptions
Acat & Uzunkol	2010	Article	16 class teachers	N/A	Qualitative	Perceptions
Ak & Güvendi	2010	Article	60 class teachers	N/A	Quantitative	Perceptions
Güneş	2010	Presentation	45 Science teachers -50 class teachers	N/A	Descriptive	Implementation
Karakuş	2010	Article	47 class teachers	Math	Case Study	Perceptions
Bal & Doğanay	2010	Article	226 class teachers-881 5th students	Math	Mixed	Perceptions
Özdemir	2010	Article	337 class teachers	N/A	Relational model	Proficiency
Köklükaya	2010	Master Thesis	66 student teachers	Science	Descriptive	Proficiency
Okur & Azar	2011	Article	161 class teachers	Science	Mixed	Perceptions
Yayla	2011	Presentation	60 class teachers	Science	Quantitative	Self-sufficiency
Toptaş	2011	Article	214 class teachers	Math	Descriptive	Perceptions
Ören et al.	2011	Article	53 student teachers	Science	Mix. Descriptive	Self-sufficiency
Şimşek	2011	Article	31 teachers	Social Science	Qualitative	Implementation
Gömlüksiz, Yıldırım, & Yetkiner	2011	Article	15 class teachers	Life Science	Case Study	Perceptions
Çetinkaya & Duran	2011	Presentation	35 class teachers	N/A	Mixed- Descriptive	Problems
Çetin	2011	Dissertation	9 English Teachers	N/A	Case Study	Investigation
Karamustafaoğlu, Çağlak, & Meşeci	2012	Article	117 class teachers	N/A	Descriptive	Self-sufficiency
Kaya, Balay, & Göçen	2012	Article	483 class teachers	N/A	Descriptive	Implementation
Alkan	2012	Master Thesis	200 administrator	N/A	Descriptive	Perceptions
Kolomuç & Açışlı	2013	Article	46 student teachers	N/A	Mixed- Descriptive	Perceptions
Duran, Mıhladız, & Balliel	2013	Article	40 class teachers	N/A	Descriptive	Proficiency
Duran et al.,	2013	Article	40 class teachers	N/A	Descriptive	Proficiency
Özenç	2013	Article	351 class teachers	N/A	Relational model	Investigation
Ören, Ormancı, & Evrekli	2014	Article	174 student teachers	N/A	Descriptive	Self-sufficiency
Özenç & Çakır	2015	Article	9 class teachers	N/A	Case study	Proficiency
Demir	2015	Dissertation	24 class teachers	Math	Case study	Comparative

Table 1 presents a general summary of categorical analysis of the 42 studies, presented chronologically from 2006 through 2015. Among the 42 alternative assessment studies, only three (7.1%) were published between 2006 and 2007; 12 (28.6%) were published between 2008 and 2009; 19 (45.2%) were published 2010 and 2012; five (11.9%) were published between 2013 and 2014; and two (4.8%) were published 2015. These results indicate dramatically increased attention to alternative assessment methods across the period of 2006 through 2012. It is likely that the apparent decrease in 2013 and beyond is an artifact of time to produce and publish rather than a decrease in research activity. It was found that from 2006 to 2015, studies included mostly teachers, and some student teachers, but as participants few studies included students or school administrators.

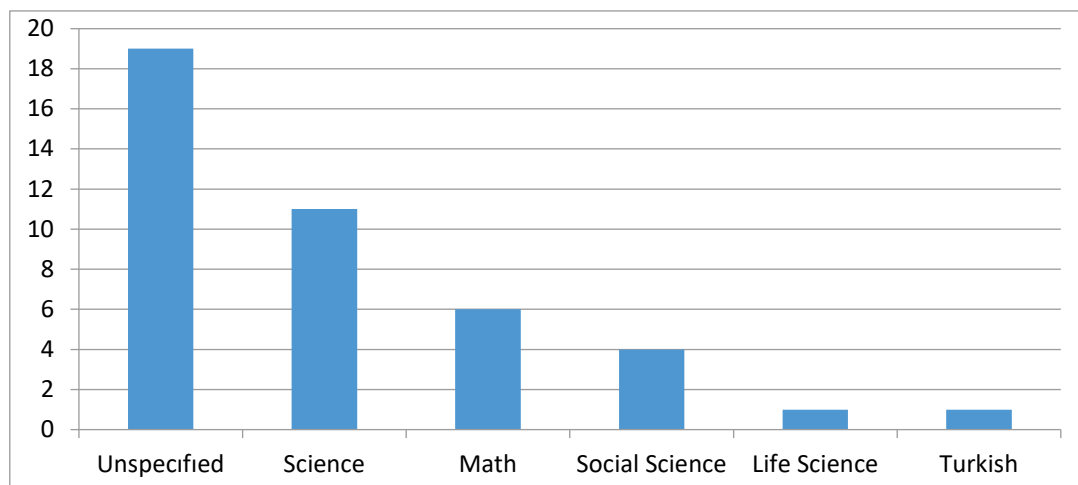


Figure 1. Distribution of Field of Studies were Conducted

Table 1 shows that many studies (45.2%) did not include what courses were involved. 26.2% of the 42 studies reported on science, and 14.3% of the 42 studies report on math, 9.5% on social studies, 2.4% on Turkish and 2.4% on Life Science were conducted to examine using the assessment methods in these fields. These percentages indicate that alternative assessment methods are being used widely across the elementary curriculum, especially in science and mathematics.

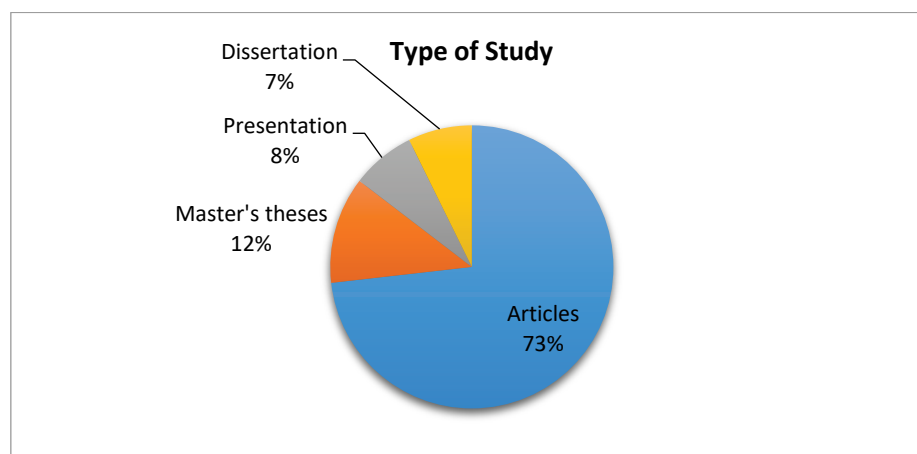


Figure 2. Distribution of Type of Study

The type of the studies included in this review consisted of 71.4% academic articles, 11.9% master's theses, 7.1% conference presentations and 9.5% dissertations.

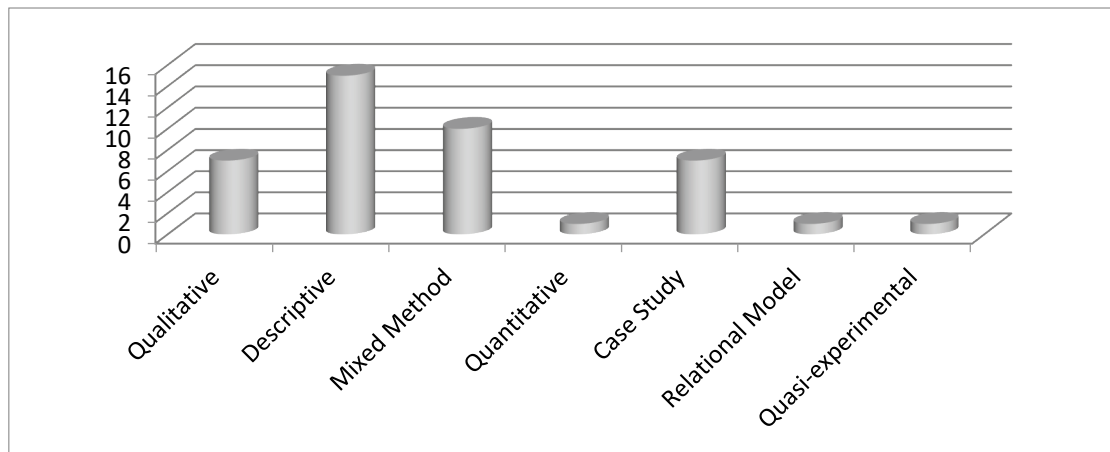


Figure 3. Distribution of Design and Method

Many studies used descriptive design alone, in total 13 out of the 42 (30.9%); 10 out of the forty-two (23.8%) studies used mixed method; six (14.3%) used qualitative; seven (16.7%) used case study method; two (4.8 %) used quantitative, two (4.8%) was used relational model and one (2.4%) was used quasi experimental design.

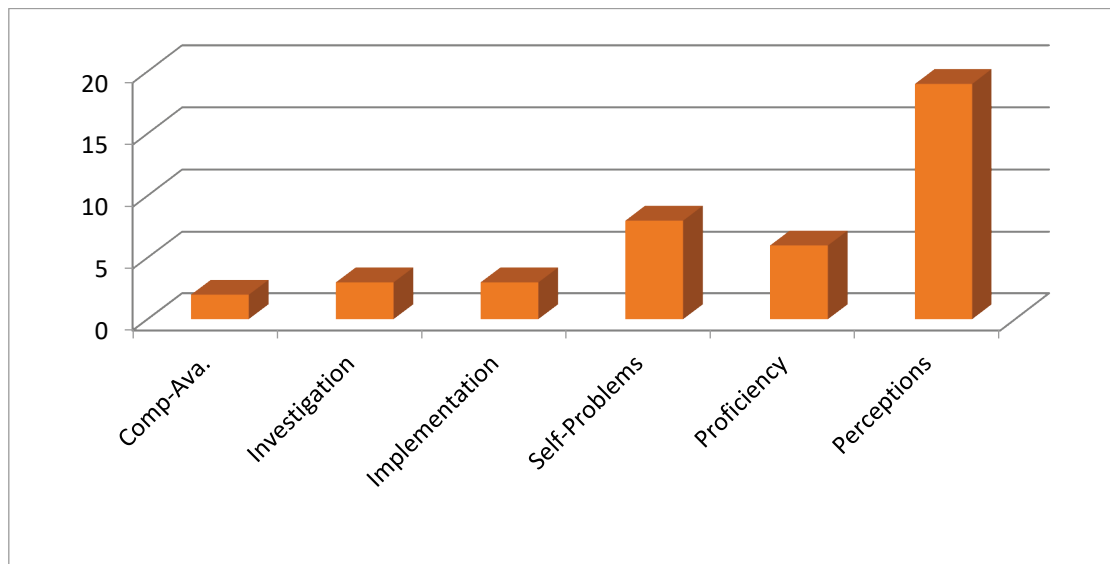


Figure 4. Distribution of Issues of Study

Many studies ($n= 19$, 45.2%) focused on teachers' perceptions, six studies (14.3%) were on teachers' proficiency, eight studies (19%) on problems in the implementation process and self-sufficiency; three studies (7.1%) on implementation of alternative methods, three studies about the investigation (7.1%) and one (2.4%) study was about availability of alternative assessment and one (2.4%) study was conducted as a comparative.

Table 2. Reported Teacher Perceptions of Alternative Assessment

Category	Findings	Source
Pedagogy	Teachers have a positive attitudes toward methods	Parmaksız & Yanpar (2006), Duban & Küçükylmaz (2008), Metin & Demiryürek (2009), Bekçi (2009), Kuran & Kanatlı (2009), Acat & Uzunkol (2010), Karakuş (2010), Bal & Doğanay (2010), Çepni & Çoruhlu (2010), Toptaş (2011), Ören et al. (2011), Şimşek (2011), Gömleksiz et al. (2011), Karamustafaoğlu et al. (2012) and Duran et al. (2013).
	Teachers need professional development	Ersoy (2008), Metin & Demiryürek (2009), Çoruhlu et al. (2009), Karakuş & Kösa (2009), Kuran & Kanatlı (2009), Yalçınkaya (2010), Ak & Güvendi (2010), Güneş (2010), Bal & Doğanay (2010), Özdemir (2010), Köklükaya (2010), Karamustafaoğlu et al. (2012) and Ören et al. (2014), Demir (2015).
	Methods provide multi-directional assessment	Turan (2007), Ören et al. (2011), Şimşek (2011) and Gömleksiz et al. (2011), Demir (2015).
	Methods provide an assessment of process	Duban & Küçükylmaz (2008), Ören et al. (2011) and Gömleksiz et al. (2011).
	Methods reveal individual differences in students	Duban & Küçükylmaz (2008), Güneş et al. (2010), Şimşek (2011) and Çetin (2011).
	Methods provide objective assessment	Çakır & Çimer (2007), Duban & Küçükylmaz (2008) and Tatar & Ören (2009), Demir (2015).
	Methods contribute to the education system	Turan (2007) and Köklükaya (2010).
	Development hands-on learning	Ören et al. (2011)
	Teachers evaluate themselves	Turan (2007)
	Methods more away from rote learning	Duban & Küçükylmaz (2008), Demir (2015).
	Methods improve students' higher-level thinking skills	Duban & Küçükylmaz (2008), Tatar & Ören (2009), Metin & Demiryürek (2009), Güneş (2010), Bal & Doğanay (2010), and Gömleksiz et al. (2011), Demir (2015).
	Methods are develop students' creativity	Duban & Küçükylmaz (2008), Tatar & Ören (2009), Metin & Demiryürek (2009), Bekçi (2009) and Ören et al. (2011), Demir (2015).
	Students exhibit a positive attitude towards methods	Orhan (2007), Tatar & Ören (2009), Bekçi (2009) and Bal & Doğanay (2010), Demir (2015).
	Students' interest in to the course increased	Tatar & Ören (2009), Bal & Doğanay (2010), Ören et al. (2011) and Gömleksiz et al. (2011), Demir (2015).
	Student Impact	Methods support deeper learning
Methods improve students' motivation to learn the lessons		Güneş (2010), Ören et al. (2011) and Şimşek (2011), and Çetin (2011).
Methods improve students' awareness of their strengths		Turan (2007), Güneş (2010) and Ören et al. (2011), and Çetin (2011).
Methods increase students' productivity in the course		Tatar & Ören (2009), Ören et al. (2011) and Gömleksiz et al. (2011).
Methods increase learning		Tatar & Ören (2009) and Ören et al. (2011).
Methods improve students' self confidence		Tatar & Ören (2009) and Bal & Doğanay (2010), Demir (2015).
Methods help student put their knowledge and skills into practice in daily life		Tatar & Ören (2009) and Bal & Doğanay (2010), Demir (2015).
Improve students' study skills		Turan (2007) and Bal & Doğanay (2010), Demir (2015).
Methods contribute to personal development of students		Metin & Demiryürek (2009) and Ören et al. (2011), and Çetin (2011).
Improve students' assessment skills		Tatar & Ören (2009) and Ören et al. (2011), Demir (2015).
It enables students to develop a critical perspective	Bal & Doğanay (2010), Çetin (2011), Demir (2015).	
Methods help students identify and evaluate their skills	Kuran & Kanatlı (2009), Demir (2015).	

Table 2 categories the 42 studies included in the review across two major concepts: pedagogy and student impact, and sub-concepts within. Teachers very much favor the use of alternative assessment methods, such as performance tasks, self and peer assessment. They cite these methods' ability to facilitate personal development by increasing critical thinking, and creativity. Many teachers use these methods and attest to their efficacy. However, teachers report not being able to use these methods as often as they would like because of several factors: crowded classes, lack of time, the obligation to "teach to the test," cost and also parental resistance to new ideas. In Turkey, parents are understandably concerned about their children's performance on standardized tests, which can determine post-secondary choices. The most critical factors, however, are the size of elementary classes in Turkey (40-50 students per class on average) and not surprisingly, lack of time. Teachers admit to needing professional development to be able to appropriately implement these assessment methods, however, there are few resources to support systematic professional development.

Table 3. Reported Teacher Perceptions of Challenges in Implementation on Alternative Assessment Methods

Category	Code	Study Code
Teacher Control	Teachers do not have sufficient knowledge	Parmaksız & Yanpar (2006), Çakır & Çimer (2007), Anıl & Acar, (2008), Duban & Küçükylmaz (2008), Ersoy (2008), Bal (2009), Tatar & Ören (2009), Metin & Demiryürek (2009), Çoruhlu et al. (2009), Bekçi (2009), Karakuş & Kösa (2009), Sağlam et al. (2009), Kuran & Kanatlı (2009), Yalçınkaya (2010), Ak & Güvendi (2010), Acat & Uzunkol (2010), Güneş (2010), Karakuş (2010), Özdemir (2010), Köklükaya (2010), Okur & Azar (2011), Ören et al. (2011), Şimşek (2011), Gömleksiz et al. (2011), Çetin (2011). Çetinkaya & Duran (2011), Karamustafaoğlu et al. (2012) and Kolomuç & Açışlı (2013), Özenç, (2013), Duran et al. (2013), Özenç & Çakır (2015), Demir (2015).
	Need for expert support in the use of methods	Anıl & Acar, (2008), Ersoy (2008), Kuran & Kanatlı (2009), Karakuş (2010), Bal & Doğanay (2010) and Gömleksiz et al. (2011), Çetin (2011), Demir (2015),
	Professional development inadequate	Çakır & Çimer (2007), Anıl & Acar, (2008), Karakuş & Kösa (2009), Kuran & Kanatlı (2009), Bal & Doğanay (2010) and Ören et al. (2014), Demir (2015)
	Teachers resistant to innovations	Çakır & Çimer (2007), Duban & Küçükylmaz (2008), Çoruhlu et al. (2009), Sağlam et al. (2009) and Şimşek (2011).
	Assessment methods are complex	Anıl & Acar, (2008), Ersoy (2008) and Gömleksiz et al. (2011), and Çetin (2011).
	Students do not understand instruction	Duban & Küçükylmaz (2008), Bal (2009) and Tatar & Ören (2009), and Çetin (2011).
	Students' negative attitudes	Duban & Küçükylmaz (2008) and Tatar & Ören (2009).
Institutional Control	Insufficient time	Turan (2007), Anıl & Acar, (2008), Duban & Küçükylmaz (2008), Bal (2009), Metin & Demiryürek (2009), Bekçi (2009), Karakuş & Kösa (2009), Kuran & Kanatlı (2009), Yalçınkaya (2010), Acat & Uzunkol (2010), Güneş (2010), Karakuş (2010), Okur & Azar (2011), Şimşek (2011) and Gömleksiz et al. (2011), Çetin (2011). Demir (2015).
	Overcrowded classes	Turan (2007), Anıl & Acar, (2008), Bal (2009), Tatar & Ören (2009), Çoruhlu et al. (2009), Kuran & Kanatlı (2009), Acat & Uzunkol (2010), Güneş (2010), Karakuş (2010), Okur & Azar (2011), Şimşek (2011), Gömleksiz et al. (2011), Çetinkaya & Duran (2011), and Çetin (2011). Karamustafaoğlu et al. (2012), Demir (2015).
	Great expense	Turan (2007), Ersoy (2008), Bal (2009), Metin & Demiryürek (2009), Bekçi (2009), Karakuş & Kösa (2009), Acat & Uzunkol (2010), Karakuş (2010), Çepni & Çoruhlu (2010), Şimşek (2011), Gömleksiz et al. (2011) and Karamustafaoğlu et al. (2012), Demir (2015).

Table 3. Continued

Category	Code	Study Code
Institutional Control	Assessment process takes a long time	Turan (2007), Ersoy (2008), Bal (2009), Güneş (2010), Şimşek (2011) and Çetinkaya & Duran (2011), Çetin (2011). Demir (2015).
	Resource shortage	Tatar & Ören (2009), Sağlam et al. (2009), Bekçi (2009), Kuran & Kanatlı (2009), Acat & Uzunkol (2010) and Karakuş (2010), Demir (2015).
	Exam pressure	Duban & Küçükylmaz (2008), Metin & Demiryürek (2009), Sağlam et al. (2009), Acat & Uzunkol (2010) and Karakuş (2010), Demir (2015).
	Large number of assessment forms	Bal (2009), Metin & Demiryürek (2009), Sağlam et al. (2009) and Gömleksiz et al. (2011), Çetin (2011). Demir (2015).
	Busy program schedule	Duban & Küçükylmaz (2008), Tatar & Ören (2009) and Acat & Uzunkol (2010), Ak & Güvendi (2010), Demir (2015).

Challenges of implementing alternative assessment methods from the studies were analyzed and are presented in Table 3, examining characteristics of issues within teacher control and those beyond, within institutional control. The most common challenges indicate that teachers have inadequate knowledge about alternative assessment practices and so they need for expert support in the use of methods. Teachers do not seem to have enough time to implement the methods and they do not have financial resources to apply assessment, and complain about large class sizes. The least common challenges were busy program schedules, complicated assessment methods, students having trouble understanding the instructions and students' negative attitudes towards those methods.

According to literature, the methods teachers have the most competency with were performance assignments (Yalçinkaya, 2010; Kaya et al., 2012; Duran et al., 2013) while they showed less competency with diagnostic trees and structured grids (Özdemir, 2010; Okur & Azar, 2011). The analysis also showed that teachers also feel less competent with evaluating portfolios (Parmaksız & Yanpar, 2006) and concept maps (Ören et al., 2011). Similarly, the alternative methods teachers the most common used were performance task, project and portfolio (Bal & Doğanay, 2010; Duran et al., 2013), whereas they occasionally used peer assessment, self assessment and rubric (Yalçinkaya, 2010). The literature also showed that the teachers have very rarely used diagnostic trees and structured grids (Karamustafaoglu et al., 2012; Şimşek, 2011).

Discussion and Conclusion

The aim of this literature review was to examine key Turkish studies available on alternative assessment in elementary schools. In analyzing forty-one studies selected for this review. It is clear that interest in alternative assessment has grown considerably since 2006. Although few studies explicitly indicated their field of the study, most studies were focused on science, social sciences, math, Turkish language and life science. Of the 42 studies included in this review, most of them were in an article format, while few studies were presentations, master thesis and dissertations. The researchers prefer to working on articles due to writing an article is less time-consuming and laborious, and particularly thesis and presentations are written by doctoral and MS students because they might not be interested in those issues.

Teachers were the most common study participants (36 studies), however, a few studies also used student teacher participants. Very few studies were focused on elementary school students or administrators. The reason behind the fact that the studies are mostly done on the teachers is that teachers easily accessible and available since a significant number of teachers in Turkey do not demand to be a part of the studies on this subject thinking that participation in such types of studies will bring extra burden of time and workload. In addition, researchers investigate the applications regarding

assessment methods by sampling teachers because teachers directly implement assessment methods in their classrooms. However, given the areas of focus and study participants, it is difficult to determine the effectiveness of alternative assessment methods in helping students increase knowledge, motivation and achievement. Considering the fact that a significant amount of the studies done in Turkey are those done with the teacher participants, it is important that future studies should be conducted with teachers in terms of results to be obtained. Furthermore, it will be much more beneficial if the researchers sample the working groups, not only to the number of the studies on students and teachers but also the number of the studies conducted on sample groups like supervisors, administrators, academic staff and parents.

Additionally, 20 studies used descriptive research methods, a very common tendency in Turkish educational research. However, there has recently been a major trend toward mixed method research (Johnson & Onwuegbuzie, 2004) because these methods can deal with weaknesses of single qualitative and quantitative methods (Howe, 1988; Johnson & Onwuegbuzie, 2004; Sechrest & Sidani, 1995). Ten of the studies reviewed here used a mixed methods approach (Bal & Doğanay, 2010; Okur & Azar, 2011; Kolomuç & Açıslı, 2013). Seven studies used qualitative and case studies and one used quantitative, relational model and comparative. Additionally, only one research study used an experimental research method (Turan, 2007) because the experimental model “fell short of accomplishing the objective of improving educational practice in spite of its improved quality” (Salomon & Clark, 1977, p. 106). It is seen that most studies are still largely descriptive in nature. This likely does the lack of broad use and implementation of alternative assessment. This relates to other research that has shown that although teachers have positive perceptions about alternative assessment, they do not have the Professional development (PD) and institutional support necessary to make this substantial shift in practice. More research is needed to explore why such PD and support is lacking, and where it is occurring what has been teacher experience with the methods. After these types of studies have been completed, research should shift to student-level impact of the use of alternative assessment.

Most of the studies reviewed here focused on teacher perceptions of alternative assessment methods (Kolomuç & Açıslı, 2013). Problems, self-efficacy, implementation, examination and applicability of these methods (Parmaksız & Yanpar, 2006) have rarely been studied. In addition, the concept of self-efficacy is crucial for the performance of teachers and students and can affect positively the learning process. If the teachers have enough Professional development and support in order to use the alternative assessment methods, they might feel and do comfortable using the methods. Therefore, future studies may want to focus on the areas highlighted here that have had less research exposure.

Based on the findings related to the categories of pedagogy (see on Table 2), it can be inferred that even though teachers need professional development for appropriate implementation of alternative assessment methods (Ersoy, 2008), teachers' attitudes towards them were positive (Bal & Doğanay, 2010). Only one study looked at the effect of the methods on type of students learning. Duban & Küçükylmaz's (2008) which found that alternative assessment methods helped students learn beyond rote memorization. These methods improved students' higher level thinking and creativity, while helping students identify and evaluate their skills (Kuran & Kanatlı, 2009).

Among problems and challenges to teacher and institutional control in the implementation of alternative assessment methods, is teachers' lack of familiarity with the methods, and they need for expert support in the use of alternative assessment (Bal & Doğanay, 2010; Demir, 2015). The institutional challenges to implementing these methods appear large. Crowded classroom (Gömlüksiz et al., 2011; Çetinkaya & Duran, 2011; Karamustafaoğlu et al., 2012; Demir, 2015) and curricular intensity are the greatest obstacles to implementation, calling for policy review and change at an institutional level (Duban & Küçükylmaz, 2008; Tatar & Ören, 2009).

Teachers' competencies with alternative assessment methods were highest among performance assignments, portfolios, projects, self- and peer-assessments, construct maps and showcases. In contrast, the investigation showed lower levels of teacher competency with diagnostic trees and structured grids (Özdemir, 2010; Okur & Azar, 2011). In the same line, the findings indicated that performance task, project and portfolio were most common used by the teachers, while they were rarely used peer assessment, diagnostic trees and structured grids (Karamustafaoğlu et al., 2012; Şimşek, 2011). Again, this underlines the need for professional development and administrative support for teachers.

Consequently, the primary limitation of the studies reviewed is the fewness of experimental studies with detailed analysis of the benefits of alternative assessment methods; none of these studies has actual classroom observation of assessment in use. In addition, almost all studies were conducted with teachers, including only simple descriptive analyses based on percentages and frequencies. The study provides a profound insight into the limitations inherent in the available literature and suggests that new methods that could enhance understanding of alternative assessment, such as experimental and observations in classrooms studies, should be employed when conducting research on the issue of alternative assessment methods. In doing so, it is hoped that the study informs and leads further research on alternative assessment methods of Turkish educational programs. It is also hoped that these findings may be beneficial for instructors and researchers planning to conduct or advise studies with new insights "in making appropriate decisions and broadening their scopes when conducting research and writing academic publications in the future" (Tsai & Wen, 2005, p. 13).

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