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Prospective Teacher's Metaphoric Perceptions on Test Concept

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ABSTRACT

In this research it was aimed to develop a conceptual framework for understanding prospective students' subjective perceptions about test concept. Study group of this research is 199 students enrolled in a Teacher Certificate Program at Abant Izzet Baysal University in Turkey. No studies thus far have examined the metaphorical constructions of tests from the viewpoint of prospective teachers. In this research, data were collected from prospective teachers through metaphors. Prospective teachers were asked to share their thoughts about test concept. The metaphors related to the test concept were collected and evaluated. In sum, the results of this study show that students' subjective perceptions about test concept are both positive and negative. The prospective teachers in this study were created 92 different metaphors in all. Dominant metaphors are life (f=12), gambling game (f=6) and labyrinth (f=6). These metaphors were organized into seven themes: mediator, ambiguity, disappointment, result, anxiety, selection and complexity. The most popular theme was "selection".

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tests, metaphors, test anxiety

Introduction

A test is a formal, systematic procedure used to gather information about students' behavior; tests are a subcategory in the general domain of assessment approaches (Airasian, 1994). According to Crocker &Algina (1986), 'test' refers to procedures for obtaining a sample of an individual's optimal performance (as typified by an aptitude or achievement test on which examinees are instructed to do their best) or a sample of an individual's typical performance (as on questionnaires or inventories, where respondents report their typical feelings, attitudes, interests, or reactions to situations).

Theoretically, tests and exams can be expected to trigger a wide variety of human emotions. Exam results are decisive for educational and occupational careers today, implying that high subjective values are attached to success and failure on exams (Pekrun and others, 2004).

When the studies on tests in Turkey were examined, no studies on the perceptions and metaphors of the test concept were found; the studies in Turkey mostly focused on perceptions of some specific exams, for example, the Public Personnel Selection Examination (Aküzüm, Demirkol, Ekici&Talu, 2015; Atay&Sönmez, 2013; Çimen& Yılmaz, 2011; Demir, 2012; Demir&Bütüner, 2014; Elçiçek, Tösten&Kılıç, 2012; Erdem&Soylu, 2013; Gündoğdu&ÇimenTuran, 2008; GürolveSevindik, 2009; Kuran, 2012; Odabaş, 2010; Şahin&Arcagök, 2010; Tösten, Elçiçek&Kılıç, 2012) and university entrance exams (Buran &Şimşek, 2000; Ekici, 2005; Hardevanlı&Ekici, 2011; Kelecioğlu, 2002; Kutlu, 2011). The aim of Özkan&Benli's (2014) study was to identify opinions on the Transition from the Basic Education to the Secondary Education (BESE) system and theCommon Central Examinations (CCE). Some additional studies were conducted on the perceptions of the TIMSS (Güner, Sezer&Akkuş İspir; 2013; Küçük, Şengül&Katrancı, 2014; Öztürk, 2010).

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In Turkey, other studies examined test anxiety (Alyaprak, 2006; Aydın &Takkaç, 2007; Azazi Aslan, 2005; Baştürk, 2007; Boyacıoğlu, 2010; Bozanoğlu, 2005; Civil, 2008; Çankaya, 1997; Çakmak, 2007, Daymaz, 2012; Duman, 2008; Dündar, Yapıcı&Topçu, 2008; Ekenel, 2005; Ergene, 2011; Erzen&Odacı, 2014; Erkan, 1991; Güler and Çakır, 2013; Gürses, Kaya, Doğar, Güneş&Yolcu, 2010; Hanımoğlu, 2010; Tekbaş, 2009; Pazarlı, 2009; Yıldırım, 2008). In the research carried out by Bonaccio and Reeve (2010), they found that there are three broad domains of perceptions of sources of test anxiety: students' perceptions of the test, their self-perceptions, and their perceptions of the test-taking situation. Each of these broad domains, in turn, subsumed a number of narrower categories of perceptions. Whereas students perceive test-related properties as the most anxiety-inducing, self-perceptions appear to be more strongly empirically related to the level of test anxiety they experience. In the research carried out by Hanna and Mekaela (2013), the aim was to explore how a sample of pupils perceived their first encounter with national tests in terms of perceived importance of the test, reported invested effort, and feelings of test anxiety, and how these aspects were related to test performance. Their results showed that a majority of the pupils seemed to perceive the test as rather important and claimed that they spent effort on the test; many students also reported feeling anxious before and during the test. Cheng and others (2014) examined test-takers' motivation, test anxiety, and test performance; their results illustrate the complex interrelationships of test-takers' motivation and test anxiety in their test performance. Differences in motivation and test anxiety emerged with regard to social variables (i.e., test importance to stakeholders and test purposes). Further, motivation and test anxiety, along with personal variables (i.e., gender and age), were associated with test performance. Nathaniel and Witmer (2004) examined the relationship between student anxiety about high-stakes testing and their subsequent test performance. At the end of the study, test anxiety was a significant predictor of test performance when controlling for other expected predictors of test performance, including school performance.

Despite the fact that several studies were conducted on test anxiety, these studies did not examine perceptions of test conception. Pekrun and others (2004) emphasized that test anxiety is neither the only relevant nor the most important test emotion in their research on test emotions. The findings of current research showed that anxiety is not the only human emotion relevant in such situations. Positive emotions, like hope, relief, and joy, and negative emotions, like anger, shame, and hopelessness, may be important as well, according to this analysis. The findings thus suggest that students' exam-related emotional life is richer than prevailing views on the importance of test anxiety seem to suggest; any account of emotions relating to tests and exams which narrows the range of feelings to anxiety only may risk misrepresenting reality.

When Turkish studies are examined, there was not any study that examined the metaphorical constructions of tests from the viewpoint of prospective teachers. Metaphorical concepts are those which are understood and structured not merely on their own terms, but rather in terms of other concepts. This involves conceptualizing one kind of object or experience in terms of a different kind of object or experience (Lakoff and Johnson, 1980). According to Cameron (2003), metaphor is a mode of thought and characterizes thinking. As illustrated by Lakoff and Johnson (1980): "For example, money is a limited resource and limited resources are valuable commodities. Paralleling these we have the metaphorical concept time is money which entails that time is a limited resource and time is a valuable commodity." Understanding prospective teachers' perceptions on test concepts through metaphors is important because they provide explanations for reactions to tests. Thus, in this research, it was aimed to develop a conceptual framework for understanding prospective students' subjective perceptions on test concepts and to close this gap in the literature.

Method

Participants

In this study, convenience sampling was used to compose the study group. According to Frankel &Wallen (2005), a convenience sample is a group of individuals who are available for study. Convenience samples cannot be considered representative of any population and should be avoided if at all possible. The study group of this research was 199 students enrolled in a Teacher Certificate Program at a university in Turkey. 77% of them were female and mean of the age was 26.93.

Data Collection and Analysis

In this research, data were collected from prospective teachers through metaphors. They were informed by the researcher about metaphors. Students were asked to complete "Tests are like…….; because ……."

statements. 199 prospective teachers were asked to write their thoughts on the test concept. The metaphors on the test concept were collected and evaluated. Before starting the data analysis, metaphors that were collected by the researchers were coded. 11 papers didn't contain any metaphor and 35 papers were incompatible; thus 46 papers were left out in this phase.

Data was analyzed using content analysis. Content analysis is a technique that enables researchers to study human behavior in an indirect way, through an analysis of their communications. All procedures that are called content analysis have certain characteristics in common. These procedures also vary in some respects, depending on the purpose being analyzed. There are two ways to convert descriptive information into categories: the researcher determines the categories before any analysis begins or becomes very familiar with the descriptive information collected and allows the categories to emerge as the analysis continues (Fraenkel&Wallen, 2005). With these aims, the metaphors were examined to identify any similarities. Metaphors that were collected from the students were divided into groups, called themes.

Findings

The data collected from prospective teachers was divided into seven themes by the researcher. Two weeks later, the researcher and two independent coders examined the metaphors and they placed most of the metaphors into themes again. 92% of the data were placed into an initial theme regarding the metaphor's reason. Inconsistencies were resolved through discussion. Metaphors from prospective teachers relating to the concept of test are shown in Table 1 with their frequencies.

Table 1. Metaphors relating to test concept

Metaphor name	f
Life	12
Gambling game, labyrinth, fork in a road	6
earthquake	5
Riddle, weather condition, women	4
Blackbox, shopping, steps, marriage	3
Box, chamber of horrors, gift box, high mountain, human, incubus, love, misty weather, mood, romp, rotten fruit, strainer, travelling, wardrobe.	2
Alice in wonderland, angry man, apartment, archery, bee, black and white film, blind lead, bottomless pit, brawl, buffet breakfast, cactus, calm before the storm, candy box, Chinese torture, colorful flowers, cooking, costume for a special day, dessert, destinity, disappointment, dog, earth, fire, fruit basket, game, garbage, gatekeeper, gloomy weather, good lover, hand, hippodrome, horror movie, Istanbul, joyful work, key, light, mother, negative pole of a magnet, nimbus, obscurity, opened door, pain, paradox, path, pepper, pepper spray, puzzle, race track, rain in a sunny day, rainbow, risk, rose, sea, selecting a dress, shaft, sudden bend, supporting character, swamp, sweet dream, traffic signal, trap, travelling in a crowded bus, tunnel, Turkish coffee given to groom, two faced human, war, watermelon.	1

In this study, students generated a total of 92 different metaphors. Dominant metaphors were life (f=12), gambling game (f=6), and labyrinth (f=6). These metaphors were organized into seven themes, namely tests as a mediator, tests as an ambiguity factor, tests as a disappointment factor, tests as a result, tests as an anxiety factor, tests as a selection, and test as a complexity. Each theme was evaluated separately.

Table 2. Metaphors in mediator theme

Metaphor name	f	Explanation
Steps	3	You can go to the next step as you achieve.
A sweet dream	1	You can be happy as you achieve.
Light	1	It illuminates the path to success.
Life	1	If you find the right way, you catch success.
Key	1	It opens achievement doors.
Race track	1	You reach the target.
Travelling in a crowded bus	1	You're stuck before you can relax.
Supporting character	1	It helps us.
Game	1	You can go the next step as you solve it.
Joyful work	1	You can go the next step as you solve it.
Puzzle	1	The picture is formed as long as you know.

This theme was represented by 11 metaphors by 13 prospective teachers. 8% of participants considered tests as a mediator. They focused on the tests helping reach an achievement or a target and put emphasis on the positive side of tests. The most frequently used metaphor in this theme was steps; some metaphors given by the students were:

"Tests are like steps, because you can go the next step as you achieve."

"Tests are like light, because it illuminates the path to success."

"Tests are like puzzle, because the picture is formed as long as you know."

Table 3. Metaphors in ambiguity theme

Metaphor name	f	Explanation
Weather condition	4	It is unpredictable (2). You can experience the four seasons in it. It only a prediction.
Women	3	Sometimes it is sophisticated but the answer is hidden in it. It is difficult to understand (2).
Black box	3	You don't know what it contains.
Gift box	2	You don't know what is in it.
Box	2	You do not know what's inside.
Life	2	You can imagine the result but you are wrong. You never know what will come out of your face
Love	2	It is not clear what will happen.
Mood	2	It can change according to the situation.
Watermelon	1	You do not know what came out of that.
Travelling	1	It is sometimes fun, sometimes boring.
Black and white film	1	It is indicting.
Bottomless pit	1	We do not know exactly.
Rose	1	It is nice but thorns may sting.
Pepper	1	You do not know whether it will be painful before you eat it.
Opened door	1	Those who fail can pass it.
Dessert	1	You do not know what to do.
Bee	1	Sometimes it produces honey, sometimes stings.
Obscurity	1	You cannot be sure of its accuracy.
Istanbul	1	It can alter at any time.
Human	1	It may vary depending on the situation.
Path	1	You do not know what's waiting for you on your way.

This category was represented by 21 metaphors by 33 prospective teachers. 21% of participants considered tests as an ambiguity. The most frequently used metaphors in this theme were women, weather condition, and black box, given by students as:

"Tests are like weather condition, because it is unpredictable."

"Tests are like women, because it is difficult to understand."

"Tests are black box, because you don't know what it contains."

Table 4. Metaphors in disappointment factor theme

Metaphor name	f	Explanation
Rotten fruit	2	Unlike the external appearance, the inside is awful.
Blind lead	1	You may be hit in your back.
Marriage	1	It gives happiness, but the end is disappointment.
Sudden bend	1	Everything may be difficult when everything is good.
Calm before the storm	1	Suddenly everything is transformed into obfuscation.
Turkish coffee given to groom	1	Induces nausea, but you have to drink it.
Life	1	You can imagine the result, but you are wrong.
Disappointment	1	You would be wrong to think of the right things.
Rain in a sunny day	1	It can be surprising.
Fork in a road	1	Selected option cannot bring us to the right path.

This category was represented by 10 metaphors by 11 prospective teachers. 7 % of participants considered tests as a disappointment; they focused on the negative pole of the test concept; some metaphors given by the students were:

"Tests are like fork in a road, because selected option cannot bring us to the right path."

"Tests are like life, because you can imagine the result, but you are wrong."

"Tests are like calm before the storm, because suddenly everything is transformed into obfuscate."

Table 5. Metaphors in result theme

Metaphor name	f	Explanation
Strainer	2	Discriminate the successful from the unsuccessful.
Cooking	1	It would be nice or failure.
War	1	There are winners and losers in at the end.
Risk	1	Either you win or lose.
Traffic signal	1	It indicates that you will pass or not.
Archery	1	You can hit the target or you can not shoot well.
Life	1	Either you win or lose.
Gatekeeper	1	It decides whether you pass the door.

This category was represented by 8 metaphors by 9 prospective teachers. 6% of participants considered tests as a result. The most frequently used metaphor in this theme was a strainer; some metaphors given by the students were:

"Tests are like war, because there are winners and losers in at the end."

"Tests are like risk, because either you win or lose."

"Tests are like gatekeeper, because it decides whether you pass the door."

Table 6. Metaphors in anxiety factor theme

Metaphor name	f	Explanation
Earthquake	5	Sometimes you can shake (3). It can be devastating (2).
Chamber of horrors	2	You pass through the anxiety. It is dark.
High mountain	2	It is difficult to overcome.
Romp	2	It shortens our lives.
Misty weather	2	We can get disappear.
Incubus	2	You're in a continuous struggle. It creates the anxiety effect for a long time.
Horror movie	1	From anywhere, at any time, it can be a scary thing.
Negative pole of a magnet	1	I'm positive we're pushing each other.
Nimbus	1	You become overwhelmed.
Pain	1	Its effects last longer.
Cactus	1	Results will sink us.
Swamp	1	You drown in it.
An angry man	1	It does not tolerate wrong.
Chinese torture	1	There is no escape hurts.
Dog	1	It makes us stressful.
Shaft	1	If you're foreign, it attacks.
Sea	1	You may drown.
Tunnel	1	It is scary.
Gloomy weather	1	It affects life.
Trap	1	Every moment you're fallible.
Hippodrome	1	Solvers are racing with each other.
Pepper spray	1	It will bring tears to your eyes.
Fire	1	If you don't know, you can burn.
Brawl	1	You're constantly struggling.

This category was represented by 24 metaphors by 33 prospective teachers. 22% of participants considered tests as an anxiety factor. The most frequently used metaphor in this theme was an earthquake, given by the students as:

"Tests are like incubus, because it creates the anxiety effect for a long time."

"Tests are like tunnel, because it is scary."

"Tests are like dog, because it makes us stressful."

Table 7. Metaphors in selection theme

Metaphor name	f	Explanation
Gambling game	6	You cannot capture the correct answer. You take a chance. With luck, you can accomplish it. Sometimes you lose, sometimes you can win. If you're lucky you win.
Fork in a road	5	Only one way leads you where you're going. You will not find the way to go.
Life	5	There are options, but we're trying to find the truth. It provides options. You need to find the right path that leads to success. We have to choose.
Shopping	3	There are many options.
Marriage	2	An instant decision will affect your whole life You have to choose.
Wardrobe	2	There are many choices. You will not know which one to select.
Colorful flowers	1	You will not know which one to select
A costume for a special day	1	You cannot choose any one.
Buffet breakfast	1	It is difficult to choose any one.
Selecting a dress	1	You choose a costume, but after you left home you wish you had chosen the other one.
A good lover	1	It is difficult to find without looking at other options.
Hand	1	It has five options.
Fruit basket	1	It has options.
Destiny	1	It provides options.
Candy box	1	You cannot choose anyone.
Apartment	1	It is varied.
Travelling	1	There are many ways in way.
Rainbow	1	Every color holds in it.

This category was represented by 18 metaphors by 35 prospective teachers. 23% of the participants considered tests as a selection. The most frequently used metaphor in this theme was a gambling game; some metaphors given by the students were:

"Tests are like gambling game, because sometimes you lose, sometimes you can win."

"Tests are like fork in a road, because only one way leads you where you're going."

"Tests are like life, because you need to find the right path that leads to success."

Table 8. Metaphors in complexity theme

Metaphor name	f	Explanation
Labyrinth	6	It misleads us. Sometimes I get lost in it. It's a mess.
Riddle	4	It scrambles your mind (3). You cannot fully understand.
Life	3	It is complex. Options will take you into chaos.
Human	1	It is complex.
Garbage	1	It is complex.
Earth	1	It is distracter, complex and difficult to understand.
Paradox	1	It scrambles your mind.
Alice in wonderland	1	We can get lost in.
Two faced human	1	It misleads us.

This category was represented by 9 metaphors by 19 prospective teachers. 13 % of the participants considered tests as a complexity. The most frequently used metaphor in this theme was labyrinth; some metaphors given by the students were:

"Tests are like labyrinth, because sometimes I get lost in it."

"Tests are like riddle, because it scrambles your mind."

"Tests are like life, because options will take you into chaos."

Results and Discussion

Students generated 92 different metaphors of the test concept. Dominant metaphors were life (f=12), gambling game (f=6), and labyrinth (f=6). These metaphors were organized into seven themes, namely tests as a mediator, tests as an ambiguity factor, tests as a disappointment factor, tests as a result, tests as an anxiety factor, tests as a selection, and tests as a complexity. In sum, the results of this study show that student's perceptions on the test concept are positive and negative. The popular theme was "selection". Each theme was given separately.

The mediator theme was represented by 11 metaphors by 13 prospective teachers. 8% of the participants considered tests as a mediator, focusing on tests as helping to reach targets or achievements; this emphasized the positive side of tests. The most frequently used of the metaphors in this theme was steps. From this result, it can be said that, in all of the metaphors, only 8% of them were positive. Pekrun et al. (2004) researched students' test emotions to develop a test emotions scale. 530 emotions were reported for the 185 exam episodes selected by the participants. Of these emotions, 180 were positive and 305 were negative. The ambiguity theme was represented by 21 metaphors by 33 prospective teachers. 21% of the participants considered tests as an ambiguity. The most frequently used metaphors in this theme were women, weather condition, and black box.

The disappointment theme was represented by 10 metaphors by 11 prospective teachers. 7% of the participants considered tests as a disappointment. They focused on the negative pole of the test concept.

The result theme was represented by 8 metaphors by 9 prospective teachers. 6% of the participants considered tests as a result. The most frequently used metaphor in this theme was strainer.

The anxiety theme was represented by 24 metaphors by 33 prospective teachers. 22% of the participants considered tests as an anxiety factor. The most frequently used of the metaphor in this theme was earthquake. This result may be because teachers use tests as a mobbing factor. Pekrun et al. (2004) stated that anxiety accounted for 23.6% of students' reported emotions, implying that the remaining 76.4% was made up of other emotions. Concerning negative emotions, anxiety was reported most often, but anger was also mentioned quite frequently, as were shame/guilt and hopelessness.

The selection theme was represented by 18 metaphors by 35 prospective teachers. 23% of the participants considered tests as a selection. The most frequently used metaphor in this theme was a gambling game, possibly because tests are perceived as multiple-choice items.

The complexity theme was represented by 9 metaphors by 19 prospective teachers. 13% of the participants considered tests as a complexity. The most frequently used metaphor in this theme was labyrinth.

In this research, 21% of participants considered tests as an ambiguity, possibly because of uncertain test formats or content. This situation can be an indicator that teachers do not inform students about tests.

Recommendations

Understanding prospective teachers' perceptions on the test concept through metaphors is important because they provide explanations for reactions to tests. The use of metaphors in this research provided a means for exploring the perceptions of the test concept. As a result of this research, it can be said that most of the participants considered tests as a negative concept (especially as an anxiety factor), possibly because teachers use tests as mobbing or threat factors. This research finding suggests that more attention needs to be paid to raising awareness of the process of measurement and evaluation. Many studies show that test

anxiety affects test achievement. Thus, in measurement and evaluation processes, the test concept should be introduced as a concept that helps recognize the student's knowledge and ability (positive meaning); prospective teachers can transfer this concept to their students as a positive concept. In Turkey, researches related to the test concept are limited to test anxiety. Therefore, further researches should emphasize other emotions on the test concept: why students feel like this and how these emotions affect test success. In this research, 21% of the participants considered tests as an ambiguity. Apart from this result, it can be said that tests are not an obvious concept for students, possibly because of uncertain test formats or content. Therefore, teachers should give some information about test format and content, possibly following a framework for test content.

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