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THE INVESTIGATION OF THE RELATIONSHIP BETWEEN TEACHERS' BELIEFS TOWARDS LEARNING AND BELIEFS TOWARDS THE STANDARD TESTS

İsmail Kinay[1],
Kasım Karataş[2]
[1]Assistant Prof. Dr., Department of Educational Sciences,
Curriculum and Instruction,
Ziya Gökalp Faculty of Education,
Dicle University, Turkey
[2]Res. Asst., Department of Educational Sciences,
Curriculum and Instruction,
Ziya Gökalp Faculty of Education,
Dicle University, Turkey

Abstract:
The aim of this study is to investigate the relationship between teachers' beliefs toward learning and beliefs toward standard tests. During the study, correlational survey research model, one of the research models, is adopted. As data collection tool; "Belief Scale Towards Learning" and "Beliefs About Standardized Tests Scale" is used. Data is collected from 659 different branches of teachers, 306 female and 353 male. For analyzing the data; descriptive statistical analyzing methods and correlation-regression analysis are used. According to the findings, it is determined that teachers' beliefs towards constructivist learning are higher than the beliefs towards traditional learning. Secondly, it's determined that there is a positive and significant relationship between beliefs towards traditional learning and beliefs towards standard tests. Furthermore, it's found that there is negative and significant relationship between beliefs towards standard tests and beliefs towards constructivist learning. Finally, it's determined that the beliefs toward traditional and constructivist learning are significant predictor of beliefs toward standard tests.

Keywords: constructivism, standard tests, beliefs.

1. Introduction

Learning is an indispensable subjective action to understand facts and events for the individual. It depends on many effects. Though discussions made on the relevant topics by experts who take on what these factors are, it is considered that the most basic tool of learning is "knowledge" and that the individual's developmental level and social and cultural experiences are influential in the process of obtaining information (Von Glaserfeld, 1995). Selvi (2013) defines the learning as a means of forming meaning and explanation based on the interaction between knowing and known. He also emphasizes the need to remove the obstacles in front of the process of making meaning, so that the individual will act on learning perceptions and increase perceived power. From this point, there are many elements that affect the learning of the individual. Bandura defines learning as a process based on the interaction between personal, behavioral and environmental factors. Personal factors include beliefs and behaviors that influence learning in particular responses to behavioral and environmental stimuli; Behavioral factors include the reactions that the individual generates in a given situation; Environmental factors include roles that parents, teachers, and friends act (Bruning, Schraw & Norby, 2014). Woolfolk (2015) also argues that individuals may have a belief in knowledge and learning that affecting the overall strategy they use in the learning process. In this context, it is thought that the perception, motivation and level of belief in learning are the most important components of the process of making sense, depending on the self-evaluation judgments.

The level of belief and motivation to learn about the individual's needs, goals, interests, feelings is affected. Teachers are expected to organize the learning-teaching process by considering these situations. At this point, teachers' beliefs about learning; the professional role of the learning process and the educational strategies and practices it monitors is affected (Kagan, 1992, Waters-Adams, 2006, Vanderbilt, 2008). Teachers are expected to adopt a student-centered approach that best suits constructivist mind with their professional knowledge, awareness and skills (Duru, 2014). Because constructivist mind takes into consideration cognitive structures and experiences of students, individual differences and socio-cultural characteristics, new knowledge and experiences, deductions and evaluations are built on this basis (Hanley, 1994). Constructivist approach builds all the constructivist theories such as social constructivism, radical constructivism, cognitive constructivism, experience as an endogenous meaning together with the internalization process of this meaning and argues that knowledge is structured socially (von Glasersfeld, 1995; Vygotsky, 1978).

It's predicted that teachers, having constructive learning beliefs, are suggested to organize the learning-teaching process in the context of constructivist principle, to focus on designing the program with deductive method and emphasize the general concepts, to keep the program work with materials based on primary resources and skill development, to organize the learning environment for the students with an interactive attitude, to observe the performance of the activities in the evaluation of the students, to evaluate the exhibition and product files (Brooks & Brooks, 1999). In the traditional understanding, the teacher is at the focus of teaching studies as the source of information and the lessons, programs, homeworks, lesson hours and similar situations are arranged without considering the interests and needs of the child (Kafadar, 1997). In the traditional approach, education is in the form of teacher - student - information triangle, teacher is in the position of transferring the knowledge and the student is in the position of getting the knowledge. Therefore, in this approach student is not active in making the knowledge meaningful (Özden, 2011). Finally, assessment of students is seen as a separate process from teaching and evaluations are made through standard tests (Brooks & Brooks, 1999). While traditional teacher assesses students by looking at their learning outcomes, constructivist teachers often use process-based methods to track student development (Duru, 2012). It is seen that the teaching - learning processes of the traditional and constructivist methods, which constitutes the basis of belief in learning in general terms, is divided into basic points and differences are found. One of these fundamental differences is related to the measurement and evaluation processes.

Through the evaluation of the education process, information about the expected level of target behavior, the effectiveness of the program, the identification of learning deficiencies and the student achievement status are acquired (Turgut & Baykul, 2011). One of the most important parameters that give clues to the effectiveness of the education process is the student achievement level. Methods of obtaining information on student achievement levels, in other words, measurement and evaluation situations based on the adopted learning approach. In traditional methods, the assessment of student success is usually dealt with in a way that focuses more on the product than on the teaching process; for this purpose, more emphasis is given to written- verbal examination and multiple choice-short answer tests. In traditional assessment, it is desirable to solve problems without seeking help from anyone, without consulting anyone or applying to resources in a limited period of time. But learners solve the problem by receiving of their friends' support, ideas, or resources, without a time limitation to solve the problems they face in everyday life (Fer, 2011). As this problem-solving approaches are more appropriate for students at the point of adopting and internalizing constructivist principles, getting meaningful learning according to real

life, being a part of learning process of mutual responsibility and social deal, processing information structures with self-awareness process, learners need the support of learning attitudes (Driscoll, 2005). In accordance with this necessity, it develops as an obligation to make assessment and evaluation based on constructivist mind in the nature of the process. Because in the constructivist learning approach, assessment and evaluation are part of the teaching process and take place at every important point throughout the learning process, not just at the beginning and end of the learning. As it emphasis on the process, it requires the use of more measurement tools and methods than the old approach (Gelbal & Kelecioğlu, 2007).

One of the beliefs that should be taken into account during the learning-teaching process is the beliefs of the teachers toward evaluating. It is expected to contribute to increasing the quality of teaching process in general because of teachers out looking or beliefs in assessment and evaluation; having an attitude in the necessity of making evaluation and believing that learning improves learning. Beliefs about assessment can be handled from different aspects as; beliefs about the place of assessment in the learning-teaching process, and beliefs about the evaluation methods used in the learning-teaching process (İlhan, Çetin & Bars, 2013). Another title emerged as a result of handled in terms of the assessment methods used in the process of learning-teaching, beliefs toward evaluation is beliefs toward standard tests (İlhan, Çetin&Kinay, 2015). Standard tests are kind of tests consisting of a set of standardized questions that are used to measure achievement or ability in a particular area; Education and psychology (Bakırcıoğlu, 2015). Koç (1985) states that the standard tests have been developed as a product of intensive experimental work by specialists for specific purposes. Another characteristic of the standard tests is; they are applied, scored and interpreted in the same way to all students regardless of when and where they are assessed. They are advantageous since the guidelines for the application and scoring of standardized tests are clearly stated, they can be easily, quickly and uniformly applied by different practitioners, and because they are developed by experts (İlhan, Çetin & Kinay, 2015). On the other hand, standard tests are generally prepared in the form of multiple choice questions; these tests are based on the assumption that all students have gone through the same teaching process. Thus, in these tests students' personal, cultural and linguistic features are criticized for ignoring differences and ignoring the differences based on these features can lead to bias in standardized tests (Aksu - Ataç, 2012). At this point, student achievement evaluations based only on standardized tests can be considered as a product of the traditional mind rather than the constructivist approach. Because, it's supported to form notions of each student by taking into account individual differences in constructivist mind and this process isn't applied by only single assessment and

evaluation tool but rubrics, portfolios, mind maps, and peer evaluation are applied (Kurt, 2016). In general constructivism requires the use of more and various measuring instruments or methods based on the process instead of the traditional assessment and evaluation approaches based on multiple-choice exams (Duban & Küçükyılmaz, 2008; Gelbal & Kelecioğlu, 2007; Gömleksiz & Kan, 2010; Nazlıçiçek & Akarsu, 2008).

Although researches in our country have shown that teachers have adopted constructive learning practices and have a positive view on constructivist understanding (Saylan & Yurdakul, 2005; Özdemir, 2009; Ocak, 2010; Teyfur & Teyfur, 2012), it's seen that they're inadequate in terms of knowledge and experience and couldn't adopt constructivist mind on the subject of constructivist assessment - evaluation (Gelbal & Kelecioğlu, 2007, Özsevgeç, 2007, Damlapınar, 2008, Şenel-Çoruhlu and et al., 2008, Güven, 2008). It's thought to be one of the determining factors of teachers' learning beliefs on which learning-teaching approach they will organize the teaching process, how to create learning and teaching environment and how they will adopt an assessment approach. In the case of adopting the traditional approach, the change in test scores of the student is evaluated as a success indicator (Ünver, 2003). On the other hand, it's envisaged that teachers adopting constructivist approach will have the conviction that making the assessment in terms of students' appropriate assessment techniques according to the constructivist theory, revealing the nature of learning process rather than the product and reflecting that standard tests will not be sufficient in determining student achievement and ability. In another respect, with the change performed in 2005, we changed our education system to the constructivism and the teachers tried to fulfil the requirements of constructivism. But it comprises contradiction in our country to do the student assessment and evaluation with the standard tests based on traditional methods (Altan 2014; Baş, 2012). It is accepted worth to investigate that whether the reflection of this contradiction is affected the teachers' beliefs toward learning and standard tests. It's not encountered in a related literature that investigating relationship between learning beliefs possessed by other teachers and their beliefs toward standard tests and it seems necessary to contribute to the literature by examining the relationship of this condition. In this research, it is aimed to investigate the relationship between teachers' beliefs toward learning and beliefs toward standard tests. For this purpose, the following questions are answered:

a. At what level are the teachers' beliefs about learning and standard testing?

b. What is the relationship between teachers' beliefs about learning and beliefs about standard tests?

c. Are the teachers' traditional and constructivist beliefs together predict their beliefs about standardized tests significantly?

2. Materials and Method

In this study, correlational survey research model is used as it is aimed to examine the relationship between teachers' beliefs about learning and beliefs about standard tests.

2.1. Population and Sample

The population of this research is formed of teachers who work in the districts of Diyarbakır province in 2016-2017 academic years. The sample of the research is formed of 659 teachers randomly selected from different branches working in different school levels in this population. The distribution of teachers according to their gender and grade of school they are working in is presented in Table 1.

Table 1: Distribution of teachers by school and level of duties

		n	%
Gender	Male	306	46.4
	Female	353	53.6
School Level	Pre-School	27	4.1
	Elementary	169	25.6
	Secondary	315	47.8
	High School	148	22.5

2.2. Data Collection Tool

In this study "Belief Scale Towards Learning" and "Beliefs About Standardized Tests Scale" is used as a means of collecting data."Beliefs Scale Towards Learning" (BSTL) is formed by Bay et al. (2012). (BSTL) is a 5-Likert scale consisting of 34 items and 4 dimensions. The first dimension consists of 11 items "Social Constructivist"; the second dimension is "Traditional", which consists 9 items; the third dimension is the "Cognitive Constructivist" consisting of 6 items and the fourth dimension is the "Radical Constructivist" dimension that consists 8 items. For the dimensions of the scale, the Cronbach Alpha reliability coefficient is calculated between .73 and .85, and the reliability coefficients obtained by the test method are calculated between .66 and .84 (Bay et al., 2012). In this study, the Cronbach Alpha internal consistency coefficients of the BSTL are calculated .67 for the "Cognitive Constructivist" dimension, .79 for the "Social Constructivist" dimension, .70 for the "Radical Constructivist" dimension, .83 for the "Traditional" dimension and .82 for the "Constructivism" dimension.

"Beliefs About Standardized Tests Scale" (BASTS) is developed by Magee and Jones (2012) and adapted to Turkish by İlhan, Çetin and Kinay. BASTS is developed to determine the beliefs of university students about standard tests. BASTS has 5-Likert

type rating and contains 9 items. The BASTS consists of three dimensions: beliefs about the objectivity of standard tests, beliefs about decisions based on standard tests, and beliefs about awarding based on standard tests. The composite reliability coefficient for the scale obtained from the data obtained from the teachers during the Turkish adaptation study is found to be .66 (İlhan, Çetin & Kinay, 2015). The Crobach Alpha reliability coefficient of this study is found to be .65.Raines-Eudy (2000) stated that the reliability coefficient of .50 and above is acceptable. Therefore, it can be said that the reliability coefficients of the measurement tools used in this study are sufficient.

2.3. Data analysis

Frequency and percentage are calculated for some characteristics of the sample in the study. For the first question of the study, the mean, standard deviation values are examined. For the second questionnaire, Pearson Correlation coefficient and for the third questionnaire multiple regression analysis techniques are used. These analyzes are made by using "SPSS Statistics 20" package program. Arithmetic averages are interpreted considering the range of points and levels of the data in Table 2.

Table 2: Intervals and levels used to interpret point scales

Point Interval	Level
1.00 – 1.80	Very Low (I definitely do not agree)
1.81 – 2.60	Low (I do not agree)
2.61 – 3.40	Medium (Partially agree)
3.41 – 4.20	High (I agree)
4.21 – 5.00	Very High (I absolutely agree)

3. Findings

The mean and standard deviation values of teachers' beliefs about learning and standard testing are presented in Table 3.

Table 3: Arithmetic mean and standard deviation values of teachers' beliefs towards learning and standardized tests

	n	$\overline{X}$	sd	Level
Traditional	659	3.36	.67	Middle
Constructivist	659	3.89	.39	High
Cognitive	659	4.09	.49	High
Social	659	4.19	.48	High
Radical	659	3.32	.59	Middle
Standard tests	659	2.66	.57	Middle

When the findings in Table 3 are examined, it is seen that teachers' beliefs toward traditional learning, radical constructivism and standard tests are moderate (Partially agree). Teachers' beliefs toward constructivist learning, cognitive and social constructivism are high (I agree). Based on these findings, it can be said that the teachers' beliefs toward constructivist learning are higher than the beliefs toward traditional learning. Also, from the findings in Table 3, it can be said that the teachers' beliefs toward constructivist learning are the highest in the social dimension of constructivism and lowest in the radical dimension. Findings of how teachers relate to their beliefs toward learning and their beliefs toward standard tests are presented in Table 4.

Table 4: Pearson correlation analysis results related to teachers' beliefs toward learning and beliefs toward standard tests

	Traditional	**Constructional**	**Cognitive**	**Social**	**Radical**
Standard Tests	.361*	-.122*	-.169*	-.089*	-.049

*p<.05

Table 4 shows that there is a positive and significant relationship between teachers' beliefs toward standard tests and beliefs toward traditional learning. In addition, there is a negative and significant relationship between teachers' beliefs toward standard tests and constructivist learning. Another finding in Table 2 is the significant negative relationship between the teachers' beliefs toward standard tests and the beliefs of the sub-dimension of constructivist learning; cognitive and social learning beliefs. However, it has been found that there is no meaningful relationship between teachers' beliefs toward standard tests and their beliefs toward radical learning. Findings of whether teachers' traditional and constructivist beliefs together are a significant predictor of their beliefs toward standard tests are presented in Table 5.

Table 5: Results of multiple regression analysis of teachers' beliefs toward standard tests

Variable	**B**	**Standard Error**	**β**	**t**	**p**	**Binary r**	**Partial r**
Constant	2.590	.214	-	12.097	.000	-	-
Traditional	.332	.031	.391	10.818	.000	.361	.389
Constructivist	-.270	.052	-.186	5.137	.000	-.122	-.197
$R = .405$, $R^2 = .164$, $F = 64.4367$, $P = .000^*$							

*p<.05

Table 5 shows that teachers' beliefs toward traditional and constructive learning together are a significant predictor of their beliefs toward standard tests. These two variables together account for 16% of the change in beliefs toward standard tests.

According to the standardized regression coefficient (β), the relative importance sequences of the predictive variables over the beliefs toward the standard tests are; traditional learning beliefs and constructivist learning beliefs.

4. Conclusion, Discussion and Suggestions

When the findings related to the first question of the research are examined, it can be said that the teachers who participated in the research adopted the constructivist learning beliefs more than the traditional learning beliefs. The reason of this can be explained to be the result of the curriculum based on constructivist approach having applied since 2005 in Turkey. In other words, it is considered that the main factor that establishes the basis for the development of constructivist learning beliefs in teachers is the result of the program which is shaped on the concept of constructivism as a consequence of the commitment of responsibility as mentor and guidance to the implementation of learning - teaching process. Teachers in constructivist practice; they are responsible for creating opportunities for students to form knowledge and meaning, and students are not forced to submit to objective information by being silenced and seized as in traditional understanding (DeLashmutt & Braund, 1996). In addition, with implemented practices, teachers acknowledge and support the autonomy of their students and help them to determine learning strategies within their own learning conventions (Brooks & Brooks, 1993). Demirel (2008) regards a teacher with constructivist understanding as; open minded, contemporary, self-renewal, considering individual differences, providing appropriate learning experiences, and learning with learners. Therefore, it is believed that the ability of teachers to implement a curriculum successfully based on constructivism and to design the learning - teaching process in accordance with constructivist teacher competencies is allied with the fact that teachers have constructivist learning beliefs. In addition, many researches that have been practiced before have detected supporting findings like this result (Chan, Tan & Khoo, 2007; Bay et al. 2014; Han & Kinay, 2016). However, in the survey it is seen that the teachers mostly adopted social constructivism. Persons adopting the social constructivist approach regard cultural values and resources as instruments of individual development by emphasizing the role of social interaction in the realization of learning and in the development of pupils' abilities (Bruning, Schraw & Norby, 2014; Woolfolk, 2015). Güneş (2007) emphasizes the social aspect of the constructivist approach; pointing out that students need to learn by interacting; developing mental processes and skills through interaction, and therefore teachers should work collaboratively by emphasizing cooperative learning. On the other hand, due to the fact

that the learners are more active in the learning-teaching process and they are forming their own knowledge, it is suggested that constructivist learning environments are designed to enable individuals to interact more with their environment in social settings, to spend rich learning experiences and to connect with real life situations (Yasar & Gültekin, 2006; Ocak, 2012). Yılmaz (2006), Ağlagül (2009) and Ocak (2012) have reached the conclusion that teachers have enough mention for meaningful and real life events in their lessons on the basis of their understanding of social constructivism. In this respect for teachers with social constructivist mind, it can be said that they are aware of the fact that learning takes place through social interaction-experience and they are prone to organize activities in this direction.

An important finding in the research is that teachers' beliefs about standard tests are moderate, like their traditional learning beliefs. Standard tests, seen as a product of traditional learning concept, does not pay enough attention to the development process of the learners' learning and focuses on comparing the students with each other in the context of the scores they obtained (Marston, Deno & Tindal, 1983). Likewise, evaluations made using standard tests do not contain sufficient information about what the student's learning deficits are and how to eliminate them; so meaningful feedback can't be given to students for missing information or wrong learning (Nichols & Nichols, 2005). Therefore, these tests are concerned with the product that emerges from the learners' learning process (İlhan, Çetin & Kinay, 2015). In the constructivist understanding, evaluations are made by taking into account the performances of the learners both in the process and in the process in the measurement and evaluation activities conducted for the students. Evaluation is not separate from the teaching process; it is seen as a continuing and continuous process that is integrated within education. Yurdakul (2008) argues that evaluation in constructivism is not done only with emphasis on learning products, or always considering solutions that are either right or wrong; it is considered to be an important criterion for assessing the relevance and ways of learning, especially at the point of the learning process. At this point, it is seen that the assessment and evaluation criteria of constructivist understanding are contradictory and contradictory, by evaluating student achievement levels through the scores obtained from standard tests in the frame of traditional understanding. Because of the traditional measurement in standard tests, the traces of traditional learning beliefs can be seen from constructivist beliefs. In this respect, teachers who participated in the research may have a high level of constructivist learning beliefs and low beliefs of traditional learning, which may be the reason for the moderate beliefs about standardized tests.

When the findings related to the second question of the research are examined, it is determined that the teachers' beliefs about standard tests, constructivist learning beliefs and other sub-dimensions except for the radical sub-dimension are negatively meaningful relations. However, there is a positive correlation between the belief in the standard test and the traditional learning belief. Many educational reformers believe that traditional assessment types, such as multiple-choice exams, can only recall information at the level of remembrance and assess only one or two zones of intelligence (King, 2000). The evaluation of student achievement with traditional methods is carried out with emphasis on more products. For this purpose, more emphasis is given to standardized tests, multiple-choice and short-answer tests, written and verbal examination. Assessment in the constructivist learning approach is done during the learning process. Because it focuses on the process, it requires the use of more and different measuring instruments or methods than the traditional approach (Gelbal & Kelecioğlu, 2007). Standardized tests, seen as a part of wider assessment plan for the constructive approach (Woolfolk, 2015) are insufficient to measure complex and high-level cognitive skills that do not take into account individual and regional differences and don't provideinformation about the reasons for the failure of the students. Because traditional assessment methods do not conform to the natural constructivist conception; alternative assessment techniques employed by many measurement and evaluation tools, task-oriented and process-oriented assessment tools with performance overlap with constructivist understanding. Bıçak (2010) indicates that alternative assessment usually refers to standardized achievement tests and multiple choice formats. Teachers adopting constructivist mind are expected to have a low belief in standardized tests because standardized tests are product-based, provide limited knowledge and skills that pupils can measure, how they affect children's abilities, their preferences, and their learning environment. With this expectation, the informations indicated in the text coincide with teachers' belief in standardized tests of traditional learning beliefs derived from the third sub-question of the research; on the other hand teachers with constructivist learning beliefs have lower confidence in the standard tests. Constructivist education approach and processes; reflects a totally different approach to education than traditional teaching (Dilmaç & Dilmaç, 2014). If teachers at this point have adopted constructivist learning beliefs; it is expected for them to use alternative assessment and evaluation techniques during the learning-teaching process in accordance with the constructivist approach. As a matter of fact, Akpınar (2010) states that for a teacher who has accepted traditional teaching concepts based on positivist understanding is a contrary situation to expect a constructive role in practice. At this point, constructivist teacher should adopt his/her students a role to help them discover

their own skills, identify their strengths and weaknesses, understand the rationale of the assessment, see their mistakes and motivate them (Senemoğlu, 2009). Therefore it can be regarded as a normal result that teachers with constructivist learning beliefs will not accept standard tests as a criterion in student assessments because of their inability to make self-evaluation about their learning and according to this the level of belief in standard tests is low.

In conclusion, in this study, in which the beliefs between teachers' confidence in learning and confidence in standard tests are examined, it is seen that teachers in general had constructivist beliefs. However, it's seen that constructivist teachers who have loyal beliefs that their confidences in standard tests are negative, teachers with traditional teaching beliefs have found positive confidence in standard tests. Finally, it's understood that the level of confidence in standard tests can be predicted by looking at teachers' constructivist or traditional beliefs levels. In the context of obtained findings and conclusions, teachers should be supported to construct the learning - teaching process in a way that conforms to the constructivist beliefs of the teachers and to make alternative assessment and evaluation in accordance with the constructivist approach. In addition, the evaluation of the student achievement with standard tests should be limited, using of alternative measurement and evaluation processes appropriate to the constructivist principles for the measurement and evaluation of the curricula should get to work. In order to adopt and use alternative measurement and evaluation methods appropriate to the constructivist mind for teachers, it is necessary to increase the activities and practices to develop constructivist learning beliefs during the undergraduate education process. However, it can be explored to increase constructivist beliefs and to learn which factors and variables are important at the point of adopting the learning-teaching process appropriate to constructivist principles on teachers and teacher candidates by using qualitative research methods. It is also possible to examine the process of assessing and evaluating students during the course in accordance with the constructivist principles within the classroom, who think that they have constructivist beliefs.

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