Initial Development and Validation of the Positive Teacher Scale

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Abstract

In literature, positive features of teachers have been investigated under many dimensions. Positive teacher studies focus more on positive teacher-student relationships. Although there are measurement tools that measure positive student-teacher relationships in the literature, there are no tools of measuring the positive teacher characteristics in a comprehensive way. The aim of this study is to develop a scale that measure positive teacher qualities. Parallel with the aim of the present study, a cross sectional research design was used. In this study, scale development process was followed. Item preparations, item analysis, exploratory and confirmatory factor analysis, reliability and validity analysis have been considered in this study. The data were collected form university students (203 individuals in exploratory analysis group; 209 individuals in confirmatory analysis group). According to factor analysis results, the scale which is consist of six dimensions which are named such as "satisfying students' need for competence", "building positive relationships with students", "concretize the subject which is taught", "being extravert", "supporting students' flow experience" and "supporting students' class engagement" has 66.01% explained variance. In the future some studies might be carried out via Positive Teacher Scale.

Keywords.

Positive teacher, develop a scale, reliability, validity, positive psychology.

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Students are not machines. They are social creatures. Thus, education is based on studentteacher interactions in the school and other settings (Connell, 1990; Goodnenow, 1993; Wentzel, 2002). Both students and teachers bring their qualities which might be positive or negative in learning process and classroom (Birch & Ladd, 1997; Eryılmaz, 2014; Eryılmaz & Mammadov, 2016). In literature positive features of teachers have been investigated under many dimensions. To sum up these features, generally positive teacher qualities might be considered in two important domains in the literature. Firstly, positive relationships with students might be an important indicator of positive teachers' qualities. This feature has been investigated with so many terms such as sense of relatedness, belongingness, and perceived pedagogical caring (Connell, 1990; Goodnenow, 1993; Wentzel, 1998). Positive relationships with students have been yielded positive results. For instance, according to Wentzel (2002), students are predisposed to internalize positive school-related values and goals via positive relationships between students and teachers. Moreover, positive relationships between students and teachers are associated with decreasing in externalizing, internalizing and learning problems; increasing motivation to learn and school adjustment, academic achievement (Baker, 2006; Howes & Hamilton, 1992; Hughes, Cavell, & Jackson, 1999; Pianta & Steinberg, 1992).

The second most important positive teacher qualities are some certain personality traits. According to literature, some kinds of teachers' qualities such as well-balanced, eager to teach, humble, friendly, fond of their job, polite, serious, warm, creative, flexible, openness and extraversion might be seen as indicator of positive teacher qualities (Beishuizen et al., 2001; Bennett, 1982; Eilam & Vidergor 2011; Goldstein & Benassi, 2006; Larsgaard, Charles, Kelso, Thomas, & Schumacher, 1998; Polk, 2006; Thibodeau & Hillman, 2003). Recent studies indicate that positive teachers' personality traits have been related with students' subjective well-being and academic achievement (Eryılmaz, 2014).

Abovementioned positive qualities have not been directly investigated. It might be deducted from results of studies. Additionally, in literature, there have been many studies about teacher qualities. Studies focusing on such qualities as ideal teacher (Amon & Reichel, 2007) excellent teacher (Goldstein & Benassi, 2006), effective teacher (Polk, 2006) are often made without reference to bring out students' positive affection. On the other hand, some studies focus on some teachers' qualities that bring out students' positive emotions (Eryılmaz, 2014; Montalvo et al., 2007). Furthermore, they do not use a specific and directly related scale that measure positive teacher qualities. Moreover, there have been some studies that measure teacher self-efficacy (Çapa, Çakıroğlu & Sarıkaya, 2005), expectations from teacher (Eryılmaz, 2013); teacher personality traits (Eryılmaz, 2014). These studies also do not use a specific and directly related scale that measure positive teacher qualities.

As far as the results of positive teacher qualities is concerned, it appears that having positive teacher qualities might be yielded for students some positive consequences such as academic achievement (Chamorro-Premuzic & Furnham, 2005), subjective well-being (Eryılmaz, 2014), mental health (Wentzel, 2002), building social relationships and motivation to learn (Howes & Hamilton, 1992; Pianta & Steinberg, 1992) school adjustment (Baker, 2006). According to Seligman and colleagues (2009), increasing the well-being of the students in the educational setting reduces their depression, increases the satisfaction of their life and helps them to learn better and to think more creative. According to Fredrickson (2001), the positive feelings of individuals often have positive effects on their lives. Consequently, teachers might be seen as the most important mediators in raising the well-being of students. For instance, recent studies indicate that positive teachers have improved both the achievements and the well-being of the students (Eryılmaz, 2014). Thus, positive teacher qualities might be determined. To this aim, some scales development studies might be carried out. While many studies have been conducted indirectly about

positive teacher qualities, few studies are directly related the development of the scales which are positive teacher qualities. For this reason, the scale development study which is directly related with positive teacher qualities might be the most important tool to reach some educational goal and achievements. To sum up, the aim of this study is to develop a scale that measure positive teacher qualities.

Method

Participants

In this study, there were two study groups. The first group was exploratory factor analysis group. The second one was confirmatory factor analysis group. Exploratory factor analysis group: There were 203 university students of whom 63 (31.0%) male and 140 (69.0%) female. They were undergraduate students in mathematics science, counselling, and primary and history teachers' departments. Their ages ranged from 18 to 31. Mean age was 2.76, and also standard deviation was 1.84. They selected positive teachers who taught 40 different lessons. Their selected positive teachers mean age was 37.80, and also standard deviation was 7.51. They selected 203 positive teachers of whom 79 (38.9%) female and 124 (61.1%) male. Confirmatory factor analysis group: There were 209 university students of whom 71 (34.0%) male and 138 (66.0%) female. They were undergraduate students in biology science, counselling, tourism, agricultural engineer, and also geography and history teachers' departments. Their ages ranged from 18 to 39. Mean age was 22.69, and also standard deviation was 2.54. They selected positive teachers who taught 51 different lessons. Their selected positive teachers mean age was 37.35, and also standard deviation was 8.54. They selected 209 positive teachers of whom 59 (28.2%) female and 149 (71.3%) male.

Measures

Positive-Negative Affect Scale (PANAS). The PANAS was developed by Watson and his colleagues (1998). The scale consists of 10 positive emotions and 10 negative emotions, and also is a five point likert type. Gençöz adapted the scale into Turkish culture. In the adaptation study, the scale reliability values were found .83 for positive affect and .86 for negative affect. According to criterion validity, positive affect was computed with depression and anxiety (-.48 and -.22); and also negative affect was computed with them (.51 and .47).

Data Analyses and Procedures

The aim of this study is to develop a scale that measure positive teacher qualities. The data were collected form university students. All ethical considerations were applied. Several steps were followed in this research. First, scale items were created. Secondly, item analysis was carried out. Third, exploratory factor analysis and reliability analysis studies were conducted. A fourth, confirmatory factor analysis study was conducted. Fifth, the validity of the scale was examined.

The process of preparation of items, firstly studies that have considered positive teacher qualities have been examined (Baker, 2006; Beishuizen et al., 2001; Bennett, 1982; Eilam & Vidergor 2011; Goldstein & Benassi, 2006; Eryılmaz, 2014; Howes & Hamilton, 1992; Hughes, Cavell, & Jackson, 1999; Larsgaard, Charles, Kelso, Thomas, & Schumacher, 1998; Montalvo et al., 2007; Pianta & Steinberg, 1992; Polk, 2006; Thibodeau & Hillman, 2003). As a second method, the interview method was utilized. With this direction, the interview with the 15 female and 15 male university students has been carried out. In the interview process, positive emotions in the PANAS scale were considered. "Do you consider, who was your positive teacher who brought out positive emotions in the secondary school, high school and university?" and "Consider 10 positive emotions, how did he/she activate and increase

these positive emotions?" Sentence based content analysis method was used to answer these questions. The results of analysis indicate that six important themes might be considered. These sentences were transformed into scale items. Two specialists who have PhD degree measurement and educational psychology checked these items. As a result, 30 items were utilized in the trial version of the scale.

Then, the study was carried out with this trial form. In this study, positive-negative affect scale PANAS was used for validity of the scale. PANAS was used for two different aims. The first is to determine students' affection in the positive teachers' lessons. The second one is to determine teachers' affection that is experienced in the classroom on the point of observers. The aim of this study is to develop a scale that measure positive teacher qualities. Parallel with the aim of the present study, a cross sectional research design was used. In this study, scale development process was followed. Item preparations, item analysis (27% upper-below group), exploratory and confirmatory factor analysis, reliability and validity analysis have been considered in this study.

Results

Item Analysis

In this study before the factor analysis step, item analysis has been carried out. In item analysis process 27% upper and lower group analysis method was utilized. According to results, all items set apart from upper group to lower group (p < .01; t values ranged from 5.276 to 11.651).

Exploratory Factor Analysis

To analysis of the factor structure of the Positive Teacher Scale principal component analysis method was used. Thus, Kaiser-Meyer-Olkin (KMO) and Barlett's Test of Sphercity were investigated. Acording to results, KMO value was .848; and also Barlett's Test of Sphercity test was 235.683 (p<.00). These results indicated that the sample size was sufficient. Subsequently, factor analysis was carried out.

According to factor analysis results, the scale which is consist of six dimensions which are named such as "satisfying students' need for competence", "building positive relationships with students", "concretize the subject which is taught", "being extravert", "supporting students' flow experience" and "supporting students' class engagement" has 66.01% explained variance. Satisfying students' need for competence dimension has 13.46% variance and 3.23 eigenvalue; building positive relationships with students dimension has 13.40% variance and 3.22 eigenvalue; concretize the subject which is taught dimension has 11.14% variance and 2.67 eigenvalue; being extravert dimension has 1.49% variance and 2.52 eigenvalue; supporting students' flow experience dimension has 8.85% variance and 2.12 eigenvalue; and also supporting students' class engagement dimension has 8.66% variance and 2.08 eigenvalue

The Reliability of the Positive Teacher Scale

The reliability of the positive teacher scale was computed with Cronbach Alpha technique and test-retest method. According to reliability analysis, satisfying students' need for competence dimension has .86 alpha value; building positive relationships with students' dimension has .83 alpha value; concretize the subject which is taught dimension has .78 alpha value; being extravert dimension has .87 alpha value; supporting students' flow experience dimension has .71 alpha value; and also supporting students' class engagement dimension has .68 alpha value. Additionally, the total point of the scale has .89 alpha values.

In this study, test-retest reliability analysis also was computed with the help of 28 students. According to results, satisfying students' need for competence dimension has .64 correlation coefficient; building positive relationships with students dimension has .68 correlation coefficient; concretize the subject which is taught dimension has .86 correlation

coefficient; being extrovert dimension has .62 correlation coefficient; supporting students' flow experience dimension has .76 correlation coefficient; and also supporting students' class engagement dimension has .67 correlation coefficient. Additionally, total point of the scale has .80 correlation coefficient value.

Table 1. The results of exploratory factor analysis

		Factor dimensions				
Items	ı	2	3	4	5	6
He/she makes us feel that we are successful.	.768		.339			
He/she gives us the chance to show how talented we are	.742					
He/she tells the right solution until we understand	.729					
He trusts us that we can succeed.	.715				.319	
He/she makes us feel that we are successful.	.610	.320				
He/she asks how we are	.323	.802				
He/she deals with our problems		.757				
He/she knows our names		.714				
He/she guides us.		.699				
He/she prepares us for the future.		.649				
He/she tells the subjects with examples from everyday life .802			.802			
He/she shares various anecdotes / stories in class.			.761			
He/she tells topics by giving examples from his own life.			.741			
He/she gives interesting examples.			.625			
He/she is social.				.899		
He/she is a friendly man/woman.				.895		
He/she is smiling.				.772		
He/she teaches at the level we can understand the I	esson.				.780	
He/she makes the lesson interesting and prevents					.754	
us from the class- disengagement.						
He/she keeps our curiosity alive					.565	
He/she allows the students to participate in the lesson.						.732
He/she warns us occasionally when we do not listen to the lesson						.728
He/she uses cues like listening carefully to this subjection.						.679
He/she solves the questions on the board	.312		C-+:-(.604

Note. Turkish version of the scale is presented in Appendix A. I. Satisfying students' need for competence, 2. Building positive relationships with students, 3. Concretize the subject which is taught, 4. Being extravert, 5. Supporting students' flow experience, 6. Supporting students' classroom engagement

The Results of the Confirmatory Factor Analysis of the Positive Teacher Scale In this study, confirmatory factor analysis also has been carried out. Some fit indexes were found such as NFI = .92; NNFI = .96; CFI = .97; IFI = .97; RFI = .91; GFI = .86 and AGFI = .83. The ratio of chi-square / df was found 1.63.

The Validity of the Positive Teacher Scale

The validity of the positive teacher scale was computed with the PANAS scale. The correlation coefficient between positive teacher and students' positive affection was found .413 (p<.01). Furthermore, the correlation coefficient between positive teacher qualities and their positive affection was found .465 (p<.01). As a result of this analysis, it might be considered that the scale has sufficient reliability and validity values.

Discussion

In this study, the positive teacher scale was developed. The findings of related studies indicated that positive experiences that produced positive emotions enhanced not only students' subjective well-being, motivation to learn and academic success but also teachers' achievement, self-regulation and classroom management (Eryılmaz, 2014, 2015; Meyer & Turner, 2006; Pekrun, 1992; Sutton, Mudrey-Camino & Knight, 2009). In contrast, negative experiences that produced negative emotions decreased not only students' interest, academic achievement, motivation and engagement but also teachers' achievement in the learning process (Birch & Ladd, 1997; Eryılmaz, 2014; Pekrun, 1992). Thus, how positive emotions could be activated in school settings for teacher and students is an important subject. The present study is directly related to positive experiences. Therefore, it appears to make an important contribution to the literature.

According to the results of the analysis, items structure and literature, the first dimension of the scale was named as satisfying students' need for competence in this study. Competence is the most important psychological need that caused optimal development (Deci & Ryan, 1985); and also increased perceived control (Skinner, 1995), intrinsic motivation, social development and well-being (Ryan & Deci, 2000). These gains indicate that need for competence should be satisfied in the classroom settings. Students might satisfy this need themselves. This study shows that teachers also satisfy this need as a mediator. If they satisfy this students' need, they might be called positive teacher.

According to the results of the analysis, items structure and literature, the second dimension of the scale was named as building positive relationships with students in this study. Human is a social creature. Intimate and positive relationships are essential for healthy development (Prager, 1997). Studies indicate that positive teacher-student relationships diminish students' aggression (Meehan, Huges & Cavell, 2003), stress (Yoon, 2002), and also increase students' satisfaction with school (Baker, 1999), subjective well-being and academic achievement (Eryılmaz, 2014). These relationships have been seen as resources for students' learning and development (Meehan, Huges & Cavell, 2003). Furthermore, according to Wubbels and Brekelmans (2005) the way of creating positive teacher–student relationships has been investigated in the two decades of research. This study indicates that positive teachers might be seen as a positive relationships builder.

According to the results of the analysis, items structure and literature, the third dimension of the scale was named as concretizing the subject which is taught in this study. In literature concretizing has been evaluated as a metacognitive learning strategy (Flavell, 1987). According to Vermunt (1996) and Reynolds (1992), students need to concretize the subject in the class and other setting. That is because students have difficulties with concretizing and applying the subject matter and they see little relations between what they study and phenomena in daily life. The same feature seems on Turkish students (Tandoğan & Orhan, 2007). Concretizing has been also as a learning style (Kolb, 2000), a part of experiential learning (Standing, 1973). This study indicates that positive teachers have discovered the effect of concretizing the subject.

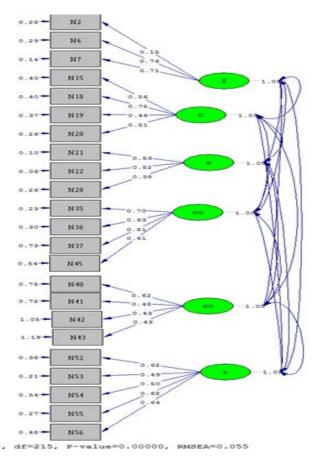


Figure 1. Confirmatory factor analysis

Note: Co=Satisfying Students' Need for Competence; r=Building Positive Relationships with Students; c=Concretize the Subject Which Is Taught; e=Being Extravert; f=Supporting Students' Flow Experience" And En: Supporting Students' Class Engagement

According to the results of the analysis, items structure and literature, the fourth dimension of the scale was named as being extrovert in this study. According to literature the most important feature of the happy people is extroversion (Costa & McCrea, 1980; DeNeve & Cooper, 1998; Eryılmaz & Ercan, 2011; Eryılmaz & Öğülmüş, 2010; Myers & Diener, 1995). Furthermore, extrovert individuals are happier than the others (Lyubomirsky, 2001). Eryılmaz (2104) indicate that extrovert teachers' students have higher academic achievement and subjective well-being. Thus, this study shows that extroversion is the most important positive teachers' feature.

According to the results of the analysis, items structure and literature, the fifth and sixth dimensions of the scale were named as supporting students' flow experience and class engagement. The engaged life is an indicator of happy life (Seligman, 2002; Seligman & Csikszentmihalyi, 2002). Schools and classroom have been seen as a domain of engagement (Shernoff et all, 2003). Creating optimal work environment is not only related with students' happiness but also it is related with teachers' happiness (Basom & Frase, 2004). Flow and engagement have positive effect on students' learning and achievement (Eryılmaz, 2015). This study indicates that students have discovered the effect of engagement and flow. Thus, they want to see these qualities their positive teachers. According to results of the present study, positive teachers have six important indicators from the students' point of view. These qualities might be measured with Positive Teacher Scale. The most important limitation of the present study is that it is based on students' perceptions. In the future some studies might be carried out via Positive Teacher Scale.

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Appendix A

Pozitif Öğretmen Ölçeği (PÖÖ): Aşağıda yer alan özelliklere öğretmeninizin ne kadar sahip olduğunu değerlendirin.

Hiç Çok Az Biraz Soğunlukl ^

Öğrencinin akış yaşamasına yardımcı olmak

Dersi anlayabileceğimiz düzeyde anlatır

Dersi ilginç hale getirerek dersten kopmamızı engeller

Derse karşı merakımızı canlı tutar

Öğrencinin yetkinlik ihtiyacını doyurmak

Başarılı olduğumuzu hissettirir

Bize ne kadar yetenekli olduğumuzu gösterme şansı verir

Doğru çözümü biz anlayıncaya kadar anlatır

Derste, başarılı olabileceğimiz konusunda bize güven verir

Dışa dönük olmak

Sosyaldir

Cana yakındır

Güler yüzlüdür

Konuyu somutlaştırmak

Konuyu günlük hayattan örneklerle anlatır

Derste değişik hikâyeleri/anekdotları paylaşır

Kendi hayatından örnekler vererek ders anlatır

İlginç örnekler verir

Öğrencinin derse katılımını sağlamak

Bizi derse kaldırır

Biz dersi dinlemediğimizde arada bir bizi uyarır

Derste burayı can kulağı ile dinleyin gibi cümleler kullanır

Soruları tahtada çözer

Öğrenci ile olumlu ilişkiler kurmak

Hal hatır sorar

Sorunlarımızla ilgilenir

İsimlerimizi bilir

Bize yol gösterir

Gelecekteki yaşamımız için destek olur