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Achievement Goals and Academic Locus of Control: Structural Equation Modeling

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Abstract

Problem Statement: Achievement goal theory has become a dominant viewpoint in understanding students' motivation. Recently, a large body of research has investigated the association of achievement goals with adaptive and maladaptive outcomes. However, to date, studies have not directly examined the relationships between 2X2 achievement goals and the academic locus of control.

Purpose of Study: The purpose of this research is to examine the relationships between the academic locus of control and achievement goals.

Methods: The study sample consisted of 627 university students from Sakarya University, Turkey. Of the participants, 379 were female and 248 were male, and their mean age was 20.2. The Academic Locus of Control Scale and the 2X2 Achievement Goal Orientations Scale were used to assess the academic locus of control and achievement goals. The relationships between the academic locus of control and achievement goals were examined using correlation and the hypothesized model was tested through structural equation modeling. The data were analyzed by LISREL 8.54 and SPSS 13.0.

Findings and Results: The results showed that while the external academic locus of control correlated positively with learning-avoidance, performance-approach/avoidance goals, the internal academic locus of control correlated negatively with performance-approach/avoidance goals. On the other hand, the internal academic locus of control was related positively to learning-approach/avoidance goals. Results from structural

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equation modeling demonstrated that the model was a good fit ($\chi^2=24.61$, $p=0.00343$, GFI=.98, AGFI=.96, NFI=.91, CFI=.95, RMSEA=.059). According to path analysis results, learning-avoidance and performance-approach/avoidance goals were predicted positively by the external academic locus of control. Further, the internal academic locus of control predicted learning-approach/avoidance goals in a positive way and performance-approach/avoidance goals in a negative way. External and internal academic locus of control variables predicted 68% of learning-approach, 48% of learning-avoidance, 34% of performance-approach, and 59% of performance-avoidance goals variances.

Conclusions and Recommendations: This study reports that the academic locus of control affects achievement goals directly. Students high in the external academic locus of control are more likely to adopt LVGO, PPGO, and PVGO than are students that are high in the internal academic locus of control. In contrast, students high in the internal academic locus of control are more likely to adopt LPGO and LVGO than are students that are high in the external academic locus of control. That the samples presented here are limited to university students restricts the generalizability of the findings. For that reason, it is also important to investigate the variables studied in this research on sample groups other than university students.

Keywords: Academic locus of control, achievement goals, structural equation modeling, path analysis

The achievement goals theory, one of the most attractive research areas in recent years, has been extensively studied in the fields of education and psychology (Akin & Cetin, 2007; Eren, 2009). Ames (1992) defines achievement goals as an “integrated pattern of beliefs, attributions, and affect that produces intentions of behavior” (p. 261). This theory assumes that students differ from each other in the purpose of their achievement behavior and that these differences are associated with distinctive emotional, motivational, cognitive, and behavioral outcomes (Covington, 2000; Pintrich, 2000b).

Dichotomous Achievement Goal Framework. Achievement goal theorists commonly identified two goal orientations: learning and performance (Ames, 1992; Ames & Archer, 1988; Anderman & Maehr, 1994; Dweck & Leggett, 1988). Students with learning goals try to improve their skills, prefer challenging tasks, and persevere in the face of failure. These students have some tendencies, such as usage of deep cognitive strategies and controlling the subjects they will learn (Middleton & Midgley, 1997). Also, they see their learning errors as a natural part of their learning process, react adaptively when they fail, and perceive these failures as an opportunity for self-development (Ames & Archer, 1988; Dweck & Leggett, 1988).

Students who pursue performance goals, on the other hand, have a purpose of demonstrating competence relative to others (Ames & Archer, 1988; Dweck, 1986). These students try to validate their ability, outperform their classmates, not engage in

challenging tasks (because it threatens demonstration of their ability), and withdraw in the face of failure (Ames, 1992; Anderman & Maehr, 1994; Dweck & Leggett, 1988; Maehr & Midgley, 1991). They tend to use some superficial learning strategies such as memorizing, self-handicapping, and an urgent call for help when faced with a difficult learning task (Meece, Blumenfeld, & Hoyle, 1988; Pintrich, 2000b; Pintrich & DeGroot, 1990). Moreover, since these students perceive learning errors as lack of ability and incompetence, they avoid difficult tasks (Pintrich, 2000b). Thus, when they fail, they react maladaptively (Ames & Archer, 1988), and when faced with difficulties they behave in a learned helplessness way (Dweck & Leggett, 1988).

Generally, studies have demonstrated that while having a learning goal orientation has motivational advantages, having a performance goal orientation can be harmful and maladaptive (Ames, 1984; Dweck & Leggett, 1988; Pintrich & Schunk, 2002; Urdan & Maehr, 1995). For instance, learning goals were positively related to numerous adaptive academic and motivational outcomes, including self-efficacy, perceived ability, task engagement, attributions of success to effort, use of cognitive and self-regulatory strategies, and academic achievement (Ames 1992; Dweck & Leggett, 1988; Meece et al., 1988; Midgley & Urdan, 2001). Contrarily, studies demonstrated that performance goals were positively associated with maladaptive variables such as lack of persistence, negative affectivity, and increased anxiety (Eppler & Harju, 1997; Meece et al., 1988). But performance orientation has been found to be positively related to academic achievement and high performance (Barron & Harackiewicz, 2001; Barron & Harackiewicz, 2003; Harackiewicz, Barron, Carter, Lehto, & Elliot, 1997; Harackiewicz, Barron, Tauer, & Elliot, 2002).

Trichotomous Achievement Goal Framework. Some researchers (Elliot & Church, 1997; Kaplan & Midgley, 1999; Midgley, Kaplan, & Middleton, 2001) have claimed that performance goals do not always have negative effects and some conditions could lead students more adaptive patterns of achievement than do learning goals. As a result of these suggestions, the learning-performance dichotomy has been revised and a trichotomous achievement goal framework has been proposed. In this new model, the learning goal construct remained the same, but the performance goal construct has been partitioned into two parts: performance-approach and performance-avoidance goals.

According to this model, the performance-approach orientation describes those motivated to perform better than their peers and the performance-avoidance orientation describes those motivated to avoid performing poorly relative to others (Elliot & Church, 1997). Approach motivation is oriented by the possibility of a positive outcome, while avoidance motivation is oriented by the possibility of a negative outcome (Elliot, 1999). More specifically, while a student adopting the performance-approach orientation tries to get the highest mark in the class, a student adopting the performance-avoidance orientation tries to avoid getting the lowest mark (Elliot & Church, 1997; Pintrich & Schunk, 2002).

The distinction of performance-approach/avoidance is related to Higgins's (1997, 2000) regulatory focus theory, which suggests that there are two distinct forms of

self-regulation: promotion and prevention. Both describe individual differences in the ways individuals approach problems and pursue goals and the ways individuals derive value from solving problems and achieving goals (Mooradian, Herbst, & Matzler, 2008). While the first involves concern with the presence and absence of positive outcomes (gains and non-gains); the latter involves concern with the absence or presence of negative outcomes (non-losses and losses) (Ouschan, Boldero, Kashima, Wakimoto, & Kashima, 2007). Although the goals toward which activities are directed can be construed in terms of gains or losses, this theory is also applicable to the construal of strategies and distinguishes two strategies for goal attainment, eagerness, and vigilance (Crowe & Higgins, 1997; Higgins, 1997, 2000).

In various studies, the factor structure of three-dimensional achievement goal orientations model was supported and a differentiation of approach/avoidance was confirmed (Elliot & Church, 1997; Elliot & Harackiewicz, 1996; Middleton & Midgley, 1997). Also, research showed that the performance-approach orientation is associated with both adaptive (such as, high academic achievement and high competency expectation, e.g., Barron & Harackiewicz, 2003; Church, Elliot, & Gable, 2001; Elliot & Church, 1997) and maladaptive variables (such as, usage of superficial cognitive strategies and fear of failure, e.g., Elliot & Church, 1997; Elliot & McGregor, 2001). However, performance-avoidance orientation was consistently positively related to negative variables such as, the fear of failure (Elliot & Church, 1997), usage of superficial cognitive strategies (Elliot & McGregor, 2001), low internal motivation, and poor academic performance (Church et al., 2001). These studies also showed that learning orientation has some positive outcomes, including being ambitious in learning tasks, internal motivation, usage of deep cognitive strategies, being prepared for exams, and keeping the learned material in memory for a long time (Church et al., 2001; Elliot & Church, 1997; Elliot & McGregor, 2001; McGregor & Elliot, 2002).

2x2 Achievement Goal Framework. Although the three-dimensional achievement goals model is widely accepted, recently, most researchers (Elliot & McGregor, 2001; Elliot & Covington, 2001; Elliot & Trash, 2001; Pintrich, 2000a, b; Pintrich, Conley, & Kempler, 2003) have suggested that learning goal orientation can be partitioned into approach and avoidance orientations. This new model contains four achievement goal orientations: learning-approach goal orientation (LPGO), learning-avoidance goal orientation (LVGO), performance-approach goal orientation (PPGO), and performance-avoidance goal orientation (PVGO). According to the 2X2 achievement goal orientations model, in which the previous three achievement goal constructs remain same, students with LVGO focus on the avoidance of losing their skills, forgetting what they have learned, misunderstanding material, leaving a task incomplete, or doing worse than they have done previously (Elliot & McGregor, 2001; Pieper, 2003).

Subsequently, Pintrich (2000b, c) specified the difference between the learning-approach and learning-avoidance orientations, comparing definitions of achievement in two kinds of orientation. While the students adopting learning-approach orientation perceive being successful as self-development, increasing skill and

competency level, and gaining a deep understanding towards the material he/she will learn, the students adopting learning-avoidance orientation perceive it as avoidance of misunderstanding or failing to learn completely. The 2X2 achievement goals model was tested and in confirmatory factor analysis, empirical support was obtained for the differentiation of the four goals (Elliot & McGregor, 2001; Finney, Pieper, & Barron, 2004).

Academic locus of control and achievement goals. The locus of control structure suggested by Rotter (1954) shows a distribution on dimensions of an internal-external locus of control; in a way, it was bound to the individual perceiving the degree of their own responsibilities for events. Individuals with an internal locus of control typically engage in proactive and adaptive behaviors and believe that their successes or failures result from their own behaviors (Battle & Rotter, 1963; Demellow & Imms, 1999; Rothbaum, Weisz, & Snyder, 1982). Conversely, an external locus of control is characterized by the belief that consequences are a result of fate, luck, or powerful others. Individuals with an external locus of control might not take responsibility for their own actions or behaviors and attribute their successes or failures to something incongruent with their own behaviors (Rotter & Mulry, 1965; Stipek, 1993).

The academic locus of control was defined by Trice (1985) as an expectation by an individual that his or her behavior can influence academic outcomes and it reflects students' beliefs about whether factors within themselves or outside of themselves determine academic success. Believing that one has control over one's academic success should facilitate the exertion of actual control over events related to such success (Howell, Watson, Powell, & Buro, 2006). The academic locus of control has been associated with a variety of achievement-related behaviors. For example, Pino and Smith (2003) suggested that if one has an internal academic locus of control, misses or skips class rarely, or rejects the GPA perspective, he or she will be much more likely to resist the temptation to engage in academic dishonesty (such as, cheating). Early studies on the academic locus of control have reported that students with an internal academic locus of control tend to be more effective in interpersonal relations (Rotter, 1966) and to be more resistant to influence attempts (Ritchie & Phares, 1969), experience less painful relationships with teachers (Bryant, 1972), and are rated as more positive and less deviant in classroom behavior (Buck & Austrin, 1971). Further internal academic locus of control was found to be positively related to task persistence (James, 1965) and to achievement motivation (Weiner & Kukla, 1970). In another study, Mooney, Sherman, and LoPresto (1991) found that there was a significant linear relationship between the internal academic locus of control and college adjustment. Nonetheless, the external academic locus of control was positively related to college absenteeism (Trice & Hackburt, 1989).

Achievement goal orientations have been related to a wide range of cognitive, emotional and behavioral outcomes, including self-regulated learning, affect and well-being, self-handicapping strategies, and disruptive behavior (see Elliot, 1999; Pintrich, 2000b). Regarding personal control there has been recent evidence to suggest a relationship between the academic locus of control and achievement goals.

A study by Ames (1992) suggested that while learning orientation increases interest and effort towards studies, performance orientation develops a learned helplessness. Similarly, Stipek and Kowalski (1989) found that the students adopting performance orientation make less effort.

The Present Study

Because cognitive and emotional variables play important roles in students' motivational processes, the differences in students' academic locus of control are thought to be clearly influential in their achievement goals. However, to date, studies have not directly examined the relationships between 2X2 achievement goals and the academic locus of control. Thus, the purpose of this research is to examine the relationships between the academic locus of control and achievement goal orientations. Based on the interpretation of previous research, it is expected that the external academic locus of control (EALOC) would be associated negatively with LPGO and positively with LVGO, PPGO, and PVGO. It is also expected that an internal academic locus of control (IALOC) would be associated positively with LPGO and LVGO, and negatively with PPGO and PVGO. This model is represented schematically in Figure 1.

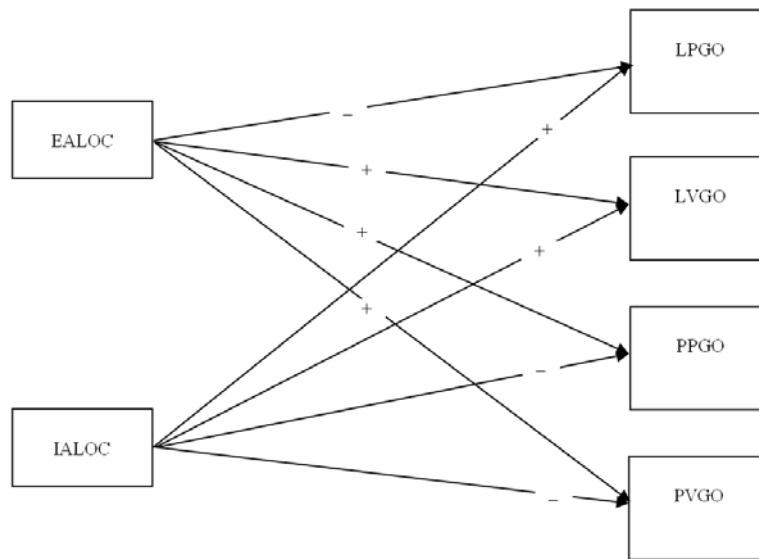


Figure 1. Hypothesized model of the relationships among achievement goals and academic locus of control.

Method

Participants

The study participants were 627 university students (379 (60%) were female and 248 (40%) were male) enrolled in various undergraduate programs at Sakarya University Faculty of Education, Turkey. These programs were mathematics education ($n=60$), science education ($n=105$), Turkish education ($n=97$), social science education ($n=117$), primary school education ($n=109$), computer and instructional technology education ($n=73$), and pre-school education ($n=66$). Of the participants, 197 (31.5%) were first-year students, 144 (23%) were second-year students, 153 (24.4%) were third-year students, and 133 (21.1%) were fourth-year students. Their ages ranged from 17 to 31 years and GPA scores ranged from 1.66 to 3.78.

Measures

2X2 Achievement Goal Orientations Scale (AGOS). The 2X2 AGOS (Akin, 2006) is a 26-item self-report scale using a five-point Likert scale (1=*strongly disagree* to 5=*strongly agree*) and has four sub-scales: learning-approach goal orientation (LPGO; eight items, e.g., "I like school work that I'll learn from"), learning-avoidance goal orientation (LVGO; five items, e.g., "I do my best to avoid making mistakes"), performance-approach goal orientation (PPGO; seven items, e.g., "It is important for me to perform better than others"), and performance-avoidance goal orientation (PVGO; six items, e.g., "I worry about the possibility of getting bad grades"). The amount of total variance explained by four factors was 67% and factor loadings ranged from .41 to .98. Internal consistencies were .92, .97, .97, and .95 and three-week test-retest reliability estimates were .77, .82, .84, and .86 for LPGO, LVGO, PPGO, and PVGO, respectively. A score for each dimension was assessed by summing the total score of the questions for each dimension.

Academic Locus of Control Scale. The Academic Locus of Control Scale (Akin, 2007) is a 17-item self-report scale using a five-point Likert scale (1=*strongly disagree* to 5=*strongly agree*). This scale has two sub-scales: external academic locus of control (EALOC, 11 items, e.g., "There are some subjects in which I could never do well") and internal academic locus of control (IALOC, six items, e.g., "When I am unsuccessful it is usually my own fault"). The amount of total variance explained by the two factors was 72% and factor loadings ranged from .72 to .95 for the internal academic locus of control and from .61 to .93 for the external academic locus of control. Internal consistencies were .95 and .94 and three-week test-retest reliability estimates were .93 and .97 for two subscales, respectively. Higher scores for the external academic locus of control subscale indicate higher levels of external academic locus of control and higher scores for the internal academic locus of control subscale indicate higher levels of internal academic locus of control.

Procedure

Permission for the participation of students was obtained from related chief departments and students voluntarily participated in research. Completion of the scales was anonymous and there was a guarantee of confidentiality. The scales were

administered to the students in groups in the classrooms. The measures were counterbalanced in administration. Prior to administration of measures, all participants were told about the purposes of the study. In this research, Pearson correlation coefficient and structural equation modeling were utilized to determine the relationships between the academic locus of control and achievement goal orientations. These analyses were carried out via LISREL 8.54 (Jöreskog & Sorbom, 1996) and SPSS 13.0.

Results

Descriptive Data and Inter-correlations

Table 1 shows the means, standard deviations, inter-correlations, and internal consistency coefficients of the variables used.

Table 1
Descriptive Statistics, Alphas, and Inter-correlations of the Variables

Variables	LPGO	LVGO	PPGO	PVGO	EALOC	IALOC
LPGO ^a	1.00					
LVGO ^b	.20**	1.00				
PPGO ^c	-.66**	-.01	1.00			
PVGO ^d	-.43**	.39**	.77**	1.00		
EALOC ^e	.00	.67**	.23**	.68**	1.00	
IALOC ^f	.83**	.21**	-.53**	-.33**	.02	1.00
Mean	27.02	15.94	13.11	14.20	28.97	22.02
SD	6.75	2.84	4.66	3.17	5.38	5.98
Alpha	.77	.81	.87	.85	.92	.79

Note. ^aLPGO = Learning-approach goal orientation, ^bLVGO = Learning-avoidance goal orientation, ^cPPGO = Performance-approach goal orientation, ^dPVGO = Performance-avoidance goal orientation, ^eEALOC = External academic locus of control, ^fIALOC = Internal academic locus of control.

** $p < .01$

Table 1 shows that there are significant correlations between the academic locus of control and achievement goal orientations. While EALOC correlated positively with LVGO ($r = .67$, $p < .01$), PPGO ($r = .23$, $p < .01$), and PVGO ($r = .68$, $p < .01$), there was no significant relationship between EALOC and LPGO. Conversely, IALOC associated positively with LPGO ($r = .83$, $p < .01$) and LVGO ($r = .21$, $p < .01$) and negatively with PPGO ($r = -.53$, $p < .01$) and PVGO ($r = -.33$, $p < .01$).

Structural Equation Modeling

The hypothesized model was examined by structural equation modeling (SEM). According to this model, achievement goal orientations are predicted by external and internal academic locus of control. Results from structural equation modeling

demonstrated that the model was a good fit ($\chi^2=24.61$, $p=0.00343$, GFI=.98, AGFI=.96, NFI=.91, CFI=.95, RMSEA=.059). Also, EALOC and IALOC predicted 68% of LPGO, 48% of LVGO, 34% of PPGO, and 59% of PVGO variances.

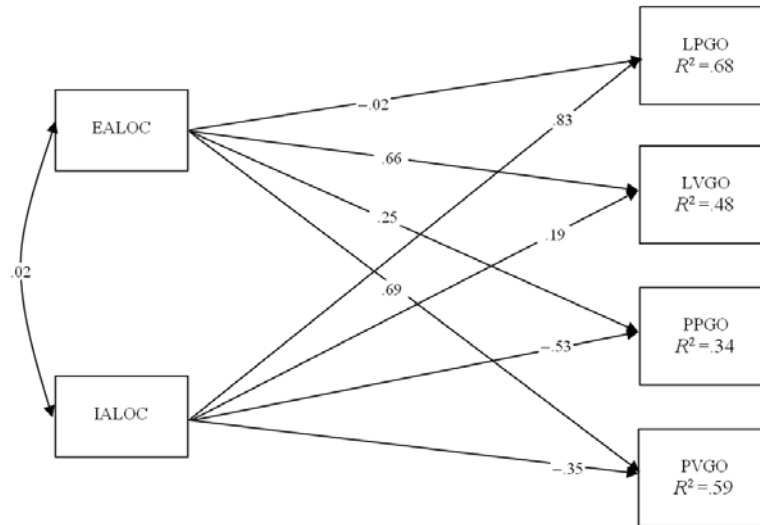


Figure 2. Path analysis between the academic locus of control and achievement goals.

The standardized coefficients in Figure 2 clearly show that LPGO and LVGO were predicted positively (.83 and .19) and PPGO and PVGO negatively (-.53 and -.35) by IALOC. However, EALOC predicted LVGO, PPGO, and PVGO in a positive way (.66, .25, and .69, respectively).

Discussion and Recommendations

The purpose of this research was to investigate the relationships between the academic locus of control and achievement goal orientations. Results showed that there were significant relationships between these variables. Also, the fit indexes indicated that formulation of the model was psychometrically quite acceptable (Hu & Bentler, 1999).

Path analysis showed that learning-approach goal orientation was predicted positively by an internal academic locus of control. This finding was consistent with previous studies (Akin, 2008; Ames & Archer, 1988; Elliott & Dweck, 1988; Meece et

al., 1988; Roeser, Midgley, & Urdan, 1996), which have suggested that a learning-approach orientation is related positively with adaptive variables in terms of psychology and education. Students who adopt learning-approach goals experience fewer negative feelings and formulate more positive attitudes about themselves (Robins & Pals, 2002); when they face failures, they tend to eliminate the factors causing failure rather than accuse or criticize themselves (Ironsmith, Marva, Harju, & Eppler, 2001). These students believe that they need to make the necessary effort to succeed and that succeeding or failing is directly relevant to them. Considering that students with an internal locus of control think that their achievements or failures are bound to their efforts (Battle & Rotter, 1963; Rotter & Mulry, 1965; Stipek, 1993), this relationship is reasonable. This result suggests that an internal academic locus of control is a strong predictor of learning-approach goal orientation and that an internal academic locus of control increases this orientation.

As anticipated, learning-avoidance goal orientation was positively predicted by internal and external academic locus of control. Students with learning-avoidance goals have concerns such as not being able to learn a subject in its all detail or forgetting what they learned (Elliot & McGregor, 2001; Finney et al., 2004). Therefore, this orientation is less adaptive than learning-approach orientation. Besides, these students display perfectionist behaviors, try to avoid failure, and when they cannot do this, feel guilty (Conroy, Elliot, & Hofer, 2003; Elliot, 1999). This causes learning-avoidance goals, which are related to some adaptive or maladaptive psychological variables and to both internal and external academic locus of control.

Performance-approach goal orientation was predicted positively by an external academic locus of control and negatively by an internal academic locus of control. The students adopting performance-approach goals tended to evaluate their performances according to other students. After this comparison, it was found that they tend to feel less valuable or worthless (Ames & Archer, 1988; Dweck & Leggett, 1988). The fact that these students especially make their learning studies and specify self-value level according to social comparison, demonstrates that they display an external academic locus of control characteristics. In addition, the fact that performance-orientation is relevant to learned helplessness (Ames, 1992) and making little effort (Stipek & Kowalski, 1989) supports the findings of this study.

Finally, consistent with expectations, performance-avoidance orientation was positively predicted by an external academic locus of control and negatively by an internal academic locus of control. The students adopting a performance-avoidance orientation tended to avoid appearing unsuccessful and clumsy (Elliot & Church, 1997; Elliot & Harackiewicz, 1996). Therefore, they gave more importance to other students and peers than themselves and took other's success as their own measure of value. These tendencies caused the students with external academic locus of control to display characteristics belonging to performance-avoidance goals. The fact that an external academic locus of control had a great contribution to the prediction of performance-avoidance orientation proves that an external academic locus of control increases performance-avoidance orientation to a great extent.

The results of this study should be interpreted in light of a number of limitations. First of all, because this research was intended to build a model rather than test a model that already exists, the findings from the research are of explanatory quality. Therefore, if these findings are not tested on another sample, it is wise to avoid interpreting the findings as definite. Secondly, as the samples presented here were limited to university students, this restricts the generalizability of the findings. For that reason, it is also important to investigate the variables studied in this research on sample groups other than university students. Besides, even though structural equation modeling suggests results related to causality, it is difficult to give a full explanation related to causality among the variables examined in the research, because correlational data were used.

In conclusion, this research reports that the academic locus of control affects achievement goals directly. Students high in an external academic locus of control are more likely to adopt PPGO and PVGO than students who are high in an internal academic locus of control. On the contrary, students high in an internal academic locus of control are more likely to adopt LPGO than students who are high in an external academic locus of control.

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Başarı Yönelimleri ve Akademik Kontrol Odağı: Yapısal Eşitlik Modeli

(Özet)

Problem Durumu: Son yıllarda oldukça fazla ilgi gören araştırma alanlarından birisi olan başarı yönelimleri teorisi, eğitim ve psikoloji alanında yapılan araştırmalarda geniş biçimde incelenmektedir. Öğrencilerin başarıya yönelik inançlarını ve performanslarını değerlendirmede kullandıkları ölçüt ve standartları inceleyen başarı yönelimleri teorisi aynı zamanda öğrencinin olayları ve kendi yeterliliğini nasıl yorumladığını, onlara yönelik nasıl tepkide bulunduğunu açıklayan ve farklı biliş, duygu ve davranış örüntüleriyle sonuçlanan bir çerçeve sağlamaktadır.

Uzun yıllardan beri başarı yönelimleri, araştırmalarda öğrenme ve performans yönelimi şeklinde ikili bir model olarak ele alınmıştır. Dweck, öğrenme yönelimini öğrencilerin “yeterlilik düzeylerini artırmak ve yeni bilgi ve beceriler kazanmaya çalışmak” için çabalaması, performans yönelimini ise öğrencilerin öğrenme çalışmalarını “yeterliliklerine yönelik uygun değerlendirmeler kazanmak ve negatif değerlendirmelerden kaçınmak amacıyla” yerine getirmesi olarak tanımlamıştır. Öğrenme yönelimi doğa olarak içseldir ve bu yönelimi benimseyen öğrenciler gerçek anlamda bir şeyler öğrenmeye odaklanırlar. Performans yönelimi ise doğa olarak dışsaldır ve bu yönelimi benimseyen öğrenciler öğrenme çalışmalarına, diğerlerine yetenekli olduğunu kanıtlamak gibi dışsal nedenlerden dolayı motive olur. Öğrenme ve performans yönelimi farklı davranışlar ve kişilik özellikleriyle ilişkili olduğu için bu iki yönelim arasında ayırım yapmak son derece önemlidir. Araştırmalar, öğrenme yöneliminin performans yönelimine göre daha uyumlu çıktılar sağladığını göstermiştir.

Son zamanlarda bazı araştırmacılar performans yöneliminin tamamen uyumsuz olmadığını ve bu yönelimin yaklaşma ve kaçınma şeklinde ikiye ayrılacağını öne sürmüştür. Performans-yaklaşma yönelimli öğrenciler diğerlerinden daha fazla performans sergilemeye ve yetenekli olduğunu kanıtlamaya, performans-kaçınma yönelimli öğrenciler ise beceriksiz ve

başarısız görünmekten kaçınmaya çalışırlar. Performans yöneliminin iki alt boyuta ayrılmasının ardından bazı araştırmacılar öğrenme yöneliminin de yaklaşma ve kaçınma unsurları olabileceğini öne sürmüş ve 2X2 başarı yönelimleri modelini geliştirmişlerdir. Bu model öğrenme-yaklaşma, öğrenme-kaçınma, performans-yaklaşma ve performans-kaçınma şeklinde dört başarı yönelimi içermektedir. 2X2 başarı yönelimleri modeline göre, öğrenme-kaçınma yönelimini benimseyen öğrenciler; dersleri tam anlamıyla öğrenememe, öğrendikleri konuları unutmama, konuları yanlış anlama, öğrenme görevlerine hakim olamama ve hata yapma gibi durumlardan kaçınmaya odaklanmaktadır. Araştırmalarda 2X2 model için deneysel kanıt elde edilmiştir.

Rotter tarafından öne sürülen kontrol odağı yapısı, bireylerin olaylara yönelik kişisel sorumluluklarını algılama derecelerine bağlı olarak içsel-dışsal kontrol odağı boyutları üzerinde dağılım göstermektedir. İçsel kontrol odağı bireyin, olay veya çıktılarını kendi davranışından, sergilediği çabadan veya yetenek gibi süreklilik sergileyen bir kişilik özelliğinden kaynaklandığına yönelik inancıyla ilişkilidir. Dışsal kontrol odağı ise bireyin, olay veya çıktılarının şans, görevin zorluğu veya diğer bireylerin davranışları gibi kendi kontrolü dışındaki faktörlerden kaynaklandığına yönelik inancıyla ilişkilidir. Yapılan literatür incelemesi sonucunda 2x2 başarı yönelimleri ile akademik kontrol odağı arasındaki ilişkileri ele alan herhangi bir çalışmanın olmadığı görülmüştür.

Araştırmanın Amacı: Bu araştırmanın amacı akademik kontrol odağı ile başarı yönelimleri arasındaki ilişkileri incelemektir.

Araştırmanın Yöntemi: Araştırmanın örneklemini Sakarya Üniversitesi Eğitim Fakültesi'nin çeşitli bölümlerinde öğrenim gören 627 üniversite öğrencisi oluşturmaktadır. Araştırmada ölçme aracı olarak Akademik Kontrol Odağı Ölçeği ile 2x2 Başarı Yönelimleri Ölçeği kullanılmıştır. Akademik Kontrol Odağı Ölçeği; dışsal akademik kontrol odağı (11 Madde) ve içsel akademik kontrol odağı (6 madde) olmak üzere iki alt ölçekten oluşan 5'li Likert tipi bir ölçme aracıdır. Ölçeğin iç tutarlılık güvenilirlik katsayıları akademik dışsal kontrol odağı için .95, akademik içsel kontrol odağı için .94 olarak, 3 hafta arayla elde edilen test-tekrar test güvenilirlik katsayıları ise akademik dışsal kontrol odağı için .93, akademik içsel kontrol odağı için .97 olarak bulunmuştur. 2x2 Başarı Yönelimleri Ölçeği 26 maddeden ve öğrenme-yaklaşma yönelimi, öğrenme-kaçınma yönelimi, performans-yaklaşma yönelimi ve performans-kaçınma yönelimi şeklinde 4 alt ölçekten oluşmaktadır. 5'li Likert tipi bir ölçme aracı ölçeğin iç tutarlılık güvenilirlik katsayıları alt boyutlar için .92 ile .97 arasında, test-tekrar test güvenilirlik katsayıları ise .77 ile .86 arasında değişmektedir. Akademik kontrol odağı ile başarı yönelimleri arasındaki ilişkiler korelasyon ve yapısal eşitlik modeliyle incelenmiştir. Elde edilen veriler SPSS 13.0 ve LISREL 8.54 programları kullanılarak analiz edilmiştir.

Bulgular ve Sonuçlar: Dışsal akademik kontrol odağı ile ÖKBY ($r=.67$, $p<.01$), PYBY ($r=.23$, $p<.01$) ve PKBY ($r=.68$, $p<.01$) arasında pozitif ilişki

olduğu görülürken, ÖYBY ile dışsal akademik kontrol odağı arasında anlamlı bir ilişki bulunamamıştır. Ayrıca içsel akademik kontrol odağı ÖYBY ($r=.83$, $p<.01$) ve ÖKBY ($r=.21$, $p<.01$) ile pozitif, PYBY ($r=-.53$, $p<.01$) ve PKBY ($r=-.33$, $p<.01$) ile negatif ilişkili bulunmuştur. Başarı yönelimlerinin akademik kontrol odağı tarafından açıklanma oranını belirlemek için kurulan yapısal eşitlik modelinden elde edilen bulgular Ki-kare değerinin ($\chi^2=24.61$, $p=0.00343$) anlamlı olduğunu göstermiştir. Ayrıca modelin uyum indeksleri; GFI=.98, AGFI=.96, NFI=.91, CFI=.95 ve RMSEA=.059 olarak bulunmuştur. ÖYBY'yi açıklamada içsel akademik kontrol odağı pozitif ve yüksek düzeyde katkıda bulunmuştur (.83). Bu değişkenin ÖYBY'yi açıklama oranı $R^2=.68$ olarak bulunmuştur. ÖKBY'yi açıklamada hem dışsal akademik kontrol odağı hem de içsel akademik kontrol odağı pozitif katkı yapmıştır (.66 ve .19). ÖKBY'nin açıklanma oranı $R^2=.48$ 'dir. PYBY ve PKBY'yi açıklamada ise dışsal akademik kontrol odağı pozitif (.25 ve .69), içsel akademik kontrol odağı negatif katkıda bulunmuştur (-.53 ve -.35). PYBY ve PKBY'nin dışsal akademik kontrol odağı ve içsel akademik kontrol odağı tarafından açıklanma oranı $R^2=.34$ ve $R^2=.59$ 'dur.

Öneriler: Araştırmanın amacı başarı yönelimleri ile akademik kontrol odağı arasındaki ilişkilerin incelenmesidir. Bulgular bu iki değişken arasında anlamlı ilişkiler olduğunu ortaya koymuştur. Başarı yönelimlerinin akademik kontrol odağı tarafından yordanmasına yönelik kurulan yapısal eşitlik modeli uyum indeksleri modelin iyi uyum verdiğini ve tüm katsayıların anlamlı olduğunu göstermiştir. Değişkenler arasındaki katsayılar incelendiğinde dışsal akademik kontrol odağının ÖKBY, PYBY ve PKBY'yi artırdığı söylenebilir. İçsel akademik kontrol odağı ise ÖYBY ve ÖKBY'yi artırırken, PYBY ve PKBY'yi azaltmaktadır. Bu araştırma bazı sınırlılıklara sahiptir. Birinci olarak araştırma önceden var olan bir modeli test etmekten çok yeni bir model kurmaya yönelik olduğu için elde edilen sonuçlar açıklayıcı nitelik taşımaktadır. İkinci olarak örneklem grubunun üniversite öğrencileriyle sınırlı olması elde edilen bulguların genellenebilirliğini bir derece kısıtlamaktadır. Bu nedenle araştırmada ele alınan değişkenlerin üniversite öğrencileri dışındaki diğer öğrenci grupları üzerinde incelenmesi önemlidir. Ayrıca yapısal eşitlik modeli her ne kadar nedenselliğe yönelik sonuçlar ortaya koysa da korelasyonel veriler kullanıldığı için araştırmada ele alınan değişkenler arasındaki nedenselliğe ilişkin kesin açıklamalar yapmak zordur.

Anahtar Sözcükler: Başarı yönelimleri, akademik kontrol odağı, yapısal eşitlik modeli, path analizi

An Analysis of the Presentation of Women in 100 Basic Literary Works in Turkey

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Abstract

Problem Statement: The dominant values of a historical moment are reflected in children's literature. Children's books also serve as a socializing tool to transmit a society's values to its next generation. In periods where life-long learning is supported, works of children's literature create models that children may imitate outside of their immediate circle, help children discover their environment and learn the values of the society in which they live; thus, it provides permanent contributions to their socializing process. The presentation of women is also affected by social and cultural values and the figure of "woman" is presented to children by the authors of children's literature in accordance with that society's point of view. From the form of such presentations, the child arrives at conclusions with respect to the roles attributed to his/her gender by social/cultural values.

Purpose of Study: The objective of this study is to establish how and at what level the novels in the "100 Basic Literary Works" list, recommended by the Ministry of National Education in Turkey to be read by elementary school students, present the theme of "woman."

Methods: To this end, 13 novels in the 100 Basic Literary Works list were studied by use of the "content analysis" method with regard to the presentation of woman.

Findings and Results: When the status of women in all the books is considered in terms of intensity, it was observed that women were presented mostly negatively (189.8%), with neutrally a close second (181.8%), and were presented positively with the least intensity (63.1%).

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Furthermore, in eight of the novels out of the thirteen studied, women were presented negatively.

Conclusions and Recommendations: In these books, the woman is shown as the gender subject to violence, doing the washing up and washing the dishes, cooking, knitting, sitting at home, and not making use of mass communication tools such as books and newspapers. In this study, only the “novels” were studied in terms of the presentation of women. The examination from this perspective of the other genres, notably the stories among the 100 Basic Literary Works and contemporary Turkish children’s literature, would be useful.

Keywords: Children’s literature, 100 Basic Literary Works, presentation of woman, sex roles, novel.

Children’s books have been around since the early 1500s. The traditional values of the times are reflected in these early books. Children’s books also served as a socializing tool to transmit these values to the next generation (Gooden & Gooden, 2001). In periods where life-long learning is supported, works of children’s literature create models that children may imitate outside their immediate circle, and help children learn the values of the society in which they live and thus discover their environment (Sever, 2002, 2003; Blumenreich & Siegel, 2006).

Every society contains sources of information designed to foster traditions. In most cultures, the most important and effective way of transmitting values and attitudes is through storytelling, and in literate cultures this process includes children's books (Kortenhaus & Demarest, 1993). Folktales can be a useful resource in social studies lessons that teach cultural themes by using children's literature (Virtue, 2007). Novels enrich children’s limited life experiences, and help them develop more sophisticated judgements. Therefore, novels make children’s adaptation to the social and cultural milieu in which they live easier on a large scale (Oğuzkan, 2000; Aslan, 2006b). However, the transmission of social/cultural values through books may not always help the child in finding the truth. In other words, this socializing process may also be negative for the child reader. In novels, the presentation of women is also affected by social and cultural values and women are presented to children by the authors of children’s literature in accordance with that society’s point of view. From the form of such presentation, the child arrives at conclusions with respect to the roles attributed to his/her gender by social/cultural values (Sever, 2004; Aslan, 2006c).

Works of children’s literature may also be made use of in human rights and women’s rights education. That is why children's literature is a useful tool for moral education, centering on concepts of fairness, human welfare, and human rights. Through literature, children can observe other people's lives, experiences, and various versions of moral conflicts and learn to take others' perspectives. They can also recognize moral and ethical dilemmas by observing the behavior of story characters (Mendoza & Debbie, 2001; Alpöge, 2003; Koc & Buzzelli, 2004).

Children's books play a significant part in transmitting a society's traditional values (Gooden & Gooden, 2001) and culture (Singh, 1998) to children. According to Singh (1998), gender roles are an important part of this culture. How genders are portrayed in children's books thus contributes to the image children develop of their own role and that of their gender in society. Gender-role identity can be described as beliefs about characteristics and behaviors associated with one sex as opposed to the other (Woolfolk, 1998).

Works of children's literature and textbooks have been the topic of many studies with regard to their forms of presenting gender roles, and women and men (Weitzman, Eifler, Hokada & Ross, 1972; Fraad, 1975; Bereaud, 1975; Kolbe & La Voie, 1981; Ashton, 1983; Dellmann, Florjancic & Swadener, 1993; Tognoli, Jane & Judith, 1994; Esen, 1998; Gümüsoğlu, 2006; Diekman & Murnen, 2004; Anderson & Hamilton, 2005; Weidmann & Koop, 2007). According to the results of those studies, children's books and textbooks are mostly prepared with a sexist point of view; in other words, men and women are presented as stereotypes in those books.

In Fraad's study (1975), the extent and kind of sex-role stereotyping were explored in popular, prestigious, and sex-role defining picture children's books printed between 1959 and 1972. It had two parallel foci: one a comparison of the extent and kind of sex-role stereotyping and distribution of male and female characters in each of five categories of children in picture books and two, a comparison of that stereotyping and character distribution between 1959 and 1965, and 1966 and 1972, the seven years preceding and following the emergence of women in the liberation movement. Anderson and Hamilton (2005) focused on the representation of mothers and fathers, and examined whether men are stereotyped as relatively absent or inept parents in their study. Results of the study demonstrate that fathers are largely under-represented, and when they do appear, they are withdrawn and ineffectual parents.

As Ashton (1983) suggested, preschool children significantly more often chose a sex-stereotypic toy following exposure to a sex-stereotypic children's book. Conversely, boys and girls exposed to a non-stereotypic book significantly more often selected a non-stereotypic toy. As Diekman and Murnen (2004) suggested, change in gender roles has been predominantly asymmetrical in children's literature. The roles of women have changed more than the roles of men. To explore the reflection of such asymmetry in the popular culture, they examined how books recommended to teachers and parents as nonsexist differed from books categorized as sexist. Although nonsexist books were more likely than sexist books to portray female characters who adopted male stereotypic characteristics and roles, both types of books similarly portrayed female-stereotypic personality, domestic chores, and leisure activities.

The common conclusions reached by the studies can generally be summarized as follows: In all kinds of books, the number of male characters is more than that of female characters. While men are shown in different occupations, women are generally shown indoors as a mother and a wife, or in traditionally female-

dominated occupations. The social gender roles of women and men are defined strictly within exact boundaries. While men are brought to the foreground with characteristics such as being active, courageous, intelligent, successful, skillful, and independent, women are presented with characteristics such as being passive, fearful, compliant, charitable, devoted, and dependent. In fact, gender roles should be exemplified in accordance with the requirements of modern life and there should not be differences between the values given and the meaning attributed to women and men in the works of children's literature. These books should assist children in finding and improving their personalities within their own gender. For them to be able to do so, judgments with respect to sexual identities formed to a distinct degree by traditional gender stereotypes should not be included in books (Sever, Dilidüzgün, Öztürk & Adıgüzel, 2002). When guiding children in reading, books that support prejudices, chauvinistic feelings, and gender discrimination should be avoided. Such books contradict the contemporary understanding of education, which aspires to inspire a critical point of view in the child and to make the child think sophisticatedly (İpşiroğlu, 1997).

In Turkey, Ministry of National Education recommended some literary works under a list titled "100 Basic Literary Works" containing short stories, novels, poems, nursery rhymes, and quatrains for elementary school students in to help establish reading habits and culture. It would be useful to know in what light women are portrayed in the Turkish children's novels in the above-mentioned list; however, at the end of the background research performed, it was found that no research has been done so far with respect to this topic. The problem of this study is founded on the questions of how and at what level the Turkish children's novels among the 100 Basic Literary Works present women. The objective of this study is to introduce how and at what level women are presented in children's novels in the 100 Basic Literary Works list recommended by the Ministry of National Education to be taught to students of elementary school.

Method

Selection of Children's Books

In this study, only the novels in the 100 Basic Literary Works list were selected to be analyzed. The reason for the choice of novels as the genre in this study is that in novels, characters are created in more detail and novels thus offer the opportunity for an in-depth analysis of women characters as needed for this study (Oğuzkan, 2000). The total number of novels in the list is 14. In the study, since the range was not very large, a sampling was not defined; in order to be able to reach a more integrated conclusion, all the novels in the list were analyzed. However, it was not possible to obtain one of these books (Feridun Fazıl Tülbentçi, *Barbaros Hayrettin Geliyor*, 1949) since it was not re-printed. To sum up, 13 novels in the above mentioned list were analyzed and almost the entire pool was reached within the scope of this study. The titles of the novels that were analyzed are listed in the Appendix.

Data Analysis

Children's books were analyzed through "content analysis," a qualitative research method frequently used in this type of study. Content analysis is perhaps the fastest-growing technique in quantitative research. It may be briefly defined as the systematic, objective analysis of message characteristics (Tavşancıl & Aslan, 2001; Neuendorf, 2002; Krippendorff, 2004). The main purpose in content analysis is to attain concepts and connections, which can serve to explain the collected data (Yıldırım & Şimşek, 2006). There are quantitative and qualitative practices of content analysis (Berelson, 1952; Çebi, 2003). In this study, qualitative content analysis technique was utilized, since the subcategories were determined as "positive", "negative", and "neutral."

Procedures

In the study, "presentation of woman" was taken as the analysis category and this category was divided into three subcategories: "positive," "negative," and "neutral." These were described for the present analysis as follows:

Positive presentation of women. The presentation of women appears in accordance with the requirements of contemporary life (making use of rights, such as working at a profession, education, health, and etc. equally with men).

Negative presentation of women. Women are not able to make use of the above-mentioned rights equally with men, and are presented within their traditional roles.

Neutral presentation of women. The presentation of women cannot be included in either of the subcategories above; in other words, it is the kind of presentation that is neither positive nor negative.

To provide inter-rater reliability of the content areas, all subcategories and one book (Halime Kaptan) were randomly chosen, and coded by another educational sciences academician. An average of 97% consistency was noted, implying a good inter-rater reliability (Hall & Houten, 1983; Neuendorf, 2002).

In content analysis, a word, a sentence or a paragraph can be chosen as the unit of analysis (Yıldırım & Şimşek, 2006). In order to have a more detailed and in-depth analysis, and as is more convenient for the purpose of the study, "sentence" was chosen as the unit of analysis while analyzing books in the research (Çebi, 2003), and the frequency of occurrence of the designated subcategories in each sentence was determined. At this stage, the sentences with words matching the subcategories or explaining designated subcategories or sentences directly conveying the meaning were taken into consideration. The weight of each aspect was valued as a point.

For each book,

Subcategory % = (Subcategory frequency / Total frequency of all subcategories) x100

Subcategory Intensity Score = (Subcategory frequency / Total number of words of the texts) x 1000

were obtained in accordance with the above given formulas (Alkan, 1989). Intensity scores of all subcategories were multiplied by 1000 because of the fact that the figures obtained while calculating the intensity score were too small and that dealing with small figures causes difficulty in interpretation. The calculations were made using a calculator. This ensured convenience in evaluating and interpreting the scores.

Findings and Results

The novels' presentations of women were analyzed separately for each book (Table 1). When the status of women in all the books is considered in terms of intensity scores, it was observed that women were presented mostly negatively (189.8‰), with neutral presentations coming in a very close second (181.8‰), and positively the least by a great deal (63.1‰).

Table 1

Breakdown of the Presentation of Woman in Novels according to Frequency (f), Percentage (%) and Intensity Score (IS - ‰)

Novels	Presentation of Woman									Total		
	Negative			Positive			Neutral					
	f	%	IS (‰)	f	%	IS (‰)	f	%	IS (‰)	f	%	IS (‰)
Novel 1 28.696*	236	30.2	8.2	347	44.4	12.1	198	25.4	6.9	781	100	27.2
Novel 2 34.138*	185	27.2	5.9	163	24.0	5.2	331	48.8	10.6	679	100	21.7
Novel 3 124.136*	827	56.6	6.7	116	7.9	1.0	520	35.5	4.2	1463	100	11.9
Novel 4 14.706*	51	18.5	3.5	70	25.5	4.8	154	56.0	10.5	275	100	18.8
Novel 5 13.616*	620	79.8	45.5	20	2.6	1.5	137	17.6	10.1	777	100	57.1
Novel 6 19.656*	595	57.4	30.3	54	5.2	2.7	388	37.4	19.7	1037	100	52.7
Novel 7 19.482*	173	22.4	8.9	215	27.8	11.3	384	49.8	19.7	772	100	39.9
Novel 8 37.268*	1647	68.9	44.2	150	6.3	4.0	594	24.8	15.9	2391	100	64.1
Novel 9 44.660*	469	47.7	10.5	166	16.9	3.7	348	35.4	7.8	983	100	22.0
Novel 10 25.384*	287	20.7	11.3	188	13.6	7.4	911	65.7	35.9	1386	100	54.6
Novel 11 26.144*	30	10.9	1.1	31	11.3	1.2	214	77.8	8.2	275	100	10.5
Novel 12 25.519*	323	39.3	12.6	37	4.5	1.4	461	56.2	18.1	821	100	32.1
Novel 13 78.660*	83	4.8	1.1	535	31.0	6.8	1106	64.2	14.2	1724	100	22.1
Total	5526	-	189.8	2092	-	63.1	5746	-	181.8	13364	-	434.7

* The Average Number of Words in the Books

Negative Presentation of Woman

When all the books are considered in terms of intensity scores, the negative presentation of woman is mostly observed in N5 (45.5%) and N8 (44.2%). These novels are followed by N6 (30.3%), N12 (12.6%), N10 (11.3%), N9 (10.5%), N7 (8.9%), N1 (8.2%), N3 (6.7%), N2 (5.9%), N4 (3.5%), N11 (1.1%) and R13 (1.1%), respectively. In eight of the novels (N2, N3, N5, N6, N8, N9, N10, N12) out of the thirteen examined, that negative presentations of women are found more than positive presentations attracts attention.

The negative expressions in these novels were studied upon being divided into seven themes, and the themes were listed as follows, in terms of the frequency of their occurrences in the novels, from the most frequent to the least frequent: "violence against woman," "gender role of woman," "woman's being the manipulated one," "woman's not having an identity," "woman's being emotional, tender, and timid," "presentation of woman as a sexual object," and "woman's financial weakness." The examples regarding these themes are presented below. Even though "sentence" was chosen as the unit of analysis, some examples given below include more than one sentence to bolster reader understanding:

The examples for the theme "violence against woman" and for the theme "gender role of woman" in the novels are as follows:

- *The sound of a slap came from the backyard after Ömer (he) left, and the scream of a woman echoed in the stone backyard. (...) The slaps and kicks in the backyard continued with no pause. Emine's (she) cries were sometimes like a weary breath, and sometimes they were like bitter screams. (N12, p. 24)*
- *Then Süzen (she) took her husband's coat and hat and immediately ran to the kitchen. She warmed the meals up on the stove. (N2, p. 21-22).*

The examples for the theme "woman's being the manipulated one" in the novels are as follows:

- *Şebnem (she): "My father will not send me to school anymore." (N6, p. 101)*
- *Duygu was the daughter of a family that could be respected as wealthy. Her family could afford to educate her in the district. But since she was a girl, they did not want to send her away. (N4, p. 21)*

The examples for the theme "woman's not having an identity" in the novels are as follows:

- *That's exactly how the daughter of a gateman would think. The man has embraced you and made you a lady... (N5, p. 40)*
- *He said "When they are without men, the womankind suddenly feels bad, and fades, sir." (N10, p. 41)*

The examples for the theme "woman's being emotional, tender, and timid" in the novels are as follows:

- *Selçuk: "You girls are always like that. You are emotional." (N4, p. 40)*

- *The children looked at each other in the face. Selçuk (he) was braver. He got into the car. Duygu (she) followed him.* (N4, p. 72)

For the theme “presentation of woman as a sexual object,” the sentence “yet almost all of them had more than one mistress” (N3, p. 30); and for the theme “woman’s financial weakness,” the sentence “Mr. Bedri said to his mother: “If he wants to, my father can sell everything he has. He can spend the money with no difficulty, no one can interfere.” (N5, p. 14) can be given as examples.

Positive Presentation of Woman

When all the books are considered in terms of intensity scores, the positive presentation of woman is mostly observed in N1 (12.1%). This novel is followed by N7 with a very close intensity score (11.3%), and then by N10 (7.4%), N13 (6.8%), N2 (5.2%), N4 (4.8%), N8 (4.0%), N9 (3.7%), N6 (2.7%), N5 (1.5%), N12 (1.4%), N11 (1.2%) and N3 (1.0%), respectively. In five novels (N1, N4, N7, N11, N13) out of the thirteen examined, it was observed that the positive representations of women were more frequently used. The positive expressions in these novels were studied upon being divided into two themes as “equality of women and men”, and “love/respect for women”. The examples in the books are given below:

- *This cap meant a little rebellion, a little love of independence, and a little Black Sea ebullience. This Laz cap brought women-men equality even to Halime Gelin (bride).* (N1, p. 96)
- *Mrs. Sahire: “All possessions of a family are common. Your father can not have anything for himself.”* (N5, p. 14)
- *When he realized that he kept Halime Captain (she) standing, he ended his speech. Although she was a soldier, she was a woman first. A respectable woman.* (N1, p. 119)
- *Your mother and I treat each other with respect, fondness, and affection.* (N2, p. 159)

Neutral Presentation of Woman

The books were also analyzed with regard to the neutral presentation of women. When considered in terms of intensity scores, that the neutral presentation of women is observed mostly in N19 (35.9%) attracts attention. This novel is followed by N6 (19.7%), N7 (19.7%), N12 (18.1%); N8 (15.9%), N13 (14.2%), N2 (10.6%), N4 (10.5%), N5 (10.1%), N11 (8.2%), N9 (7.8%), N1 (6.9%), and R3 (4.2%), respectively. Below, the example expressions for the neutral presentation of the theme “woman” are listed:

- *One day prior to the campaign, Kara Hatçe (she) disappeared. She was searched everywhere, but was not found.* (N3, p. 314)
- *The girl’s name was Duygu. Duygu was a beautiful girl with dark hair, and dark eyes; she was genial and had round cheeks. Selçuk was Duygu’s best friend.* (N4, p. 7)

Discussion and Conclusion

In this study, the novels recommended by the Ministry of National Education in Turkey for students of elementary school to read were studied in respect to "presentation of woman." It was observed that in eight of the thirteen books that were examined, women were often reflected negatively. This result was obtained because the majority of the recommended novels largely presented women with their traditional roles; this is consistent with Gooden and Gooden's (2001) determination that "additionally, the traditional view of the male work role appeared to be accepted by the majority of authors writing children's literature. As a result, these traditional values were encouraged and valued by all and thus the lack of female representation was never challenged."

The findings of this study with respect to the presentation of the woman in novels are consistent with the findings of the study conducted by Fraad (1975). In Fraad's study (1975), it was found that there was a male majority of total characters in all standard and sex-role definition books throughout the period under study; from 1959 to 1972, female stereotypes were disproportionately in excess of female characters in sex-role definition books and in all standard books. Similarly, the findings of this study are also in parallel with those of Anderson and Hamilton's (2005) study. As Anderson and Hamilton (2005) suggest, books tend to portray boys as active leaders, and girls as passive followers. Women and girls are under-represented. Previous studies conducted in Turkey on the presentation of woman in different books obtained results similar to those of this study (Esen, 1998; Tarba-Ceylan, 2003). According to the results of a study conducted by Esen (1998) in Turkey, in texts extracted from Turkish textbooks (mainly from works of children's literature), adult women and girls are most frequently shown at home and at school, while adult men and boys are mostly shown outdoors. According to this study, the perspective that brings motherhood to the foreground and that sanctifies it is dominant; however, this point of view does not ensure the woman's appearance as the main character. According to the results of a study conducted by Tarba-Ceylan (2003) in some texts on women's rights, the evaluation of women's skills and achievements, such as having an occupation, being successful at work, and being a virtuous citizen is made only through comparison with men.

It is not a very extraordinary result that women are mostly presented within their traditional roles and in the back ground in literary works in a country like Turkey, where the majority of the citizens are Muslim. In fact, Islam was a progressive religion in favor of women during the time it was adopted, when compared to previous times (Kurnaz, 1997); however, with negative influences from Persians and Arabic countries who considered women as the source of all kinds of wickedness in the periods when Islam was adopted, the social rights of Turkish women were limited when compared to the past (Doğramacı, 1982). Today, because Islamic countries remain in the background, especially in the field of education, a change and improvement in women's status suitable for the requirements of contemporary life has unfortunately not taken place. Today, even in secular Turkey, which is significantly different from other Islamic countries, because it does not follow

gender-conscious education policies (Tan, 1979; 2005), the status of women is lower than that of men with respect to many topics, mainly in their education rate; naturally, this case is reflected in literary works. Besides, this case is a problem not only in Turkey, but in all developing countries (Turkish Medical Association, 2008). Another important reason for the negative presentation of women in the novels studied within the scope of this research is that even the newest book in the 100 Basic Literary Works list was written during the Republic Era. This list does not contain books written by authors who are still alive. Çelik, Minister of National Education, declared that their aim with the books in this list is to “transfer the cultural accumulation of the country since the 13th century” (MoNE, 2005). It has thus been impossible for these books to portray today’s women’s rights. When it is taken into consideration that children identify themselves with the main characters of the books or that they take those characters as models, it can be said that the frequent negative presentation of women in these terms poses a significant problem with regard to the novels recommended in the list. These novels that are among 100 Basic Literary Works actually do not reflect today’s children’s literature. Today, Turkish children’s literature is in a process of a significant change and improvement, with the contribution of academicians, field experts, contemporary writers, and of scientific activities, contests and symposiums about children’s literature. At present, a great many writers of Turkish children’s literature who feel the responsibility to prepare children for life reflect the woman in accordance with modern gender roles at school, in business life, in short, away from the traditional roles and with equal rights and side by side with men.

As suggested by Sever (2003), in the interaction established through works of literature, the source of the subjectivity formed by the writer is generally fed by the values of the society s/he lives in. These values which are sometimes affirmed and sometimes opposed offer readers clues about the behaviors that society develops and attaches importance to. For example, the plot of “Hep O Şarki” (N8), which is one of the books where women are reflected most negatively, and the last novel written by Karaosmanoğlu and published first in 1956, is set in the Ottoman Empire period. In this novel, the author presents scenes from the lives of the upper class in ancient Istanbul. That the woman is presented rather negatively in this book may be because the plot of the book is set in the Ottoman period; “in the Ottoman society, the dissemination of some Middle-East originated traditions among the upper layers of the society and in the cities made Turkish woman a second class person. In Ottoman society, it was possible for parents and relatives to force girls to get married against their will; the occupations outside were not usually available for women; and girls were disengaged from school and the outer world from childhood” (Tekeli, 1985; Kürkçüoğlu et al., 1995; Kurnaz, 1997). The same determination applies to “Bağrı Yanık Ömer” (1930), “Miskinler Tekkesi” published in 1946, and “Uluç Reis” published in 1962, all of which contain rather negative presentations of women and the plots of which are set in the Ottoman period although they were written after the declaration of the Republic.

Uçuk, the writer of the novel titled “Gümüş Kanat”, lived through the Republican Era. In the Republican Era, the Turkish Civil Code was enacted on April 4, 1926, and

with this code, the former system of law was abolished and a modern family code was introduced. Also, with the Municipality Law enacted in 1930 and the Member of Parliament Election Law enacted in 1934, women were given equal political rights with men (Çitçi, 1982; Caporal, 1982; Kürkçüoğlu et al., 1995). The book titled "Gümüş Kanat" was first published in 1962, but in spite of that, women are presented rather negatively in the book. Moreover, the writer treated subjects such as women's rights and the place of women in the society in his works. The same applies to the novels titled "Yonca Kız", "Kuklacı", and "Bir Küçük Osmancık Vardı" written during the Republican era and published first in 1971. These negative presentations might have taken place because of women's inability to take sufficient part in educational life and business life, and because of their late participation, even after the declaration of the Republic. In the novels titled "Uç Minik Serçem" by Necati Cumalı and "Göl Çocukları" by İbrahim Örs published in 1990, women are reflected rather positively, in contrast to the above-mentioned novels. These two writers preferred to reflect women positively in their novels with the values and the influence of the Republican Era they lived through.

In five novels out of the thirteen that were examined, it was observed that women were positively reflected. This case can be associated with the periods in which the writers lived, as Sever (2003) also stated. "Halime Kaptan," the book in which woman is presented in the most positive manner, can be given as an example of this classification. The plot of this book, written by Rıfat Ilgaz and published in 1972, is set in the period of the War of Independence witnessed by the writer as well. In that period, Turkish women supported their husbands fighting on the front line by carrying ammunition to them, and even by taking part in the war actively, and to this end, they participated in organizations of political quality (Çitçi, 1982; Güzel, 1985). Halime Kaptan is one of those women. The plot in the novel is set in the town of Cide, where the writer was born and brought up. The woman protagonist in the novel is a captain from Cide (Bezirci, 1997). This result may also be related to the writer Ilgaz's having adopted a socialist realistic arts understanding (Sonsöz, 2006).

The novel titled "Osmancık" narrates the rising of Osmancık, the founder of the Ottoman Empire, as Osman Gazi and the years during which the Ottoman Empire was founded. In this novel, the figure of 'woman' is reflected rather positively. This case is associated with the period in which the plot of the book takes place. The plot of the novel is set in the old Turkish society and the woman's status within the society and the family is high in old Turkish societies when compared to her contemporaries. In the society back then, a single marriage was essential. When there were no sons, the daughters inherited the properties. The father had only a democratic claim on the family (Kürkçüoğlu, Bozkurt, Güneş, Taşdemirci, Çağan, Ergun, 1995; Erkul, 2002).

According to the Turkish language elementary education curriculum, "... Children's books should reflect the characteristics and daily life of the targeted student group, the social milieu in which the student lives, and communication etc. The books recommended for children should have the necessary features to contribute to the child's efforts to understand the world and what is going on around, and to enhance his/her attitudes." In the

light of the findings of this study, it can be said that these novels that have been recommended for students of elementary education, in order for them to gain reading habits in the new Turkish language curriculum, largely do not have the above listed aspects.

When transmitting the requirements of modern life to the child and when making sure the child senses those requirements, it is necessary to make use of literary children's books, a dominant variable in the development of the child. However, at the end of this study, it was observed that the majority of the novels included in the 100 Basic Literary Works present the women within their traditional roles; that is, they do not reflect the status of women in today's life. Based upon the findings of this study, first, it might be suggested to have the books recommended, to be read by children and to have a meticulous review performed with regard to the way women are treated in the books to be recommended. It would be useful to have a commission consisting of field experts to perform this review. It is vital that the books to be found within this list be selected from among the works of contemporary writers who are aware that women have equal rights with men, and who treat women away from their traditional roles. In a more general sense, when the works to be recommended to children for them to read are being selected, it should be taken into consideration that even though they belong to previous periods of literature, the works should present many variables, notably the gender roles, in accordance with the requirements of modern life.

There is a limitation on this study. In this study, only the "novels" were studied in terms of the presentation of women. The examination of the other genres, notably the stories, among the 100 Basic Literary Works and contemporary literary Turkish children's books from this perspective, would be useful.

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Türkiye’de Çocuklara Önerilen 100 Temel Eser’de Kadının Sunuluşu Üzerine Bir Çözümleme

(Özet)

Problem Durumu: Yazımsal nitelikli çocuk kitapları, günün geleneksel ve kültürel değerlerini yansıtarak çocuğun yaşadığı toplumdaki değerleri öğrenmesine, dolayısıyla onun toplumsallaşma sürecine kalıcı katkılar sağlar. Çocuk edebiyatı yapıtlarında, kadının sunuluşu da toplumsal ve kültürel değerlerden etkilenir ve bu yapıtlarda, kadın ile erkeğe yüklenen roller, her zaman çağdaş yaşamın gerekleriyle örtüşmeyebilir. Bu durumda çocuk okurlar, kendilerine sunulan bu rolleri benimseyebilir ve toplumsal/kültürel değerlerin kendi cinsiyetine yüklediği rollere ilişkin sonuçlar çıkarabilirler. Çocuk edebiyatı ürünleri, cinsiyet rolleri, kadının ve erkeğin sunuluş biçimleri bakımından birçok araştırmaya konu olmuştur. Bu çalışmaların sonuçlarına göre; çocuk kitapları çoğunlukla cinsiyetçi bir bakış açısıyla hazırlanmış; başka bir deyişle, erkek ve kadınlar basmakalıp bir biçimde sunulmuştur. Oysa çocuk edebiyatı ürünlerinde cinsel roller çağdaş yaşamın gereklerine uygun olarak örneklendirilmeli, kadına ve erkeğe verilen değer ve yüklenen anlam arasında farklılık olmamalıdır. Özellikle geleneksel anlayışın oluşturduğu cinsel kimliklere ilişkin yargılara yer verilmemelidir. Türkiye’de Milli Eğitim Bakanlığı, ilköğretim öğrencilerine, onlarda okuma alışkanlığı ve kültürü oluşturmak amacıyla “100 Temel Eser” adı altında içinde öykü, roman, şiir, tekerleme, mani ve romanların bulunduğu bir liste önermiştir. Anılan listedeki Türk çocuk yazınına ait romanların, kadını hangi konumda sunduğunun bilinmesinde yarar vardır.

Araştırmanın Amacı: Bu çalışmanın amacı, “100 Temel Eser” listesindeki romanların kadın izleğini nasıl ve ne düzeyde sunduğunu ortaya koymaktır.

Araştırmanın Yöntemi : Bu çalışmada, çözümlenmek üzere yalnızca 100 Temel Eser listesindeki romanlar alınmıştır. Anılan listedeki 13 roman, “içerik çözümlemesi” tekniğiyle incelenmiştir. Çözümleme kategorisi olarak “kadının sunuluşu” alınmış; bu da kendi içinde “olumlu”, “olumsuz” ve “yansız” olmak üzere üç alt kategoriye ayrılmıştır. Yapılan hesaplama sonucunda kodlayıcılar arasındaki tutarlılık %97 bulunmuş; öykülerin belirlenen kategoriler bakımından güvenilir bir şekilde ölçüldüğü sonucuna varılmıştır.

Bulgular : İncelenen romanlara yoğunluk puanları açısından bakıldığında, kadının en çok olumsuz (%0189.8), buna çok yakın bir puanla yansız (%0181.8) ve en az da olumlu (%063.1) sunulduğu görülmüştür. Ayrıca, incelenen on üç romanın sekizinde (R2, R3, R5, R6, R8, R9, R10, R12) kadının daha çok olumsuz; başka bir deyişle, geleneksel – basmakalıp rolleri içinde, beşinde ise erkekle eşit bir konumda sunulduğu görülmüştür. Kadının geleneksel / basmakalıp rolleri içinde gösterildiği

kitaplarda kadın; şiddete maruz kalan, çamaşır - bulaşık yıkayan, yemek pişiren, örgü ören, evde oturan, çalışma yaşamında fazlaca görülmeyen, kitap ve gazete gibi kitle iletişim araçlarından yararlanmayan, daha çok cinsel bir nesne olarak kabul edilen cinsiyet olarak gösterilmiştir. İncelenen 13 romanın beşinde ise, kadın erkekle eşit bir konumda; başka bir deyişle "olumlu" sunulmuştur.

Sonuç ve Öneriler: Çocuğa, çağdaş yaşamın gereklerini iletmede ve duyumsatmada, çocuğun gelişiminde başat bir değişken olan yazınsal çocuk kitaplarından yararlanmak gerekmektedir. Ne var ki, bu çalışma sonunda, çocuklara okumaları için önerilen 100 Temel Eser'deki romanların çoğunluğunun, kadını geleneksel rolleri ile sunduğu görülmüştür. Bu çalışmanın bulgularına dayanarak öncelikle, çocuklara okutulacak kitapların yeniden belirlenmesi önerilebilir. Özellikle bu listede yer alacak kitapların, kadının erkekle eşit haklara sahip olduğunun bilincinde olan, kadını geleneksel rolleri dışında ele alan çağdaş yazarların yapıtlarından seçilmesine özen gösterilmelidir. Daha genel bir anlatımla, çocuklara okumaları için önerilecek yapıtlar belirlenirken, bunlar geçmiş edebiyat dönemlerine ait olsa bile, başta cinsel roller olmak üzere birçok değişkenin çağdaş yaşamın gereklerine uygun olarak verilip verilmediği göz önünde bulundurulmalıdır. Bu çalışmada, kadının sunuluşu bakımından yalnızca "romanlar" incelenmiştir. 100 Temel Eser içerisindeki öykülerin ve çağdaş yazınsal Türk çocuk kitaplarının da aynı bakış açısıyla incelenmesi bu çalışma kapsamında getirilen bir diğer öneridir.

Anahtar Sözcükler: Çocuk edebiyatı, 100 Temel Eser, kadının sunuluşu, cinsiyet rolleri, roman

Usage of Knowledge Management Tools: UK and Canada versus Russia and Turkey in a Comparative Study

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Abstract

Problem Statement: In order to reach their goals and continue the ongoing learning process, universities, like other organizations, also need the effective use of knowledge management. In universities where research and development studies play an important role, knowledge management is of critical importance.

Purpose of Study: In order to reach their missions, universities should have effective knowledge management. Since studies in this area are not sufficient in universities, in the development phase of knowledge management, universities should focus on areas such as how to use knowledge effectively and how to improve the current situation. The aim of this study is to find effective methods for instructors and universities' boards of directors regarding knowledge management and the use of its tools.

Methods: Qualitative research techniques have been used in this study. In this research, 35 different academic staff members from different countries (Russia, Turkey, the UK, and Canada) and from four different universities have been interviewed. The countries have been chosen according to their level of development. In the interviewing process of research, the questions were related to how knowledge management tools were used. The research data were collected between 15 March 2007 and 1 July 2008.

Findings and Results: The results showed that knowledge management tools have not been used effectively by the universities of the developing countries in areas such as improvement of knowledge, acquisition of knowledge, sharing and evaluation of knowledge, and determining the

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deficiency of knowledge compared to the universities of the developed countries.

Conclusion and Recommendations: The teaching staff that represented Turkey and Russia said that they were not using these techniques; instead, they only brainstormed how to use and improve knowledge management tools. With the benchmarking method, universities in developing nations had the chance to compare themselves based on their performance. Accordingly, they had the chance to identify the areas that needed improvement, to raise their performance, and to improve the quality of education. By organising visits to each others' universities, they would have the chance to compare different teaching techniques, and based on the data they obtained, they had the chance to make better evaluations.

Keywords: Knowledge, Knowledge Management Time Period, Knowledge Management Tools, Universities.

Knowledge is the most decisive organizational resource in the organizational structure of institutions that should be used and organized systematically in order to be efficient and effective. In order to manage knowledge, effective planning and programming is needed. Knowledge management is the combination of important topics such as explaining, obtaining, developing knowledge, the use of knowledge in an effective way, and the spread of knowledge in the organization. Knowledge management helps organizations adapt themselves in highly competitive and changing environments (Demarest, 1997; Beijerse, 1999; Perez & Pablos, 2003).

Knowledge management becomes one of the necessary tools for modern-day organizations. Universities also need to pay close attention to knowledge management projects in order to accomplish their objectives and continue the ongoing learning process. In universities where research and development studies play an important role, knowledge management is of critical importance in this process (Mikulecka & Mikulecky, 2000). Knowledge is the main asset of universities; accordingly, universities play the main role in spreading and manipulating information for the society and are the key factors for implementing strategies. In order to achieve their missions and social functions, universities should have effective use of knowledge management (Conceicao, Heitor, and Oliveira, 1998; Oosterlinck, 2002). The new ideas and suggestions are important in order to develop knowledge management tools; however, there are not enough studies towards this important issue (Rowley, 2000; Kidwell, Linde, and Johnson, 2000; Agrawal, 2004).

Theoretically, universities' main function and mission is to provide and spread information and ideas within communities (Loh, Tang, Menkhoff, Chay, and Evers, 2003). Universities have two main functions: research and education. With their graduates, universities are the main producers of the intellectual assets of nations. With the help of continuous research, they aim to provide new and improved information (Mothe, Gertler, Landry, Niosi, and Wolfe, 2000; Loh et.al., 2003).

If knowledge management has been applied effectively in universities, it could have positive effects in the research process (such as increasing responsiveness for research grants, contracts, and commercial opportunities), the curriculum

development process (such as facilitating interdisciplinary curriculum design and development), student and alumni services (such as improving the capability of faculty and staff in order to offer personalized services for faculty or staff), administrative services (such as providing financial, procurement, and human resources services more effectively and efficiently), and strategic planning (such as a repository of data related to accountability and outcomes tracking by monitoring assessments, performance indicators, and benchmarking that helps in sharing knowledge from a variety of constituents to begin to create an “organizational learning” process) (Mikulecka & Mikulecky, 2000).

Knowledge management should be supported by knowledge management tools, whereas knowledge management without these tools can be defined as inadequate. Knowledge management can be accomplished by tools that also stimulate the learning process. Knowledge management tools play an essential role both in the knowledge management time process and in the process of obtaining knowledge. Accordingly, in developing nations where there are limitations in the search for knowledge and the use of knowledge management tools, both the tools and knowledge management processes should be improved (Kalkan & Keskin, 2002).

Knowledge management has four major steps in which knowledge management tools should be used to develop information. These tools are identifying the lack of knowledge (by organizing meetings, brainstorming, etc.), improvement and acquisition of knowledge (research and development activities, use of electronic resources, etc.), sharing knowledge (partnership, teamwork, etc), and evaluation of knowledge (control of internal and external effects, marking, comparisons with other universities, etc). Successful knowledge management can depend on how knowledge resource tools are effectively applied (Beijerse, 1999).

The Purpose of the Study

Parallel to modern-day changes and developments, universities, like all other organizations, have to manage information and create strategies to stay alive in the marketplace. Universities play an important role in a nation’s development; therefore, they should focus on the effective use of information in order to function efficiently. Information management could be designed as an ongoing process. This time period makes information management necessary for all kinds of organizations. It is mentioned that in order to accomplish their goals, different organizations may have different information systems because of their different goals.

In addition to this, different goals are motivated by different factors. Generally, being competitive and increasing efficiency are the most common objectives of an organization with IT adoption. Knowledge management plays an important role in universities where research and development are critical (Mikulecka & Mikulecky, 2000). The effective use of knowledge management in universities, where the spread of knowledge among communities takes place, plays an important role. In order to reach their main missions, universities should focus on effective use of knowledge management (Conceicao et. al., 1998; Oosterlinck, 2002). In this light, this study aims to compare and contrast the knowledge management tools used by the universities of the developing (Russia, Turkey) and developed countries (United Kingdom, Canada).

Method

Qualitative data is usually collected in three different ways: interviews, observations, and document analysis (Yıldırım & Şimşek, 2005). In this study qualitative interview techniques have been used.

Participants

Russia, Turkey (developing countries), the UK, and Canada (developed countries) have been selected for the study. A total of 35 academic staff (six professors, 11 associate professors, and 18 assistant professors) from four educational faculties of four universities were selected, as shown in Table 1:

Table 1

<i>Participants</i>		
Development Level of Countries	Country and University Name	Academic Staff
Developing Nations (GNP: \$3,706-\$11,455)	Russia, Lomonov Moscow State University	7 (2 Prof., 3 Assoc. Prof., 2 Assist. Prof.)
	Turkey, Cukurova University	10 (3 Prof., 3 Assoc. Prof., 4 Assist. Prof.)
Developed Nations (GNP:\$11,456-more)	Canada, University Of Calgary	8(2 Prof., 3 Assoc. Prof., 3 Assist. Prof.)
	UK, University Of Leicester	8(3 Prof., 2 Assoc. Prof., 3 Assist. Prof.)
Total	4	35

Data Collection Process

The research data were collected between 15 March 2007 and 1 July 2008. In this study, semi-structured interviews were conducted with academic staff from four different universities to elicit their views on how they used knowledge management and its tools. The questions were related to the important areas of knowledge management such as identifying the lack of knowledge (six questions), acquisition and improvement of knowledge (eight questions), sharing of knowledge (seven questions), and evaluation of knowledge (five questions). These 26 questions on the interviews were based on Beijerse's study (Beijerse, 1999) of knowledge management in universities. The interview form was evaluated by three different experts in these areas, and upon their feedback it was revised. After conducting three pilot interviews, the voices of the participants were recorded during the interviews, and their answers were read carefully to determine whether their answers related to the interview questions. After the pilot interviews the interview schedule was made ready to use.

Data Analysis

In this study, results can be classified into four different forms (Yıldırım & Şimşek, 2005):

a. Coding the Data: In the interview sessions, the recorded cassettes were all numbered. Interview notes and cassettes were all given to an expert to recheck whether or not the cassettes were transcribed correctly. The transcribed interview data were coded and broken down into categories. A code list was obtained, and the relevant information acted as a key list in the analysis of the data. After the key list was read by the participants, an “information agreed” and “information disagreed” reliability formula was followed (Miles and Huberman, 1994), and 94% reliability was recorded. According to this formula, a level of 70% and over is recorded as reliable.

b. Finding the Themes: Codes were categorized under the themes derived from the research questions. In determining the similarities between the codes, the codes were all categorized and organized.

c. Organising Data Based on Themes and Codes: In this category, participants' answers and data were put into a language by which the reader would understand the data in a clear and precise manner and subsequently were given to the reader. In order to determine which interview notes belonged to which participant, footnotes were used and interview notes were put into quotation marks. Next to each quoted statement, the job title and the job position of the participant and the initials of the participant's name were written as shown below:

Example-1 “.....” (G: ÜY (BD))

G: Interview; ÜY (University Dean); ÖE (Instructor); B:B University; D: Dean; DY: Assistant Dean; BB: Head of Department.

d. Analysis of the Findings: At the final stage, the research data obtained were analysed.

Findings and Results

The results of the interviews are presented as follows:

First Dimension: Identifying the Lack of Knowledge: Table 2 shows the results related to the knowledge management tools used to identify the lack of knowledge in universities in areas that would help them reach their goals, visions, and missions.

Table 2
Knowledge Management Tools for Use in Identifying the Lack of Knowledge

Time Period	KM Tools	Development Level											
		Developed Nations' Universities						Developing Nations' Universities					
		UK		Canada		Russia		Turkey					
		Number of Lecturers	Number of Lecturers Using KM %	Number of Lecturers	Number of Lecturers Using KM Tools %	Number of Lecturers	Number of Lecturers Using KM %	Number of Lecturers	Number of Lecturers Using KM %				
Identifying the Lack of Know-ledge	Meetings in order to identify lack of know-ledge	8	7	88	8	7	88	7	3	43	10	4	40
	Brain-storming sessions	8	5	63	8	6	75	7	1	14	10	2	20
	Academic staff Skills Evaluation	8	8	100	8	8	100	7	6	85	10	9	90
	Research to determine most effective method	8	8	100	8	8	100	7	4	57	10	6	60
	Future scenarios	8	7	88	8	8	100	7	4	57	10	5	50
	Use of researches and counsel-lors	8	6	75	8	7	88	7	2	29	10	3	30

Organising Meetings: Academic Staff from four different universities were interviewed in order to determine how they identified the lack of knowledge. In developed nations such as Canada and the UK, 88% of the academic staff members said that they organised meetings on a regular basis in order to identify the lack of

knowledge. An academic staff member from the University of Leicester, UK, said, *"We are having meetings on a regular basis. We have meetings with the board of faculty periodically. We discuss the topics that we decided in advance. We do not spend that much time in meetings. We do not deviate from our topics, and we try to get the best result as much as we can from our meetings (G:E(4))."* This shows that meetings at the University of Leicester were organized effectively.

Most of the academic staff from Russia and Turkey said that they had only 40% attendance at those meetings. An academic staff member from Lomonov State University said, *"We do not have meetings on a regular basis. We organise them if we need to. Nobody is satisfied with the meetings. We do not get the result that we expect at the end of the meetings. The main reason is that we never focus on what we discuss; we deviate from our topic, and we keep discussing unnecessary details (G:R(2))."*

Benchmarking Studies: 100% of the participants from the developed nations said that in order to reach and find the best techniques to improve themselves, they used benchmarking techniques. A lecturer from Leicester University claimed, *"We are always searching for the up-to-date and new methods in teaching. This is the main aspect of development for us. We keep continuing to evaluate each other with other universities by performing partnerships. We keep studying the new ideas for our personnel's improvement; this would give us a chance to improve ourselves and stay one step ahead of others (G:E(8))."* Accordingly, this shows us how the universities of the developed nations showed a great effort to find new ways of improving their personnel.

Approximately 60% of the participants from the universities of the developing nations used benchmarking studies less often than the universities of the developed countries. A lecturer from Cukurova University, Turkey, claimed, *"To figure out the most up-to-date methods we rarely keep in touch with other universities. However, other universities do not give that much detail about the methods they use. We do not conduct any research on the teaching methods of the foreign universities. In addition to that, because of insufficient funds we are not able to follow the latest methods."* As a result, due to economic and socio-cultural reasons, the universities of the developing countries were not able to use the benchmarking tool.

Future Scenarios: 100% of the participants from Canada and 88% of the participants from the UK said that in order to reach and find the best techniques to improve themselves, they used future scenarios. Regarding this method, a lecturer from the University of Calgary in Canada said, *"We can make future plans for the next three, five, and 10 years. For example, we know which course we are going to offer in 2013, and also we develop plans on how we are going to establish a university in India (G:C(5))."* Based on this statement, we can say that the universities of the developed nations can make future plans both for the short and long time periods.

Approximately 50% of the participants from the universities of the developing nations used this method. A lecturer from Lomonov Moscow State University said, *"We are able to prepare next year's academic plan at most. We are not able to make any future plans. Economical problems prevent us from making any future plans and applying these plans in a short time period."* As we have seen from this statement, due to economic and socio-cultural problems, developing nations had difficulties in making any future plans and applying these plans in a shorter time period.

Second Dimension: Improvement and Acquisition of Knowledge: Table 3 presents the interviews about the improvement and acquisition of knowledge in universities.

Table 3

Time Period	KM Tools	Development Level											
		Developed Nations' Universities						Developing Nations' Universities					
		UK			Canada			Russia			Turkey		
		Number of Lecturers	Number of Lecturers Using KM Tools	%	Number of Lecturers	Number of Lecturers Using KM. Tools	%	Number of Lecturers	Number of Lecturers Using KM Tools	%	Number of Lecturers	Number of Lecturers Using KM Tools	%
Improving and acquisition of knowledge	Research and development studies	8	7	88	8	8	100	7	4	57	10	4	40
	Use of technology	8	8	100	8	8	100	7	5	71	10	9	90
	Acquisition education from outsources	8	7	8	8	7	88	7	3	43	10	5	50
	Make employees attend workshops and	8	8	100	8	8	100	7	4	57	10	6	60
	Ideas of students	8	7	88	8	7	88	7	6	86	10	7	70
	Ideas of consultants	8	7	88	8	8	100	7	5	71	10	8	80
Observation		8	8	100	8	7	88	7	2	29	10	3	30

KM Tools Used in the Improvement and Acquisition of Knowledge

Research and Development Studies: 100% of the participants from Canada and 88% of those from the UK said that they used research and development in their studies in order to improve the quality of knowledge. An academic staff member from Leicester University said, "Some of the research studies done are theoretical, and some of them are industrial. Research and development studies provide financial benefits to the university budget. Because of that, research and development studies are very important. The universities where students conduct research with their instructors offer these students scholarships and grants. Their tuition is also paid, and they are provided with housing and accommodation. These studies also give a chance both to the university and also to the academic staff to make money. Research and development studies can be done in this way (G:E(6))."

Academic staff in Turkey and Russia – as shown in Table 3 – have less use of research and development studies compared to those in developed nations. An academic staff member from Cukurova University in Turkey said, "It's difficult to participate in major research and development projects in Turkey in both financial and technological terms. I can easily say that research and development studies in our universities are not that popular. I believe that research and development studies are not performed in regular and serious terms (G:T(3))." Accordingly, it is shown that research and development studies are very difficult due to economic, technological, and socio-cultural reasons.

Observational Method: As shown in Table 3, the universities of the developed countries used the observational method more than the universities of the developing countries. A lecturer from the University of Calgary from Canada said, "We make observations within and outside of our university both in terms of education and other topics. If we do not make observations, we might have difficulties in finding solutions to the problems. Otherwise, we cannot compete with other universities. By using the observational method, we can easily monitor current developments concerning students and the management within our university and other universities (G:C(2))." Based on this statement, it can be concluded that the universities of the developed countries can easily keep track of current developments within and outside their universities. In this way, they can easily find solutions to the problems that they might face in the short run, and they might have the chance to apply current developments and methods.

As shown in Table 3, the universities in Russia and Turkey used this method less compared to the universities of the developing countries. A lecturer from Cukurova University, Turkey, said, "Only the board of directors use the observational method; we as staff members do not use this method so often. Because we are afraid of our board of directors, we are not able to use the observational method by ourselves. In addition to that, due to the lack of competition between universities, the use of observation methods for monitoring current developments is not enough (G: T (7))." We can conclude that due to reasons such as lack of competition between universities, the academic staff is not able to use such methods to monitor current developments.

Third Dimension: Sharing Knowledge: Table 4 shows the sharing of knowledge at both the educational and organisational levels.

Table 4
KM Tools Used in Knowledge Sharing Method

Time Period	KM Tools	Development Level											
		Developed Nations' Universities						Developing Nations' Universities					
		UK			Canada			Russia			Turkey		
		Number of Lecturers	Number of Lecturers Using KM Tools	%	Number of Lecturers	Number of Lecturers Using KM Tools	%	Number of Lecturers	Number of Lecturers Using KM Tools	%	Number of Lecturers	Number of Lecturers Using KM Tools	%
Knowledge Shar-ing	Use of network	8	8	100	8	8	100	7	5	71	10	9	90
	Continu us partnership	8	8	100	8	8	100	7	5	71	10	4	40
	Organization of workgroups	8	8	100	8	8	100	7	5	71	10	3	30
	Informal meetings within teams	8	7	88	8	7	88	7	3	43	10	6	60
	Social gatherings on regular basis	8	7	88	8	7	88	7	6	86	10	7	70
	Discussion meetings	8	8	100	8	8	100	7	4	57	10	7	70

Continuous Partnership and Organisation of Workgroups: 100% of the participants from the universities in developed nations said that they used this method. A lecturer from the University of Leicester, UK, said, "Every department works in a synchronized way. Everybody knows what he or she is doing, and this would help work to be done on time and in a correct way (G:E(1))." As a conclusion, the academic staff at each university works as a team, and this would help them be aware of what everyone is doing. This creates an auto-control system.

As shown in Table 4, the universities of the developing countries used this method less than those of the developed countries. A lecturer from Cukurova University in Turkey said, "We are not working as a team that much. We mostly work by ourselves. We are afraid of teamwork. We are kind of selfish in the work environment; I think this is the result of some cultural factors (G:T(9))." As a result, cultural factors and selfishness in the work environment are the main reasons why this method is not used very often.

Another academic staff member from Cukurova University said regarding the issue, "Some people are afraid to take any responsibilities while working as a team. This would cause one person in the team to take all the responsibility and do all the assigned tasks. As a result, teams do not perform effectively (G:T(5))." As a result, teams are not successful due to cultural factors. Teammates are selfish in teams and are afraid of taking any responsibility.

Discussion Groups: As shown in Table 4, discussion groups are used more often in the universities of the developed nations than those in the developing nations. Regarding the discussion groups, a lecturer from the University of Calgary stated, "Either for educational topics or other issues, we cannot come up with any ideas without discussing them. Discussions should be positive and focus on finding solutions to the problems (G:E(4))." As a result, discussion groups are constructive, focus on problems in order to find solutions, and are helpful in sharing information.

As shown in Table 4, the universities of the developing nations use discussion groups less than those of the developed nations. An academic staff member from Lomonov Moscow State University in Russia pointed out, "We are afraid to express our ideas in the way we want to because we are afraid of our supervisors. Sometimes our discussions lose their focus, and we cannot come up with solutions. It's hard to say that discussions always reach their goals (G:R(2))." The universities of the developing nations do not use discussion groups due to several reasons such as fear of supervisors and diversion from the discussion topic.

Fourth Dimension: Evaluation of Knowledge: Table 5 reveals the results concerning the evaluation of knowledge at the educational and organisational levels.

Internal and External Control System: After conducting interviews with the universities of the developed countries and taking into account the results as presented in Table 5, we can conclude that the participants from the developed nations used the evaluation of knowledge method more than the participants from the developing nations. Regarding the method, an academic staff member from the University of Calgary in Canada declared, "Accreditation institutions monitor us every five years whether we follow the standards or not. It is an honour and prestige to get full scores from accreditation institutions. Not only the courses but also all other aspects of the university are controlled. Quality of students is used for internal controls, and the results obtained are used to show the quality of academic staff. When we are monitored by other departments, this helps us to figure out the areas that need improvement (G: C (8))."

Universities work hard in order to improve themselves and to meet the standards of the accreditation institutions. These efforts result in the improvement of the universities' quality. Accordingly, evaluations from students and other departments also help the ongoing improvement process of the universities.

As shown in Table 5, the universities of the developing nations used internal and external control methods less compared to those of the developed nations. A lecturer from Cukurova University in Turkey stated, "As external control only the Board of Higher Education, which is a government-based organisation, indirectly supervises us. They only examine if the university follows their applications and standards. They do not supervise other facilities of the university. As for internal control, we can mention student surveys as a control tool. However, it's hard to say whether the results of these surveys are evaluated or

Table 5

KM Tools Used by Evaluation of Knowledge

Time Period	KM Tools	Development Level											
		Developed Nations' Universities						Developing Nations' Universities					
		UK			Canada			Russia			Turkey		
		Number of Lecturers	Number of Lecturers Using KM Tools	%	Number of Lecturers	Number of Lecturers Using KM Tools	%	Number of Lecturers	Number of Lecturers Using KM Tools	%	Number of Lecturers	Number of Lecturers Using KM Tools	%
Evaluation of Know-ledge	Internal and external controls	8	8	100	8	8	100	7	5	71	10	7	70
	Interviews with students and academic staff	8	7	88	8	7	88	7	5	70	10	9	90
	Comparisons with other universities	8	8	100	8	8	100	7	5	71	10	7	70
	Evaluation of reports	8	7	88	8	7	88	7	4	57	10	6	60
	Interview with the graduates students and former academic staff	8	8	100	8	8	100	7	5	71	10	3	30

not (G:T(6)).” As a result, external controls done by governmental institutions only determine whether or not the universities use their application and standards. They do not control other factors. On the other hand, as for internal controls, only student surveys are used as a control tool, but the results are not utilized effectively.

Evaluation of Reports: As shown in Table 5, the universities of the developed nations used the evaluation of reports method more than those of the developing nations. Regarding the evaluation of reports method, a lecturer from the University of Calgary in Canada pointed out, “At the end of every academic year, reports are prepared in such areas that indicate the performances of faculty members, financial resources, courses that are available during the semester, performances of students, student profiles, student life on campus, and psychology of students. The results of these reports that are evaluated are used to make strategic plans in the areas that need improvement (G:C(3)).” The universities in the developed nations evaluated reports very carefully in order to identify their strategies and set goals for the following academic year.

As shown in Table 5, the faculty staff in countries such as Russia and Turkey have less use of this method compared to those in developed nations. A lecturer from Lomonov Moscow State University said, “Annual reports are prepared at the end of every academic year about student performances; however, I have not seen any action taken for the strategy development for the next academic year based on these reports (G:R(6)).” Accordingly, the universities of the developing nations do not use these reports effectively in important areas such as strategy development for the coming academic year.

Conclusion and Recommendations

In this study, the use of knowledge management tools in developing and developed countries can be categorised into four dimensions as shown below:

First Dimension: Identifying the Lack of Knowledge: Instructors from developed countries such as the United Kingdom and Canada organise meetings on a regular basis in order to identify the lack of knowledge. Accordingly, they used the results drawn from these meetings efficiently to find solutions for certain issues. However, instructors from developing countries such as Russia and Turkey organised fewer meetings compared to the developed countries. In addition to that, the meetings organised were not effective enough to take some decisions and identify the lack of knowledge. However, Aslangiray (2003) stated that once the communication and emotional connection between group members in teams are established, the lack of knowledge can be identified, and groups can perform more efficiently.

With regard to organising meetings, more regular and systematic meetings should be organised in the universities of the developing countries, and the opinion of the academic staff should be taken into consideration in order to prevent knowledge deficiency.

Based on the analysis of the UK and Canadian academic staff, future scenarios have been used for both short- and long-term strategic planning in their universities. However, universities in countries such as Russia and Turkey made use of the future scenarios method less compared to those in the developed countries. To sum up, the

future scenarios tool was not defined by the academic staff from the developing countries as a solution to solve the long-run knowledge deficiency problems.

The universities of the developing countries should organize their short-, medium- and long-term strategic planning parallel to the applications of the universities of the developed countries in order to eliminate knowledge deficiency problems that might arise in the future.

Second Dimension: Improvement and Acquisition of Knowledge: An academic staff member from England and Canada stated that with regard to research and development, among the knowledge management tools the improvement and acquisition of knowledge method is utilised at an adequate level, and it is understood that research and development are the main targets of the universities. In Russia and Turkey, due to economic, technological, and socio-cultural reasons, adequate attention is not paid to research and development studies.

As for the knowledge development process, it is seen that the participants from the universities of the developed countries utilise the observation method more than the participants from the universities of the developing countries. The universities in Canada and England continuously observe other universities in order to elicit the developments inside and outside the universities and increase their improvements. Their aim is to find solutions to possible problems beforehand and act on time. On the other hand, due to the lack of competition between universities in Russia and Turkey, the observation method is not utilised very often.

Third Dimension: Sharing Knowledge: Universities in countries such as England and Canada used knowledge-sharing tools of knowledge management by forming workgroups that helped them achieve continuous knowledge sharing. The participants in the universities of the developed countries said that teamwork was used more often and it helped them achieve the best results. On the other hand, organisation of workgroups and teams is used less in countries such as Russia and Turkey. The main reasons are due to cultural factors: individuals act more selfishly, and they are afraid to take responsibility. In order to keep the quality at a certain level and to follow the developments and changes in our environment and to achieve efficiency, teamwork is essential (Sarihan, 1998).

Discussion groups as a knowledge management tool were used more in the universities of the developed countries than those in the developing countries. Discussion groups are constructive, can provide positive feedback, and aid knowledge sharing. Accordingly, developed nations used this tool when sharing knowledge. Russia and Turkey have less use of discussion groups due to reasons such as conflict between faculty staff and their supervisors and drifting from the main topic during discussions. Discussion groups are also indicators of the democratic and intellectual level of the communities (Yesil, 2004). Therefore, individuals in Russia and Turkey should have an idea about how to act and behave in discussion groups (Mendel-Reyes, 1998).

Fourth Dimension: Evaluation of Knowledge: Evaluation of knowledge in terms of external and internal controls is used more often in the universities of the developed countries compared to those in the developing countries. Accreditation institutions have been seen as a major external control system in the developed nations.

Universities always try to do their best to reach the premium standards set by these institutions, which help them achieve continuous improvements. Evaluations from students and other departments classified as internal control are also helpful for making continuous improvements in the universities. The result indicates that the universities of the developing countries could not use the internal and external control systems properly when compared to those of the developed countries.

As for the external control, a government institution acted as a control tool where it focused on whether or not the universities followed the standards. On the other hand, student surveys are the only means of internal controls, the results of which are not utilised adequately. However, Sullivan and Glanz (2005) claim that in order to improve education and increase student motivation and performance, constant evaluation, control, and monitoring are necessary.

The research shows that evaluation of reports is used more often in the universities of the developing countries than the universities of the developed countries. Evaluation of reports is critical in developed countries such as Canada and England, since it helps to plan an upcoming year's educational strategies. However, evaluations of reports are not used for strategic purposes in Russia and Turkey. Quantitative analyses of social and economical factors are getting more complicated nowadays. Accordingly, new problems arise in the communities. Statistical studies and the use of methods based on these studies are becoming more necessary. In addition to this, collection of data based on issues such as summing up, analysing, making effective use of the collected data, and making decisions based on the data are the important elements of the evaluation process, and therefore they should be utilised more in Russia and Turkey (Karagöz & Ekici, 2005).

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**Bilgi Yönetimi Araçlarının Kullanımı:
İngiltere ve Kanada ile Rusya ve Türkiye'nin Karşılaştırılması**

(Özet)

Problem Durumu: Bütün organizasyonlar gibi üniversiteler de yaşamlarını sürdürebilmek ve amaçlarını gerçekleştirebilmek için bilgiyi etkin bir şekilde yönetme ihtiyacı duymaktadırlar. Bilgi yönetimini örgütsel bir süreç olarak tasarlanmak ve sürekli geliştirilmek durumundadır. Bu süreç her tür çağdaş örgüt açısından bilgi yönetimini bir zorunluluk haline getirmiştir. Araştırma ve eğitim faaliyetlerinin gerçekleştirildiği üniversitelerde ise bilgi yönetimi çalışmaları kritik öneme sahiptir. Üniversitedeki eğitim faaliyetlerinin etkili bir şekilde yürütülebilmesi insanların, örgütsel süreçlerin, teknolojinin ve yapısal özelliklerin işlevsel bir koordinasyonu ile mümkündür. Bilgi yönetimi bu koordinasyonun gerçekleştirilmesine yardımcı olarak üniversitedeki eğitime katkı sağlayabilir. Günümüzde eğitim faaliyetlerinin odak noktası öğretme çabalarından ziyade öğrenme süreçleridir. Bilgi yönetiminin en önemli araçları arasında yer alan enformasyon teknolojilerinin ve sosyal bilgi yönetimi araçlarının etkin kullanımı öğrenmeyi destekleyebilir. Bilgi yönetimi sürecinin gereklilikleri bilgi yönetimi araçları vasıtasıyla yerine getirilmektedir. Öğrenmenin gerçekleştirilmesini teşvik eden ve dolayısıyla bilgi yönetimini olanaklı kılan araçlar bilgi yönetiminin özünü oluşturmaktadırlar. Araçsız bir bilgi yönetimi süreci düşünülemez. Araçlar sürecin bütününde olduğu gibi bilgi edinimi aşamasında da önemli bir rol oynamaktadırlar. Dolayısıyla, organizasyonların bilgi yönetimi sürecine ilişkin araştırmaların başlangıç düzeyinde olduğu sektör ve ülkelerde bilgi edinimi ve araçlara ilişkin durumun öncelikli olarak ele alınması gerekmektedir.

Araştırmanın Amacı: Ülkelerin gelişimlerinde büyük bir öneme sahip olan üniversitelerin günümüzdeki bütün organizasyonlar gibi yaşamlarını sürdürebilmek ve amaçlarını gerçekleştirebilmek için bilgiyi etkin bir şekilde yönetme ihtiyacı duymaktadırlar. Bilgi yönetimi örgütsel bir süreç olarak tasarlanmak ve sürekli geliştirilmek durumundadır. Bu süreç her tür çağdaş örgüt açısından bilgi yönetimini bir zorunluluk haline getirmiştir. Araştırma ve eğitim faaliyetlerinin gerçekleştirildiği üniversitelerde ise bilgi yönetimi çalışmaları kritik öneme sahiptir. Yapısal olarak bilgiyle iç içe bir niteliğe sahip olan ve bunun da ötesinde bilginin toplumda yaygınlaştırılmasına öncülük etmesi beklenen üniversitelerde bilginin etkin bir biçimde yönetilmesi özel bir önem taşımaktadır. Üniversitelerin genel olarak misyonlarını gerçekleştirebilmeleri için etkin bilgi yönetimi süreçlerine sahip olmalarını gerektirmektedir. Bu çalışmada bilgi yönetimi hakkında üniversitelerde yeterli çalışma yapılmamış olması nedeni ile üniversitelerdeki bilgi yönetimi süreçlerinin mevcut durumunun aydınlatılması ve geliştirilmesi, sağlıklı bir bilgi yönetimi sürecinin yürütülebilmesi için önem taşıyan uygulama ve yaklaşımların tartışılması, üniversite yöneticileri ve araştırmacılar için yararlı olabilecek uygulama önerileri sunmak amaçlanmaktadır.

Araştırmanın Yöntemi: Çalışmada nitel araştırma yönteminden yararlanılmıştır. Araştırmaya ülkelerin gelişmişlik düzeyine göre Rusya, Türkiye, İngiltere ve Kanada'da faaliyet gösteren 4 tane üniversitenin 35 öğretim elemanı ile görüşülmüştür. Verilerin toplanmasında uygulanan görüşme formunda bilgi yönetimi sürecinde kullanılacak araçlar dikkate alınarak görüşme soruları

hazırlanmıştır. Araştırma verileri 15 Mart 2007 - 01 Temmuz 2008 tarihleri arasında katılımcıların uygun oldukları saatlerde kendi odalarında yapılan görüşmeler yoluyla toplanmıştır. Araştırmada yapılan görüşmeler için yarı-yapılandırılmış görüşme formu kullanılarak 4 üniversitenin eğitim fakültelerinde görevli öğretim elemanları ile bilgi yönetimi süreçlerine göre bilgi yönetimi araçlarının kullanımına ilişkin görüşler belirlenmiştir.

Araştırmanın Bulguları: Yapılan karşılaştırmalı durum çalışmasında elde edilen bulgulara göre bilgi eksikliğini belirleme, bilgi geliştirme ve satın alma, bilgi paylaşımı ve bilgiyi değerlendirme boyutlarında gelişmiş ülkelerin üniversitelerine göre gelişmekte olan ülkelerin üniversitelerinde etkin olarak kullanılmadığı ve geliştirilmesi için yorumlarda bulunulmuştur.

Araştırmanın Sonuçları ve Önerileri: Rusya ve Türkiye’de öğretim elemanı konumunda olan katılımcıların beyin fırtınası seansları düzenlenmesi konusunda bu bilgi yönetimi aracını İngiltere ve Kanada katılımcılarının görüşlerine göre pek kullanmadıkları ancak ihtiyaçları olduğu söylenebilir. Gelişmekte olan ülkelerde benchmarking (kıyaslama) uygulaması daha fazla arttırılırsa diğer üniversitelerin üstün performanslarını kendi üniversitelerine uyarlayarak bilgi eksikliklerini giderebilecekleri önerilebilir. Bilgi yönetimi aracı kapsamında olan gelecek hakkında olası senaryolar geliştirilmesi konusunda İngiltere ve Kanada’da öğretim elemanı konumunda olan katılımcıların bu bilgi yönetim aracını çok iyi kullandıkları anlaşılmaktadır. Gelecek hakkında kısa, orta ve uzun vadeli planlar yaptıklarını ve bunları uygulamaya çalıştıklarını söyleyebiliriz. Rusya ve Türkiye’de ise gelecek hakkında olası senaryolar geliştirilmesi konusunda bu bilgi yönetim aracını yeteri kadar kullanamadıkları, gelecekte oluşabilecek bilgi eksikliklerini gideremedikleri anlaşılmaktadır. Ancak gelecek hakkında olası senaryolar üzerinde çalışmalar yapılması halinde Rusya ve Türkiye’deki üniversitelerin performanslarını daha da yükseltebilecekleri, kalitelerini arttırabilecekleri, süreçleri iyileştirebilecekleri söylenebilir. Gelişmekte olan ülkelerin üniversitelerinde üniversiteler arası ziyaretlerin ihtiyaca göre sayısı artırılarak üniversitelerin farklı uygulamalarını daha fazla karşılaştırma imkanı olacağı ve karşılaştırmaları neticesinde elde ettikleri verilere göre daha iyi değerlendirmeler yapabilecekleri düşünülebilir. İngiltere ve Kanada’da öğretim elemanı konumunda olan katılımcıların bilginin geliştirilmesi veya satın alınması sürecinde bilgi yönetimi aracı kapsamında olan araştırma ve geliştirme çalışmalarının yapılması ile ilgili olarak bu bilgi yönetim aracını istenilen seviyede kullanabildiklerini, araştırma ve geliştirme çalışmalarının üniversitenin esas amacı olduğu anlaşılmaktadır. Rusya ve Türkiye’de ise araştırma ve geliştirme çalışmalarının yapılması konusunda daha düşük bir oranda yapabildikleri anlaşılmaktadır. Araştırma ve geliştirme çalışmalarına ekonomik, teknolojik ve sosyo-kültürel nedenlerle gereken önemin verilemediğini söyleyebiliriz. Gelişmiş ülke üniversitelerinde olan katılımcıların gelişmekte olan ülkelerin üniversitelerinin katılımcılarına göre bilgi yönetimi araçlarından raporların incelenmesi konusundaki aracı gelişmiş ülkelerin üniversitelerinde daha fazla kullandıklarını söylenebilir. Kanada ve İngiltere’de raporların incelenmesi konusunda çok hassas davranıldığını ve ileriki yılların stratejilerinin oluşturulmasında kendilerine hedefler koyabildiklerini söyleyebiliriz. Rusya ve Türkiye’de ise raporların incelenmesi konusunda raporların stratejik planlamalar için kullanılmadığını, yeteri kadar dikkate alınmadığını düşünebiliriz.

Anahtar Kelimeler: Bilgi, bilgi yönetimi süreci, bilgi yönetimi araçları, üniversiteler.

Research on Students' Quality of Life and Risky Living Conditions

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Abstract

Problem Statement: In order to prevent acts of violence seen in our schools in Turkey, scientific and executive circles must approach the subject with respect to quality of life as a whole and must consider protective and preventive solutions. The quality of life of the youth is affected by the personal characteristics of the individual, the environment lived in, the events and the cultural characteristics of the society. Characteristics of adolescence and risky living conditions affect the quality of life of the youth. It is necessary to evaluate the students in their environment and to upgrade their quality of life with a learner-focused approach so that they can become qualified individuals in all respects.

Purpose of Study: To examine students' quality of life in schools where unfavorable events are faced intensively, to evaluate students' risky living conditions and to assist in protective and preventive studies.

Methods: A total of 243 students, of whom 135 (55.6%) were from primary schools, 108 (44.4%) from secondary schools, 122 (50.2%) girls and 121 (49.8%) boys from the 5th, 8th, 9th and 11th grade classes of primary and secondary schools situated in the risk map of Keçioren-Ankara constitute the sample of the research. A 100-question questionnaire of the World Health Organization Quality of Life 1998 Turkey Version was used to examine students' quality of life.

Findings and Results: It was found that the conditions of the quality of girls' and boys' lives at risky schools were not equal, that levels of quality of life were physically and psychologically unhealthy, and that there was room for improvement in domains of independence, in social and environmental

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domains. It was observed that although students' perspectives to life have strong sides due to social pressure which students face dependent living conditions has been developed.

Conclusions and Recommendations: Students should be well-informed on adolescence, and be given psychological support and more opportunities; and economic support and the opportunity to live in a safe environment should be given to families of poor students; philosophy of life and ethical values should be taught to the students. Efforts should be made to free the students from social pressure and give them the opportunity of a living practice based on democratic values.

Keywords: Quality of life, indicators of quality of life

It is important to have a holistic approach to the issue of violence and to develop protective and preventive solutions. The World Health Organization defines the factors determining violence as personal factors, relations with close environment, and factors related with community and social structure. Personal factors causing violence are biological, psychological and behavioral characteristics. Psychological and behavioral characteristics are hyperactivity, inability to control behaviors, and attention problems. The socio-economic structure and cultural background of the family also influence the incidence of violent behaviors. Acts of violence are seen more frequently in families with low socio-economic levels. Factors such as the use of alcohol and narcotics in the family, stress, and social loneliness increase the incidence of violence (WHO, 2006).

The aim must be to determine characteristics of violent behaviors, factors leading to violence, and measures necessary to make such factors ineffective (TBMM, 2007). Under the efforts to prevent violence in Turkey, planning has begun to prepare school action plans and to make constructive educational efforts to prevent violence and to create safe schools (MEB, 2007) in line with the "Strategy and Action Plan for Prevention and Reduction of Violence in the Media of Education" (MEB, 2006). The crisis intervention team formed in Ankara-Keçiören has prepared an action plan to conduct preventive and protective efforts against unfavorable events in schools (Keçiören County National Education Directorate, 2006).

Characteristics of adolescence and risky living conditions affect adolescents' quality of life (Öktem, 1999). It is necessary to evaluate the students in their environment and to improve their quality of life with a learner-focused approach, so that they can become qualified individuals in all aspects. The criteria that explain the individual quality of life are students' evaluations such as how they see themselves and the situation they are in, satisfaction from life, happiness, and well-being (Tekeli et al., 2003). The general health of the students and their quality of life are determined by their social environment, family structure, friends, school environment and gender (Öksüz & Malhan, 2005). The purpose of the research is to study students' quality of life in schools where unfavorable events are experienced intensively, to determine unhealthy and insufficient areas of life, and to evaluate

risky living conditions in these areas for male and female students and to assist protective and preventive efforts.

The issue of the meaning of life and the happiness of human beings historically having been dealt with in philosophical teachings took a major place among the main topics of science in the development process of the social sciences. Studies of scientific and administrative environments have developed in the fields of putting human rights into practice--qualified life, health-based, city-based and environment-based life quality. In the context of changing paradigms and changing indicators, it was observed that measurements of the performance of human beings and society by means of indicators have changed and improved over time (Tekeli et al., 2003). Being healthy as physically and psychologically, having an independent personality, having successful social relationships, having a secure and healthy interaction with environment, having consistent values and coping with social pressures are related to develop students as qualified individuals

In today's world, life quality research dealing with people and the reality of the society in which they live within the integrity of its objective and subjective aspects have gained importance. The purpose of understanding the problems of people and society and establishing a basis for the practices which will improve the level of welfare has come to prominence. To determine causality relations in life quality, to measure life quality via indicators, to determine problems and to develop ways of solving problems has become a main purpose. Diagnosis dependent interventions in medicine and social science fields have facilitated studies for increasing effectiveness and productivity of the individual (Öksüz, & Malhan, 2005). The development of the concept of life quality and the introduction of indicators dependent on this concept carries the concern of the development of rationalism in social policies and ensures that these policies are sufficient.

Method

Participants

Risky schools were determined by the report on students at risk at schools within Ankara-Keçiören County and their primary and secondary school students are the population of this research. It was found that there were students at risk at 27 schools where unfavorable events were observed. 7 schools out of 27 have been covered under the sampling. Sampling was planned on the basis of stratified, gradual and random samplings (Erdoğan, 1998). 4 primary and 3 secondary schools at most risk were determined using the risk map and the application was made to students of 5th, 8th, 9th and 11th grade classes, taking into consideration their development levels. 122 (50.2%) out of 243 students in the sampling were girls, and 121 (49.8%) were boys. 135 (55.6%) students were at primary schools and 108 (44.4%) were at secondary schools.

Data Collection Tool

The quality of life scale prepared by the World Health Organization and validated for Turkey was used for data collection. The original WHOQOL-100 scale

is comprised of 100 questions. The scale comprises 6 domains and 25 sections. Each domain is comprised of 4 questions. The questions designed as using Likert type. Scale The scale doesn't have a total score. Each section and domain gets maximum scores of 20 and 100 points, respectively. Higher scores indicate a better quality of life. Indicators that enable evaluation of the students' individual quality of life are physical health (energy, sleep, pain), psychological domain (positive feelings, thinking and learning, self-respect, corporal image perception, negative feelings), level of independence (activity, action, ability to work, addiction to medicines) social domain (relations, support, adolescence, sexual development), and environment (security, home environment, financing, health, accessibility to social assistance and services, accessibility to information, leisure time, physical environment, transportation) (Eser, Fidaner, Fidaner, Elbi, Eser, & Göker, 1999).

Studies for The "World Health Organization Life Quality Scale" (WHO-QOL) were launched in 1992 with the aim of making comparisons between various cultures in the world; this research is still valid in more than 40 languages and cultures. In 1995 Turkey joined this development project and in accordance with the conditions proposed by the World Health Organization carried out a Turkish version of the validity study, which was completed in 1998. The validity study was implemented with focus group studies in primary, secondary and higher education levels. The life quality scale applied in the study contains the qualities that will help students to look at their lives wholly as individuals and generate original data and information. The fields of the scale allow for the life qualities of students to be evaluated in the social environment in which they live and for problems to be determined. Indicators of the scale contribute to the evaluation of students' physical and spiritual health; an examination of their independency levels, social relations, and their interactions with their social environment; and the determination of students' perspectives on life and the social pressures they face. The scale contains dimensions which contribute to the determination of the students' risky life conditions as well as their positive life conditions, and understanding the causes of the problems experienced in the schools. Scale indicators could help in the formation of a database that will contribute to the research to be conducted with the aim of increasing students' life qualities and improving their life standards.

Data Collection and the Evaluation Process

The survey was made with the cooperation of the guidance services of the schools in the sampling. In the analysis of the data, the Association of Quality of Life in Health, which made the validation study of the World Health Organization Quality of Life Scale 1998 Turkey Version 2 was contacted and assistance was received as "WHOQOL Turkey Center" in the application and evaluation phases. The data of the research were evaluated using SPSS for Windows 11.5. Chi-square analysis was made to check if there were any differences between boys and girls with respect to quality of life (Büyüköztürk, 2007).

The fact that the research was conducted within the scope of "Strategy and Action Plan for Prevention and Decrease of Violence in Educational Environments" studies and that the researcher himself/herself was on a work team made the

implementation process easier. The Keçiören District National Education Directorate and Guidance and Research Center crisis intervention team was formed, an advisory board was established and a risk map of the schools in the town was formed within the scope of the action plan. In this scope, it was ascertained that there was no student at risk in 71 of 98 schools in the town; there were students at risk in 27 schools; 7 students were drug addicts; 52 students were subjected to negligence and exploitation; 538 students were subjected to violence; and 988 students had parents who lived separately, did not have good economic conditions, smoked and could not control their anger. In these matters, the necessary studies were undertaken by the crisis intervention teams established in the schools. Within the scope of the Report of Students at Risk, it was decided to conduct a field research project in order to determine the life qualities and risky life conditions of problematic students, and it was stated that this research would be conducted by the author of this paper.

At the end of the study, it was observed that the students responded to the scale articles consistently and it was determined that surface validity was high. It was realized that the words in scale articles were understood by the students and the answers appropriate to the students were marked by them. It was ascertained that correlation coefficients of primary education and secondary education students in themselves were high. For that reason, all of the students were included in the evaluation and no respondent was excluded. The difference in education level did not cause a new exclusion criterion to be formed in the scale implementation.

Findings and Results

Characteristics of the Students' Families

Most of the students (64.1%) lived in nuclear families. With respect to number of members of a nuclear family, those with parents and two children ranked first (40.3%). A majority of mothers (87.2%) were housewives. (55.6%) of fathers were self-employed tradesmen and 24.3% were public servants. 84.2% of the students' families had social security. As for income level, half of the students' families (57.6%) were on the boundary of poverty. Families earning below minimum wage were 25.1%; those with an average income were 13.2% and wealthy families were 4%.

Characteristics of Adolescence

Development stages of the students cover pre-adolescence (29.2%) and mid-adolescence (70.7%). Students unhappy with the changes in adolescence constitute an important group (32.5%). Those who feel that the changes in adolescence are compelling them are as high as 51.9%. 49.4% of the students think that schools are not giving them sufficient information about adolescence. 81.4% of the students think that their knowledge about sexuality is sufficient. It is a significant contradiction that the students who feel insufficiently informed about adolescence in schools find their knowledge about sexuality to be sufficient. The idea is that the information about sexuality is taken from sources outside of schools and, therefore, that such information is found insufficient is gaining ground.

A Comparative Analysis of Male and Female Students' Quality of Life

Students' ideas about quality of life. It was observed that, in general, the level of the students' quality of life in risky schools was low (100/50). Students' physical (100/56) and psychological (100/63) conditions were unhealthy, their sense of independence (100/56) was medium, and social (100/56) and environmental conditions (100/31) were insufficient.

Table 1

Points of Students In Terms of Life Quality Fields and Their Sub Indicators

Fields	Physical Health	Spiritual Field	Independency Level	Social Field	Environmental Field	Perspective Of Life	General Life Quality And Health
Sub Indicators	Energy Sleep Aches and pains	Positive Feelings Thinking & Learning Self Esteem Body simulacrum Negative Feelings	Mobility Activity Power to work Addiction to drugs	Relations Support Adolescence-Sexual development	Security House environment Financing Accessibility to health, social help and services Access to information Leisure time Environment Transportation		
Raw Field Score	13	14	16	13	9	16	12
Scale Point Of Raw Field Score	56	63	75	56	31	75	50

Physical health and quality of life. Students' most important health problems are fractures (26.3%), stress (26.3%), eye problems (24.3%) and bronchitis (14%). Pain is a health problem constantly experienced by one group (8%). Pain or feeling of pain causes concern among students (83.5%). A significant number of the students (41.2%) find it difficult to cope with pain. A majority of students (69.6%) think that they are strong enough to continue with their daily lives. It was observed that students were pleased with the strength they had (70.4%). It was noted that the girls became tired more easily $\chi^2 (4, N=243) = 6, 34 p \leq .05$. Male students suffered more from sleeping problems (38.7%) $\chi^2 (4, N=243) = 3, 47 p \leq .48$. Sleeping problems created concern for students (66.3%). Girls were more concerned with sleeping problems $\chi^2 (4, N=243) = 8, 91 p \leq .06$.

Psychological health and quality of life. Students were of the opinion that they were experiencing positive feelings intensively (89.7%). A majority of the students (82.3%) felt at peace. 89.5% of the students could focus their attention. 10.5% of the students

had attention deficit disorders and difficulty with concentration. A majority of the students found their memories to be good (73.3%) and their levels of self-confidence high (78.6%). Boys had a higher level of self-confidence $\chi^2 (4, N=243) = 2, 66 p \leq .62$. 74.1% and were content with their ability to learn new things, and 63.8% were content with their ability to make decisions. Boys were more content with their ability to make decisions $\chi^2 (4, N=243) = 6, 78 p \leq .15$. Those optimistic about the future constituted the majority (88.9%). Girls were more optimistic about the future $\chi^2 (4, N=243) = 4, 15 p \leq .39$.

Boys are less comfortable with one or another aspect of their appearance $\chi^2 (4, N=243) = 0, 84 p \leq .93$. There is a significant difference among students in being content with their physical appearance $\chi^2 (4, N=243) = 1, 51 p \leq .83$. Boys are more affected by their physical appearance and this makes them more shy $\chi^2 (4, N=243) = 5, 91 p \leq .21$. Girls tend to accept their physical appearance $\chi^2 (4, N=243) = 1, 51 p \leq .83$. The rate of students experiencing negative feelings like grief, hopelessness, stress and depression is 65.4%. 95.4% of the students have high self-esteem; 95.1% have self-confidence and 70.4% are content with themselves. Girls are more content with themselves $\chi^2 (4, N=243) = 6, 25 p \leq .18$.

The percentage of students who were happy, hopeful, enthusiastic, and energetic was 34.6%. Girls suffered from negative feelings more than the boys $\chi^2 (4, N=243) = 5, 14 p \leq .27$. Girls were more affected by negative feelings (63.3%). $\chi^2 (4, N=243) = 10, 50 p \leq .03$. Half of the students (50.1%) expressed that negative feelings hindered their daily lives. Negative feelings hindered girls' daily lives more $\chi^2 (4, N=243) = 8, 06 p \leq .09$. A significant group of students (65.8%) feel lonely in the environment in which they live. Girls experience the feeling of loneliness more than boys $\chi^2 (4, N=243) = 4, 10 p \leq .39$. Students who feel anxious during their daily lives (61.9%) take the lead. Girls feel more anxious in their daily lives $\chi^2 (4, N=243) = 11, 79 p \leq .02$. A significant number of students (47.9%) are willing to receive psychological support when necessary. Girls are more willing to receive psychological support $\chi^2 (4, N=243) = 10, 47 p \leq .03$.

Level of independence and quality of life. Physically active students (89.2%) and the ones content with their physical abilities (85.6%) constitute the majority. Girls are more content with their physical abilities $\chi^2 (4, N=243) = 5, 90 p \leq .21$. Girls are rather corporally active $\chi^2 (4, N=243) = 5, 10 p \leq .74$. Half of the students (46.6%) feel bothered by their difficulties in physical activity. Girls are more bothered by these difficulties $\chi^2 (4, N=243) = 2, 15 p \leq .87$. Those who feel that the difficulties in physical activity (61.3%) hinder their lives take the lead. Boys feel that such difficulties affect their lives $\chi^2 (4, N=243) = 5, 41 p \leq .25$.

93.1% of students have sufficient strength to maintain their daily lives. It was observed that boys were stronger in maintaining their daily lives $\chi^2 (4, N=243) = 6, 08 p \leq .19$. The rate of the students who find that they have difficulty in maintaining their daily lives is 46.1%. Girls feel more bothered by the restrictions encountered $\chi^2 (4, N=243) = 2, 73 p \leq .60$. Students who are bothered by the restrictions in performing their daily activities (60.1%) take the lead. The percentage of students who are happy

with their skills is 68.1%. Students' satisfaction with the medium of education at schools (72.9%) and the physical conditions of the schools (69.2%) is mediocre. The rate of the students stating that physical conditions of their school restricted their domain of activity was 30.8%. The rate of students feeling that activity opportunities provided by the school were sufficient was 63.4%. Students were, in general, happy with the relations they established with their teachers (80.2%) and friends (88.5%) at school. Students finding class hours sufficient (66.7%) found the breaks insufficient (58.4%).

The rate of students stating that they had to take medication to perform their daily activities was 16.5%. Boys were found to be taking more medication to perform daily activities $\chi^2 (4, N=243) = 6, 42 p \leq .17$. The rate of students who needed medical treatment to perform daily activities (24.7%) was high. It was found that boys needed more medical treatment $\chi^2 (4, N=243) = 10, 26 p \leq .04$. The rate of students stating that they were dependent on medication they were using for treatment to improve their quality of life was high (40.3%). It was observed that boys were more dependent on medicines used to improve their quality of life $\chi^2 (4, N=243) = 4, 49 p \leq .34$. Boys view themselves as more dependent on medicines than girls $\chi^2 (4, N=243) = 11, 85 p \leq .02$.

Social relations and quality of life. Students were happy (86.4%) in their relations with family members. Girls were happier in their relations with family members $\chi^2 (4, N=243) = 4, 83 p \leq .31$. All students (99.8%) were happy in their relations with people out of their families. Girls were happier in their relations with people out of their families $\chi^2 (4, N=243) = 5, 81 p \leq .21$. All students (93.8%) were happy in their relations with their teachers at school. Girls were happier in their relations with their teachers $\chi^2 (4, N=243) = 8, 79 p \leq .07$. Students were happy in their relations with friends (95.9%). Girls were happier with their relations with friends $\chi^2 (4, N=243) = 5, 69 p \leq .22$. A majority of the students (94.7%) were happy about their ability to help others. Girls were happier about their ability to help others $\chi^2 (4, N=243) = 7, 70 p \leq .10$. Boys stated that they were more able to receive support from others $\chi^2 (4, N=243) = 6, 78 p \leq .15$. A majority of the students (87.7%) stated that they felt happiness happy with the support they receive from their families. Girls are happier with the support they receive from their families $\chi^2 (4, N=243) = 4, 65 p \leq .33$. Students (81.9%) feel confident that their friends will support them when they need it. Boys feel more confident in this regard $\chi^2 (4, N=243) = 6, 78 p \leq .67$. Girls are happier with the support they receive from friends $\chi^2 (4, N=243) = 6, 93 p \leq .14$.

Environment and quality of life. One out of two students (52.6%) is not happy with the physical environment in which they live. Girls are more dissatisfied with their physical environment $\chi^2 (4, N=243) = 7, 40 p \leq .12$. A majority of the students (81.1%) feel safe in their daily lives. The rate of those who think that they are living in a safe and secure environment is 64.2%. Girls think that the environment in which they live is not safe and secure $\chi^2 (4, N=243) = 5, 56 p \leq .35$. A significant group of students (40.3%) are concerned about their safety. Students (87.2%) are happy with the conditions of their homes. Students (91.7%) find the homes they live in to be comfortable. Girls find the homes they live to be more comfortable $\chi^2 (4, N=243) = 3, 23 p \leq .52$. Girls find the quality of their homes more suited to their needs $\chi^2 (4,$

$N=243$) = 5, 31 $p \leq .26$. Girls find their homes more enjoyable as an environment χ^2 (4, $N=243$) = 2, 62 $p \leq .06$

The rate of those who have financial problems to meet their needs is 36.7%. Girls have more financial problems χ^2 (4, $N=243$) = 2, 32 $p \leq .68$. Girls are more concerned about money χ^2 (4, $N=243$) = 2, 60 $p \leq .63$. A majority of the students (82.3%) are happy with access to health services. Girls feel that they have easier access to health services χ^2 (4, $N=243$) = 3, 03 $p \leq .55$. A majority of the students (76.2%) are happy with the social service agencies. 88.3% of students find the social services offered to be of good quality.

Half of the students (49%) have been found not to have the opportunity to have access to the knowledge they need for education. It was found that students were happy to get news and new information in their daily lives (82.3%). A majority of the students (85.2%) are happy to have the opportunity to acquire new skills. A majority of the students (82.3%) are happy with how they enjoy leisure time. The percentage of students happy with their means of transportation is approximately 79.9%. Boys are more content with their means of transportation χ^2 (4, $N=243$) = 2, 82 $p \leq .60$. It is an important problem that girls are not content with their means of transportation. 43.2% of the students have transportation problems. Girls have been found to have more transportation problems χ^2 (4, $N=243$) = 5, 43 $p \leq .25$. Transportation problems restrict girls' lives more χ^2 (4, $N=243$) = 2, 10 $p \leq .72$.

Perspective of life and quality of life. A majority of the students (92.3%) find their lives meaningful. Girls find their perspective of life even more meaningful than boys χ^2 (4, $N=243$) = 5, 76 $p \leq .22$. Students (86.4%) feel that their perspectives of life give them the strength to overcome the difficulties they encounter in life. Girls share this view even more χ^2 (4, $N=243$) = 5, 76 $p \leq .22$. The thought that perspective of life helps in understanding the difficulties of life is widely accepted (89.3%). Girls share this view more χ^2 (4, $N=243$) = 3, 90 $p \leq .42$.

Social pressure and quality of life. Most of the students (63%) stated that there was pressure and difficulties of control in their relations with people close to them. Half of the students (56.8%) think that helping and supporting others restricts their lives. Boys feel even more restricted in their lives because of helping and supporting others χ^2 (4, $N=243$) = 7, 18 $p \leq .13$. Boys feel that helping and supporting others is turning into a social pressure on them χ^2 (4, $N=243$) = 5, 20 $p \leq .27$. Boys experience more the problem of transformation of the help they give to others into a social pressure on themselves χ^2 (4, $N=243$) = 5, 20 $p \leq .27$. Students (86%) feel that they can sufficiently defend themselves in any subject on which they do not agree. Boys feel that they are stronger than girls in defending themselves in subjects on which they don't agree χ^2 (4, $N=243$) = 4, 41 $p \leq .35$. Boys experience more such environments of communication where social pressure and control, as well as level of self-defense is high.

Discussion and Conclusion

Students are living in nuclear families where mothers are housewives and fathers mainly work as tradesman or public servants earning below minimum wage and living on the verge of poverty. Families considered as middle class in terms of participation in production have recessed back to the category of poor and hungry in terms of income. The presence of the students' families in the category of poor and hungry is a domain of risk. Results of a study conducted by a Parliamentary commission support these findings.

Students' quality of life in risky schools where unfavorable events take place has been found to be insufficient. The World Health Organization European Research finds that violence, abuse, and use of alcohol and drugs by children and youth are related with poor living conditions (WHO, 2007). It is necessary to develop protective and preventive services for students at risk. A comparison of the students' quality of life revealed that boys and girls do not live under the same conditions and that there is gender inequality in terms of quality of life (Güvenç, & Aktaş, 2006). Efforts should be made to eliminate gender discrimination at schools, in families and among the students. The students have to be taught about the changes and developments in adolescence. Risks related with the physical health of the students are domains of overcoming pain and physical strength. Measures should be taken to encourage students to use their energies in constructive and nourishing ways.

Students who do not have positive feelings and are anxious and unsuccessful in concentrating should be referred to psychological and social development services (Güvenç, & Aktaş, 2006). Students who have a pessimistic vision of the future, who are confident of their memories, who have a high degree of self-confidence, and who are confident of their abilities to make decisions and are open to learning new things have this negative factor in terms of healthy thinking (Özmen, Erbay, Dündar, Çetinkaya, Taşkın, & Özmen, 2008). Boys need psychological support with respect to corporal perception. Students should be given psychological support and educational services to increase their self-esteem and self-confidence, to make them reconcile with themselves, develop skills which will make them happy, and prevent their tendency toward negative feelings (Çuhadaroğlu, et al., 2004). Productive, creative and participating attitudes of the students should be strengthened and they should be supported in overcoming the pressure of their negative feelings (Onur, 2004). Students' insufficiency in thinking and learning as well as lack of self-respect are important negative issues in terms of psychology. Loneliness is a negative feeling affecting one out of three students.

To improve students' independence level, the quality of their physical activities must be increased. Students' mobility in the cities where they live must be based on a conscious and qualified way of living. Unconscious mobility and interactions may draw students into risky conditions and unfavorable events. Students strong enough to live find it difficult to maintain their lives independently. Students face obstacles in using their strength and performing their daily activities independently.

Opportunities should be developed for girls to enable them act independently and participate in activities. Good relations established by the students are favorable with respect to their socialization process. Students' relations should be improved with respect to democratic communication. Lack of mobility and inability to participate in activities is an important domain of risk. An insufficient duration of breaks limits participation in activities and self-actualization. The use of drugs by students and their need to receive treatment is an important domain of risk. Addiction to drugs is a problem limiting the independence level of boys and girls in the educational environment and creating negative effects on their quality of life (Öktem, 1999). The rate of drug addiction in boys is higher than in girls. These findings support the Research on Profile of Drug Abuse and Addiction in Turkey (Association of Turkish Psychologists, 2002). The works envisioned in the national action plan must be initiated in order to protect the children from drug abuse and addiction.

Students who live in families on the verge of poverty and hunger are happy with the social support of their families and their relations with family members and the familial environment. The vicious circle of the culture of poverty determines the dynamics of students' lives. Feelings of loneliness by the students are feelings peculiar to adolescence. Male students' relations with their friends are a domain open to improvement. Family and circle of friends are the most important means of support for students. Receiving social support can create dependence on others within the dynamics of family and friend circles. Restriction of students' lives due to the support given to others is an important domain of risk with respect to independence (Kağıtçıbaşı, 1995; İmamoğlu, 1995; Musaağaoğlu, & Güre, 2005). Students' financial problems in meeting the education and daily expenses are important domains of risk. Economic problems of the students who live in families on the verge of poverty and hunger and who are dependent on their families for their education expenses and pocket money must be dealt with seriously. Families of poor students must be economically supported and provided with strengthening family services. It was found that discrimination is made between genders in spending money for the children. Financial problems of girls in meeting their needs and their concerns over money create a domain open to economic and sexual abuse. Opportunities of the students to benefit from health and social services should be improved.

Students' satisfaction from the opportunity to get news from mass communication media despite insufficiency of access to the knowledge they need for education is a contradiction in terms of education. Opportunities should be created for students to get the knowledge necessary in the education process. Students should be given opportunities to acquire new skills and value their leisure time. Students should be provided with living conditions in an environment where they feel safe and where there is no danger to life and property. Solutions should be found to transportation problems and the quality of transportation should be improved.

Students feel that their perspective of life makes them strong in understanding the difficulties of life and in overcoming the problems they encounter. Adolescent students who do not find their lives meaningful, and who do not have a perspective

of life helping them understand and solve the difficulties of life should be carefully evaluated (TBMM, 2007). Adolescent students should be made knowledgeable and conscious about philosophy of life and ethical values and they should acquire changes in values, attitudes and behaviors (Çivitci, 2009). Researching and questioning productive and qualified individuals who have a rational view of life and can direct their feelings rationally should be brought up (Sabancı, 2009).

Social pressure on the students is a very important domain of risk. The culture of democracy should be determinant in students' relations with their friends and people close to them in their family, at school and in social circles. It is a basic domain of contradiction that the culture of pressure and control prevails instead of the culture of democracy (Kartal, & Bilgin, 2009). Chances are high that children brought up with unfavorable qualities will be subject to all kinds of neglect and abuse in their lives. Social pressures and control on students limit their ability to grow up as individuals with characteristics of a democratic personality (Kağıtçıbaşı, 1995; İmamoğlu, 1995). Compared to girls, boys experience more aggressive and conflicting communication environments where the level of self-defense is high. Resistance to social pressure is high in boys while it is low in girls (Kumru, Carlo, & Edwards, 2004). Relations based on pressure and control emphasizes dependence on authority and actions directed by it. The most important factor in communication clashes and violence in schools is the social pressure and control mechanism. With a view to prevent conflicts and violence, students should undergo training, enabling them acquire democratic communication styles that prevent difficulties of pressure and control in their relations. An egalitarian understanding should be used in approaching problems related with conflicts stemming from gender. Approaches based on the principle of children's rights should be created, and the culture of democracy should be strengthened, rather than the culture of violence.

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Öğrencilerin Yaşam Kalitesi ve Riskli Yaşam Koşulları Araştırması

(Özet)

Problem Durumu: Türkiye’de okullarda yaşanan şiddet olaylarını önlemek ve gerekli önlemleri almak için alan araştırmaları yapılmalıdır Ergenlerin yaşam kalitesi, ruh sağlığından, kişisel özelliklerden, yaşanan ortamdan, olaylardan ve yaşanan toplumun kültürel özelliklerinden etkilenir. Ergenlik döneminin özellikleri ve riskli yaşam koşulları ergenlerin yaşam kalitesini etkiler

Araştırmanın Amacı: Olumsuz yaşam olaylarının yoğun olarak yaşandığı okullardaki öğrencilerin yaşam kalitelerini incelemek, sağlıksız ve yetersiz yaşam alanlarını saptamak, bu alanlara ilişkin riskli yaşam koşullarını kız ve erkek öğrenciler açısından değerlendirmek, koruyucu ve önleyici çalışmalara yardımcı olmaktır.

Araştırmanın Yöntemi: Araştırmanın örneklemi, Ankara-Keçiören’de olumsuz olayların yaşandığı riskli okullardaki öğrencilerden oluşturulmuştur. Uygulama 5, 8, 9 ve 11. sınıf öğrencilerine yapılmıştır. Öğrencilerin 135’i (%55, 6) ilköğretim okulunda, 108’i (%44, 4) ortaöğretim okulunda okumaktadır. Örneklem kapsamına giren 243 öğrencinin 122’si kız (%50, 2), 121’i erkek (%49, 8) öğrencidir. Araştırmada veri toplama aracı olarak Dünya Sağlık Örgütü’nün, Türkiye için geçerlilik çalışması yapılmış olan, (100) soruluk, “Dünya Sağlık Örgütü Yaşam Kalitesi Ölçeği 1998 Türkiye Sürümü” ölçeği kullanılmıştır. Kız ve erkek öğrenci grupları arasındaki farkın önem düzeyini saptamak amacıyla veriler kay-kare analizi yapılarak değerlendirilmiştir.

Araştırmanın Bulguları: Öğrenci aileleri; çekirdek aile kompozisyonunda, yoksulluk sınırında ve asgari ücretin altında geliri olan ailelerdir. Ergenlik sürecindeki değişmelerin kendilerini zorladığı görüşünde olan kız ve erkek öğrenciler, eğitim kurumlarınca ergenlikle ilgili yeterli ve sağlıklı bilgi verilmediği görüşündedir. Öğrencilerin günlük yaşamlarını sürdürmek için yeterli fiziksel güce sahip oldukları, kız öğrencilerin daha çabuk yoruldukları ve uyku güçlüğüne tüm öğrenciler için önemli bir sorun olduğu saptanmıştır. Öğrenciler arasında dikkat eksikliği sorunu yaşayanların yaygın olduğu gözlenmiştir. Erkek öğrencilerin kendine

güven düzeylerinin daha yüksek olduğu ve karar verebilme yeteneklerinden hoşnut oldukları saptanmıştır. Erkek öğrenciler beden imgelerinden daha çok etkilenmekte ve olumsuz görünümünden rahatsızlık duymaktadırlar. Olumsuz duygular kız öğrencileri daha çok rahatsız etmekte ve günlük yaşantılarını engelleyici olmaktadır. Günlük yaşamlarında kendilerini yalnız hisseden ve endişe duyan kız öğrencilerin psikolojik destek almaya daha fazla isteklidir. Bedensel hareketliliklerinin engellenmesi erkek öğrencilerin bağımsızlık düzeylerini sınırlamaktadır. Öğrencilerin hareketliliklerini ders sürelerinin uzunluğu ve teneffüs sürelerinin kısalığı sınırlamaktadır. Erkek öğrencilerin günlük işlerini yürütmek için daha çok ilaç kullandıkları ve tıbbi tedaviye gereksinim duydukları saptanmıştır. Yaşamlarının kaliteli olması için tedavi amacıyla kullandıkları madde ve araçlara bağımlı olduklarını belirten öğrencilerin(%40,3) oransal yüksekliği önemlidir. Sosyal yönden, kız öğrencilerin ilişkilerden daha çok memnun oldukları saptanmıştır. Kız öğrenciler başkalarına yardım becerilerinden ve arkadaş desteğinden daha çok hoşnuttur. Fiziki çevre, öğrencilerin yaşam kalitesini olumsuz yönde etkileyen önemli bir etmendir. Öğrencilerin yarısı güvenlikleri ve emniyetleri konusunda endişelidir. Kız öğrenciler gereksinimlerini karşılamakta daha çok para sorunu yaşamaktadır. Günlük yaşantılarında öğrencilerin gereksinim duydukları bilgiyi edinme fırsatları sınırlıdır. Ulaşım ile ilgili sorunlar kız öğrencilerin yaşantılarını daha çok kısıtlamaktadır. Kız öğrenciler yaşamlarını ve yaşama bakış açılarını daha anlamlı görmekte, bakış açılarının yaşamın zorluklarını anlamalarına ve karşılaştıkları güçlüklerle baş etmelerine yardımcı olduğunu düşünmektedirler. Kız öğrenciler kendilerine yakın kişilerle ilişkilerinde baskı ve kontrole ilgili güçlükleri daha çok yaşamaktadır. Başkalarına yardım etme ve destek olma davranışları erkek öğrencilerin yaşamlarını kısıtlamaktadır. Erkek öğrenciler savunmacı iletişim ortamlarını daha çok yaşamaktadırlar. Sosyal baskıya karşı koyma davranışı erkek öğrencilerde artarken kız öğrencilerde azalmaktadır.

Araştırmanın Sonuçları ve Önerileri: Olayların yoğun olarak yaşandığı okullardaki öğrencilerin yaşam kalitesi düzeylerinin genel olarak yetersiz olduğu saptanmıştır. Ergenlik çağındaki kız ve erkek öğrencilerin eşit olmayan koşullarda yaşadıkları ve yaşam kalitesi açısından cinsiyet eşitsizliğinin öne çıktığı saptanmıştır. Toplumsal cinsiyet eşitliği düşüncesini yaygınlaştıracak çalışmalar yapılmalıdır. Öğrenciler ergenlik dönemi konularında eğitilmelidir. Ergenlik çağındaki öğrencilerin özsaygılarının geliştirilmesi için önleyici psikolojik destek ve yardım sağlanmalıdır. Öğrencilere günlük uğraşlarının daha etkili, verimli ve doyumlu gerçekleşmesi için olanaklar yaratılmalı, ruhsal sorunlar yaşayan öğrencilere destek programları geliştirilmelidir. Öğrencilerin bağımsızlık düzeylerini geliştirmek için sosyal çevredeki hareketlilikleri ve etkileşimleri düzeyli bir yaşam biçimine dayandırılmalıdır. Öğrencilere ders dışında zaman yaratılmalı, ilgi istek ve eğilimleri doğrultusunda

sosyal aktivitelere katılım olanakları geliştirilmelidir. İlaçlara bağımlılık sorunu eğitim ortamındaki öğrencilerin bağımsızlık düzeylerini sınırlayan ve yaşam kalitelerini olumsuz yönde etkileyen bir sorundur.

Öğrencilerin başkalarına yardım etmeleri ve destek olmaları, yaşamlarını kısıtlamakta ve bağımlılık ilişkisine dönüşmektedir. Kız öğrencilerin gereksinimlerini karşılamakta daha çok para sorunu yaşamaları önemli bir ekonomik ve cinsel istismar alanı doğurmaktadır. Yoksul öğrenci ailelerine ekonomik destek sağlanmalı, aile içi ilişkileri geliştirici, dayanışma ve yardımlaşma mekanizmalarını güçlendirici aile hizmetleri sunulmalıdır. Eğitim sürecinde gerekli bilgilere ulaşabilmeleri ve beceri kazanabilmeleri için öğrencilere gerekli olanaklar yaratılmalı, fiziksel çevreleri geliştirilmeli, kendilerini güvenli hissedecekleri ortamlar yaratılmalıdır. Öğrencilerin ailelerinde, okulda, arkadaşları arasında ve kendilerine yakın kişilerle kurdukları ilişkilerde baskı ve kontrol önemli bir risk alanıdır. Öğrenciler üzerindeki sosyal baskı ve kontrol, demokratik kişilik özelliklerine sahip bireyler olarak yetişme olanaklarını sınırlamaktadır. Sosyal baskıya karşı koyma davranışı erkek öğrencilerde artarken kız öğrencilerde azalmaktadır. Okullarda yaşanan iletişim çatışmalarının ve şiddet olaylarının oluşmasında en önemli etmen sosyal baskı ve kontrol mekanizmalarıdır. Çatışma ve şiddetin önlenmesi amacıyla aile, öğretmen, öğrenci ve çevre odaklı önleyici ve koruyucu eğitim çalışmaları yapılmalıdır.

Anahtar Sözcükler: Yaşam kalitesi, yaşam kalitesi göstergeleri

Cross-Cultural Structural Parameter Invariance on PISA 2006 Student Questionnaires

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Abstract

Problem Statement: In cross-cultural studies such as PISA, it is not possible to use a single form, since the scales are applied to different countries, and it is necessary to translate the form into the language of the country that will use it. Language differences may have a strong impact on measurement inequalities. Nevertheless, translated tests may not function in the same way, because of different culture and language characteristics of different countries. This situation may be described as the test not being equivalent, or fair, for different cultures. Translation is the first step of a long-lasting process in adapting the test to different cultures; the basic objective of adaptation is to preserve the structural equivalence between the versions of two or more languages, and to protect the test content.

Purpose of Study: This study aims to examine the factorial invariance of some of the PISA questionnaire in relation to its scientific context, and the equality of the questionnaire across the ten countries, by a multi-group confirmatory factor analysis model.

Methods: In this study, samplings from ten countries were used. For the cross-cultural invariance of PISA questionnaires, a set of confirmatory factor analysis procedures were used. If the introduction of a set of invariance constraints results in a substantial reduction in goodness of fit, then there is evidence against the appropriateness of those invariance constraints. Confirmatory factor analyses were conducted with LISREL.

Findings and Results: As a result, in the model in which there is a constraint indicating that factor loadings should be equal for all countries, there is no evidence of a decrease in fit index level, exceeding the criterion in comparison to the baseline model. This result strongly supports the conclusion that factor loadings do not vary from one country to another. However, in the model in which error variances are

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also constrained, NNFI and RFI fit indexes show higher declines than .01, when compared to the baseline model.

Conclusions and Recommendations: This finding indicates that error variances may vary from one country to another. Furthermore, fit indexes show higher decreases, exceeding the limits in the model in which there is a constraint on equivalency of correlations between factors, when compared to the baseline model.

Keywords: PISA, CFA, cross-cultural generalizability, parameter invariance

Globalization has its effects on education also, just as it has been affecting other fields such as economy, health, and science. Innovation and development in education take place in a swift manner in other countries. As a result of globalization, there is a need for assessment and evaluation of problems in an educational system at the international level, since globalization makes them global, rather than national or local, in nature. Trends in International Mathematics and Sciences Study (TIMSS), Progress in International Reading Literacy Study (PIRLS) and the Program for International Student Assessment (PISA), which are currently administered at international levels, are assessment programs that are carried out for this purpose, and focus mainly on assessment at an international level. Turkey is one of the many participating countries to administer these assessment programs.

PISA is a program organized and developed by the Organization for Economic Cooperation and Development (OECD), that primarily focuses on the assessment of students' knowledge and skills, in some basic fields. The PISA assessment focuses on 15-year-olds' ability to use or apply the knowledge and skills that they have acquired in reading literacy, mathematics and science, to real-life situations (Neidorf, Binkley, Gattis, & Nohara, 2006). Once every three years, PISA surveys are conducted, among the members of OECD countries, as well as in a group of partner countries. These countries dominate approximately ninety percent of the world's economy. PISA assesses the extent to which students, who are nearing the end of their compulsory education, have acquired the knowledge and skills that are necessary for full participation in society, focusing on student competencies in the key subject areas of reading, mathematics, and science (PISA, 2007). Assessment processes of PISA basically aim to determine the level of awareness of students, and their ability to reflect on the knowledge and experience, as well as how they apply that knowledge and experience both to their school life and to real world issues (EARGED, 2007).

Each administration of PISA includes assessments of all three subjects, namely reading, mathematics, and science, but assesses only one of the subjects in depth. However, assessments are also being conducted in the other two fields. Thus, PISA continuously provides a data source in each of the three fields for the participating countries (Lemke et al., 2004). In 2000, PISA focused on reading literacy (32 countries) with mathematics and science treated as minor domains, whereas in PISA 2003, mathematics was the major domain (41 countries) and in PISA 2006, scientific literacy (57 countries) was mainly emphasized (Neidorf et al., 2006; OECD, 2007). In the last administration conducted in 2006, students were presented a series of self-report questions, based on scientific problems. The survey assessed science knowledge and

skills, as well as student attitudes towards science. Consequently, the aim of PISA 2006 was to better understand students' views on particular science issues, and to generalize these results into measurement of students' interest in science, as well as the value they place on scientific knowledge (OECD, 2007).

In this context, it is obvious that, in general, achievement outputs obtained at the end of the education process are considered as the basic criteria for predicting a student's success. However, this excessive emphasis on a student's academic achievement may cause many other important learning outcomes to be ignored (Schulz, 2005b). In PISA 2006, students' attitudes and aptitude towards science (OECD, 2006), as the variable which affects academic achievement of students and that is affected by the academic achievement, are also assessed. Data collected in the PISA 2006, are related to variables such as self-related cognitions, attitudes, interests, motivations, learning behaviors, as well as academic performance of students. Data from questionnaires are generally used to explain variations in student performance or referred to as learning outputs (Schulz, 2005a).

The belief that international programs provide a broader perspective in assessment and improvement of education is generally accepted in many countries that participated in large-scale programs, such as PISA. An increasing number of countries participating in these programs supports this development. These assessment programs also provide an international criterion for evaluating the education reforms of the country.

Whereas, use of data obtained from these large-scale assessment programs in cross-cultural comparative studies may help educational processes to be better understood, these studies are based on a comparison which brings advantages to the identification of necessary changes and improvements, aimed at the movements of the educational system (Yıldırım, 2006). Nevertheless, the most urgent need for this international evaluation program, to be able to serve the aforementioned purposes, is the fact that measurement instruments used for assessment should have equivalent features for different countries and cultures (Klieme & Baumert, 2001; Poortinga, 1989). In other words, these measurement instruments should be able to measure some valid and current structures in different cultures, in order to establish objective comparison criteria (Yıldırım, 2006). However, equivalence of measurement instruments used in cross-cultural studies constitutes a major problem. Therefore, measurement and assessment tools, translated into different languages, generally need to be readjusted, due to cultural differences, technical aspects, and other reasons (Zhu & Kang, 1998; Akın & Çetin, 2007). Furthermore, copying factorial structure of a measurement instrument may not guarantee international invariance of the theoretical structure of that measurement instrument (Byrne & Campbell, 1999).

Consequently, according to Standards for Educational and Psychological Testing (AERA, APA, & NCME, 1999), researchers who develop assessment tools should develop criteria that do not include bias in terms of gender, race, socio-economic level, etc. in relation to different groups (Pae & Park, 2006). In the globalized world,

researchers in social sciences frequently tend to compare people from different countries and with different cultural background in terms of various psychological variables. One of the basic assumptions required for studies, comparing two or more socio-cultural groups, by using multi-item instruments developed to measure individual differences in some fundamental constructs, is that the items included in the test need to operate in similar ways, on samplings from different cultures (Beckstead, Yang, & Lengacher, 2008). Namely, measurement instruments used for measure psychological constructs should have measurement equivalence (Drasgow & Kanfer, 1985; Valbuena, 2003). In the event that a measurement instrument does not provide true measurement equivalence across different groups, then that measurement instrument serves different functions for different groups. In other words, scores obtained/observed from different groups and/or people, are measured as though from different scales, and so are not meaningfully comparable (Valbuena, 2003).

In cross-cultural studies such as PISA, it is not possible to use a single form, since the scales are applied to different countries, and it is required to translate the form into the language of the country that will use it. Language differences may have a strong impact on measurement inequalities (Schulz 2005a). Nevertheless, translated tests may not function in the same way, because of varying culture and language characteristics of different countries. This situation may be described as the test is not equivalent or fair for different cultures (Allalouf, Hambleton, & Sireci, 1999; Bentler, 1990; Ercikan, 2002; Hui & Triandis, 1989; Robin, Sireci, & Hambleton, 2003; Yıldırım, 2006). Translation is the first step of an on-going process in the adaptation of a test to different cultures. The basic objective of adaptation of the test is to preserve the structural equivalence between the versions of two or more languages, and to protect the content representing the test (Allalouf, Hambleton, & Sireci, 1999).

The Multi-Group Confirmatory Factor Analysis (MG-CFA) model, developed by Jöreskog, is known as an assessment method for cross-cultural validity of an instrument, by testing invariance or equality of the factorial structures, factor loadings, and factorial variances and covariances. This study aims to examine the factorial invariance of some of the PISA questionnaire, in relation to its science context, and the equality of the questionnaire across ten countries.

Method

Participants and Data

OECD aims to assess 15-year-old students' performances from thirty OECD, and from twenty-seven non-OECD countries, and to measure background variables that may affect performances of these students. In this study, sampling from eight OECD, and two non-OECD countries, were used. No selection was made among the sampling of the aforementioned ten countries. However, the total number of samplings was reduced to 57,399 from 68,746, due to data cleaning of missing values. Breakdown of the samplings from ten different countries, within the scope of the study, according to their genders, is shown in Table 1.

Table 1
Countries and Gender About Samples' Countries

	Female		Male		Total		Original Total
	N	%	N	%	N	%	N
Belgium	3,342	48.6	3,530	51.4	6,872	100	8,857
Brazil	3,351	53.8	2,883	46.2	6,234	100	9,295
Germany	2,025	50	2,026	50	4,051	100	4,891
Finland	2,227	50.6	2,174	49.4	4,401	100	4,714
United Kingdom	5,812	51.1	5,572	48.9	11,384	100	13,152
Jordan	3,099	57.7	2,271	42.3	5,370	100	6,509
Japan	2,809	49.6	2,857	50.4	5,666	100	5,952
New Zealand	2,048	50.9	1,975	49.1	4,023	100	4,823
Turkey	2,043	46.7	2,336	53.3	4,379	100	4,942
United States	2,506	49.9	2,513	50.1	5,019	100	5,611
Total	29,262	51.0	28,137	49.0	57,399	100	68,746

In this study, data were used based on responses given to the questions, in relation to attitudes towards science, included in the PISA student questionnaire administered by OECD. The main concept of "Attitudes towards Science" was limited by PISA, with five sub-concepts; namely, enjoyment of science (ES), value of Science (VS), interest in Science (IS), self-efficacy in Science (SE), and self-concept in science (SC), (PISA, 2007, p. 123). The approach of considering attitude as an umbrella construct over other subconstructs is supported by many researchers (Breakwell & Beardsell, 1992; Crawley & Black 1992; Gardner, 1975; Haladyna, Olsen, & Shaughnessy, 1982; Keys, 1987; Koballa, 1995; Oliver & Simpson 1988; Osborne, Simon, & Collins, 2003; Piburn, 1993; Ramsden, 1998; Van Aalst, 1985).

A total of thirty-seven different items was used in the assessment instrument employed in PISA 2006, for assessment of students' attitudes towards science. It used five items to measure enjoyment, eight for self efficacy, ten for value, eight for interest, and eight items for self-concept in science. The codes of the items given by PISA, and their relevant scales, are shown in Table 2.

Tablo 2
Codes and Items in Attitudes Towards Science Questionnaires in PISA

Constructs	Code	Item
Enjoyment of Science	ST16Q01	I generally have fun when I am learning <broad science> topics
	ST16Q02	I like reading about <broad science>
	ST16Q03	I am happy doing <broad science> problems
	ST16Q04	I enjoy acquiring new knowledge in <broad science>
	ST16Q05	I am interested in learning about <broad science> science>
Self-efficacy in Science	ST17Q01	Recognise the science question that underlies a newspaper report on a health issue
	ST17Q02	Explain why earthquakes occur more frequently in some areas than in others
	ST17Q03	Describe the role of antibiotics in the treatment of disease
	ST17Q04	Identify the science question associated with the disposal of garbage
	ST17Q05	Predict how changes to an environment will affect the survival of certain species
	ST17Q06	Interpret the scientific information provided on the labelling of food items
	ST17Q07	Discuss how new evidence can lead you to change your understanding about the possibility of life on Mars
	ST17Q08	Identify the better of two explanations for the formation of acid rain
Value of science	ST18Q01	Advances in <broad science and technology> usually improve people's living conditions
	ST18Q02	<Broad science> is important for helping us to understand the natural world
	ST18Q03	Some concepts in <broad science> help me see how I relate to other people
	ST18Q04	Advances in <broad science and technology> usually help improve the economy
	ST18Q05	I will use <broad science> in many ways when I am an adult
	ST18Q06	<Broad science> is valuable to society
	ST18Q07	<Broad science> is very relevant to me

	ST18Q08	I find that <broad science> helps me to understand the things around me
	ST18Q09	Advances in <broad science and technology> usually bring social benefits
	ST18Q10	When I leave school there will be many opportunities for me to use <broad science>
Interest in	ST21Q01	Topics in physics
	ST21Q02	Topics in chemistry
	ST21Q03	The biology of plants
	ST21Q04	Human biology
	ST21Q05	Topics in astronomy
	ST21Q06	Topics in geology
	ST21Q07	Ways scientists design experiments
	ST21Q08	What is required for scientific explanations
Self-Concept in Science	ST37Q01	Learning advanced <school science> topics would be easy for me
	ST37Q02	I can usually give good answers to <test questions> on <school science> topics
	ST37Q03	I learn <school science> topics quickly
	ST37Q04	<School science> topics are easy for me
	ST37Q05	When I am being taught <school science>, I can understand the concepts very well
	ST37Q06	I can easily understand new ideas in <school science>

Analysis

For the cross-cultural invariance of PISA questionnaires, a set of confirmatory factor analytic procedures, outlined by Byrne (2006), was used. CFAs were conducted with LISREL 8.54 (Jöreskog & Sörbom, 1993), using maximum likelihood estimation. In brief, the researcher posits an a priori structure, and tests the ability of a solution based on this structure to fit the data. In a CFA study, the parameters typically consist of factor loadings, factor correlations, and error variances. In this investigation, the thirty-seven items were hypothesized to represent five a priori factors. When the focus of the CFA is to test the invariance across multiple groups, it is critical that analyses are conducted with covariance matrices in which variables from the different groups are scaled along a shared metric (Marsh, Hau, Artelt, Baumert, & Peschar, 2006). Therefore, the data for this research are 37 (items) × 37 covariance matrices for each of the 10 countries.

Because of the large sample sizes in this study, the chi-square test statistic to evaluate parameter estimates, wasn't considered. The χ^2 test statistic is known to always reject in any formal test of significance (Byrne, 1998; Marsh, Balla, & McDonald, 1988; Marsh & Yeung, 1996). Thus, and following Marsh and Yeung (1996), and Hilton, Schau, & Olsen (2004), emphasis is placed on the Root Mean Square Error of Approximation (RMSEA), the Non-Normed Fit Index (NNFI), the Comparative Fit Index (CFI), the Incremental Fit Index (IFI), and the Relative Fit Index (RFI). For RMSEA, values ≤ 0.05 indicate good fit, values ≤ 0.08 indicate reasonable fit (Marsh, et al., 2006; Tempelaar, Van Der Loeff, & Gijsselaers, 2007). The NNFI, RFI, CFI, and IFI, vary along a 0-to-1 continuum, in which values greater than .90 and .95 are typically taken to reflect acceptable and excellent fits to the data, respectively (Bagby, Taylor, Quilty, & Parker, 2007; Kline, 2005; Marsh, et al., 2006; Marsh, Hau, & Grayson, 2005).

In CFA studies with multiple groups, it is possible to test the invariance of any one, any set, or all-parameter estimates, across the multiple groups. Tests of factorial invariance (see Bollen, 1989; Byrne, 1998; Jöreskog, 1971; Marsh et al., 2006; Marsh, 1994) traditionally posit a series of nested models, in which the endpoints are the least restrictive model, with no invariance constraints and the most restrictive (total invariance) model, with all parameters constrained to be the same across all groups. Testing for factorial invariance essentially involves comparing a number of models, in which aspects of the factor structure are systematically held invariant across groups, and assessing fit indexes, when elements of these structures are constrained (Marsh et al., 2006). If the introduction of a set of invariance constraints results in a substantial decrease in goodness of fit, then there is evidence against the appropriateness of those invariance constraints. Typically, the minimal condition for factorial invariance is the equivalence of all factor loadings in the multiple groups, and this is generally the first test of invariance (following the test with no invariance constraints), in the sequence of invariance models. The following hierarchical ordering of nested models was tested to reflect the relative importance of the different sets of parameters: (a) unconstrained model; (b) factor loadings invariant; (c) factor loadings and error variances invariant across groups; (d) factor loadings, error variance and factor correlations invariant.

Results

Table 3 shows the reliabilities within each sample: all scales have highly satisfactory internal consistencies in all country samples, but are relatively low for Brazil and Jordan. Also the ES and SC scales demonstrated higher internal consistencies than the other scales.

Firstly, total group sample (N= 57,399), of ten countries, was used for CFA, as a preliminary. In this analysis, it was posited a highly restrictive a priori model with five factors, such that each item was allowed to load on one, and only one, factor; and error terms associated with each item were not allowed to be correlated with error terms for any other items. In spite of the highly restrictive nature of this a priori model, it provided excellent goodness of fit, and acceptable RMSEA, in relation to current standards (RFI = .98, NNFI = .98, and RMSEA = .065), even though the χ^2 (df = 619) = 131663.46 was favorably significant, due to the very large sample size (see

Table 4). Secondly, a priori model to fit the data separately, for each of the ten countries with no invariance constraints, was tested.

Table 3
Reliabilities (Cronbach's Alpha) Of 5 Scales in the 10 Countries

Country	ES	SE	VS	IS	SC
Belgium	.900	.806	.824	.835	.917
Brazil	.835	.791	.793	.837	.865
Germany	.923	.815	.853	.788	.905
Finland	.931	.832	.858	.849	.919
United Kingdom	.918	.846	.872	.839	.915
Jordan	.833	.747	.790	.799	.838
Japan	.930	.847	.848	.859	.932
New Zealand	.926	.869	.877	.836	.926
Turkey	.912	.812	.865	.825	.926
United States	.933	.869	.893	.870	.931

Results for each of the 10 countries fitted the data well, in relation to previously mentioned standards of acceptable and excellent fits, except for RMSEAs for Turkey and Finland.

Table 4
Goodness of Fit in Confirmatory Factor Analysis in Each of the 10 Countries

Country	χ^2	df	RFI	NNFI	CFI	IFI	RMSEA
All 10 countries	131663.46	619	.98	.98	.98	.98	.065
Belgium	18651.89	619	.97	.97	.97	.97	.070
Brazil	14663.91	619	.96	.96	.96	.96	.065
Germany	11025.13	619	.97	.97	.97	.97	.069
Finland	19249.73	619	.96	.96	.96	.96	.086
United Kingdom	35420.09	619	.97	.97	.97	.97	.076
Jordan	11733.75	619	.96	.96	.96	.96	.061
Japan	18282.25	619	.96	.97	.97	.97	.076
New Zealand	13649.63	619	.97	.97	.97	.97	.080
Turkey	16067.32	619	.96	.96	.97	.97	.085
United States	15174.84	619	.97	.97	.98	.98	.075

It was begun as the least restrictive model, in which all parameters are free across groups (Model 1 in Table 5). Model 1 is vital, because all other models with invariance constrained, are nested under this model. So Model 1 gives a crucial starting point, for comparing the influence of other invariance constraints. If it will result that a more parsimonious solution with invariance constraints is able to fit the data, there is support for the invariance constraints.

The results vary, model to model, for the different indexes of fit. The change in chi-square is statistically significant for each step, indicating that there is some statistically significant lack of invariance—due in part to the extremely large sample size. However, NNFI, RFI, and the RMSEA all support the invariance of factor loadings. Specifically, RFI and NNFI, CFI, and IFI dropped only .01, whereas RMSEA increased by .005 when the factor loadings are constrained to be equivalent across the ten countries (Model 1 vs. Model 2; see Table 5). Consistent with earlier evaluations of country-to-country differences in reliability estimates, there was some further decline in RFI, NNFI, CFI, and IFI (dropped .02 according to Model 1), when error variances were also constrained to be invariant (Model 3). However, even the difference between Model 3 and Model 4 was not large (no difference for RFI, NNFI, CFI, and IFI, but .001 for RMSEA). According to current standards of RMSEA, an unconstrained and invariant factor loadings model provided acceptable fit to the data (RMSEA = .074 and .079). For RFI, NNFI, CFI, and IFI, all models provided excellent fit to data.

Table 5
Goodness of Fit of Confirmatory Factor Model Across Multiple Countries

MODEL	X ²	df	RFI	NNFI	CFI	IFI	RMSEA
Model 1 ^a	173918.54	6190	.97	.97	.97	.97	.074
Model 2 ^b	201277.11	6613	.96	.96	.96	.96	.079
Model 3 ^c	275826.70	6856	.95	.95	.95	.95	.089
Model 4 ^d	281462.30	6946	.95	.95	.95	.95	.090

Note: ^aUnconstrained ^bFactor Loadings Invariant ^cFactor Loadings and Error Variance Invariant ^dFactor loadings, factor correlations and error variance invariant

Table 6 shows the correlation between the latent variables, as estimated by LISREL, across country sub-samples. These estimates reflect the correlation between the construct as measured, without error. Whereas, between ES and IS, there is a high correlation in most countries, there is less correlation between SE and other scales. The correlations between VS and SC have more variation across countries. Consistent with reliability estimates, Brazil has less factor correlations than other countries.

Table 6
Correlations Among the 5 Factors Based on Unconstrained Model

Country	ES-SE	ES-VS	ES-IS	ES-SC	SE-VS	SE-IS	SE-SC	VS-IS	VS-SC	IS-SC
Belgium	.54	.73	.80	.64	.52	.57	.51	.68	.57	.63
Brazil	.39	.71	.63	.55	.45	.41	.43	.59	.52	.45
Germany	.61	.77	.75	.59	.60	.58	.58	.71	.55	.59
Finland	.51	.76	.73	.60	.56	.56	.61	.69	.59	.60
United Kingdom	.56	.73	.78	.69	.58	.54	.62	.67	.61	.61
Jordan	.42	.66	.71	.54	.56	.53	.48	.63	.53	.59
Japan	.52	.59	.82	.61	.49	.57	.45	.57	.38	.60
New Zealand	.60	.79	.81	.74	.58	.53	.63	.72	.65	.62
Turkey	.57	.77	.76	.63	.61	.64	.48	.68	.55	.60
United States	.51	.67	.74	.64	.56	.48	.59	.62	.55	.54
Median	.53	.73	.76	.62	.56	.55	.55	.68	.55	.60

Discussion and Recommendations

In this study, the cross-cultural equivalency of the survey questionnaires in relation to science, that were administered in PISA 2006, was examined. Marsh, et al. (2006) classified the studies as cross-cultural comparison, and cross-cultural generalization. This study does not aim to make a cross-cultural comparison, but aims to examine the cross-cultural generalizability of survey questionnaires administered in PISA 2006, that intend to determine students' approach, in relation to science. For these purposes, two CFAs model were initially used. CFAs were conducted with all of the ten country sample, as well as the ten countries separately. Then four different CFA models were used, ranging from an unconstrained model to the most constrained model, in terms of parameter estimations for the purpose of examination of cross-cultural equivalency. In addition to the foregoing, there are some general constraints which are common for these four models, such as error terms, associated with each item, were not allowed to be correlated with error terms for any other items. Each item was allowed to load on one – and only one – factor.

When the findings of this study, in which data from International PISA 2006, are examined, evidence on parameter invariance between languages, cultures, or countries was not obtained. In the model in which parameter estimations were made separately for each country, better fit values were obtained, compared to the model which has a constraint for parameter equivalency. In this study, as the constraints on parameters increase in CFA models, then fit indexes of the models decline. In the unconstrained model, that is, the baseline model, fit indexes varied from acceptable

to excellent. In the model (Model 2), in which there is a constraint indicating that factor loadings should be equal for all countries, there is no evidence of a decrease in the fit index level, exceeding the criterion in comparison to the baseline model. This finding strongly supports the conclusion that factor loadings do not vary from one country to another. However, in the model in which error variances are constrained (Model 3), NNFI and RFI fit indexes show higher declines than .01 criteria recommended by Cheung and Rensvold (2002), when compared to the baseline model. This finding indicates that error variances may vary from one country to another. Furthermore, fit indexes show higher decreases, exceeding the limits in the model in which there is a constraint on equivalency of correlations between factors, when compared to the baseline model. This finding proves that correlations between factors can change from one country to another and requires that correlations between factors be examined, according to countries.

In examination of correlations between factors, with respect to countries, it was observed that correlation coefficients vary from one factor to another. On the one hand, correlation between VS and SC factors indicates the highest variability between the countries. On the other hand, the lowest variability was observed in the correlation between VS and IS factors. In general, the lowest correlation values were obtained from the Brazilian sampling. The highest correlation values were obtained from New Zealand sampling, where the pilot study was carried out during the phase of development of PISA tests and survey questionnaires.

It is not correct to assume that the students who have translated from the source language to different languages, and with different cultures and different education systems, would give similar answers to questions. Parameter variability, to some extent, may be considered as the unavoidable reality of cross-cultural studies. However, it should be taken into consideration that the results of the variability in parameters may lead to a cross-cultural bias.

Taking the results into consideration, it is clearly seen that invariance of factor loadings has changed the fit indexes in an acceptable manner. In addition to the foregoing, reliability values are in acceptable limits for all countries, and correlation values between factors have great significance for all country's samplings. In other words, same constructs were measured across the countries; however some parameter values vary from one country to another.

In international education studies, investigation of whether or not the scale structures demonstrate cross-cultural parameter invariance, is generally not taken into consideration. Multiple-group Confirmatory Analysis is one of the significant methods used to investigate the parameter invariance of scale structures in cross-cultural studies. This method may be used in research investigating parameter invariance across multiple groups. Also, there should be future research to determine the criteria deteriorating cross-cultural parameter invariance, and to measure equivalency by using different methods.

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PISA 2006 Öğrenci Anketinin Yapısal Parametrelerin Kültürlerarası Değişmezliğinin İncelenmesi

(Özet)

Problem Durumu

The Program for International Student Assessment (PISA), OECD tarafından gerçekleştirilen bazı temel alanlarda öğrencilerin bilgi ve becerilerini değerlendirmeyi amaçlayan bir programdır. PISA genel anlamda 15 yaş grubunda yer alan öğrencilerin, okuma, matematik ve fen bilimleri alanlarında öğrendikleri bilgi ve becerileri gerçek yaşam durumlarına uygulama ve uyarlayabilme yeteneğine odaklanmaktadır. PISA'nın değerlendirme süreçleri temelde, öğrencilerin öğrendiklerine ilişkin farkındalık düzeylerini ve bu öğrendikleri bilgileri okul veya okul dışı ortamlarda nasıl uygulayabildiklerini saptamayı amaçlamaktadır. PISA her uygulamasında, okuma, matematik ve fen bilimleri alanlarından birine derinlemesine odaklanmakta, ancak diğer iki alanda da değerlendirme yapmaktadır. PISA'nın 2006 yılındaki uygulamasında topladığı veriler öğrencilerin başarı düzeylerinin yanı sıra; öz-bildirimli (self-report) tutumlar, ilgiler, motivasyon, öğrenme davranışları gibi değişkenlerle ilgilidir. Anketlerden elde edilen veriler genelde öğrenci performanslarındaki değişkenliği açıklamada kullanmak üzere toplanmaktadır.

Araştırmanın Amacı

PISA gibi kültürler arası çalışmalarda, ölçekler farklı ülkelere uygulandığı için tek bir form kullanılması mümkün değildir, o ülkelerin diline çevrilmesi gerekir. Dil farklılıkları ölçek eşitsizlikleri üzerinde güçlü bir etkiye sahip olabilir. Bununla birlikte, farklı ülkelerin farklı kültür ve dil durumlarından dolayı, çeviri testler tüm kültürlerde aynı şekilde işlev görmeyebilir. Bu durum testin eşit olamayabildiği veya farklı kültürler için adil olamadığı şeklinde isimlendirilebilmektedir. Çoklu-grup doğrulayıcı faktör analiz (DFA) modeli testin faktör yapısı, faktör yükleri ve faktör korelasyonları, hata varyansları değişmezliğini veya eşitliğini test etme yoluyla bir ölçme aracının kültürlerarası geçerliğini değerlendirme yöntemi olarak bilinir. Bu araştırma fen bilimleri bağlamıyla ilgili PISA anketinin faktör yapısını ve 10 ülke örneklemini arasında anketin eşitliğini çoklu-grup doğrulayıcı faktör analizi kullanarak incelemeyi amaçlamaktadır.

Araştırmanın Yöntemi

Bu çalışmada PISA'nın uygulandığı sekiz OECD üyesi ve iki OECD üyesi olmayan ülkenin örneklemleri kullanılmıştır. Bu 10 ülkenin örneklemlerinden ayrıca bir seçim yapılmadan 57399 bireyin verileri kullanılmıştır. Bu çalışmada PISA öğrenci anketinin bilime yönelik tutum

maddelerine verilen cevaplar analiz edilmiştir. PISA tarafından bilime yönelik tutum üst kavramı altında sınıflanan hoşlanma (ES), değer verme (VS), ilgi (IS), öz yeterlik (SE) ve benlik kavramı (SC) ile sınırlandırılmıştır. Parametre değişmezliğini test etmek için aşağıdaki hiyerarşik model sıralamasına göre çoklu grup doğrulayıcı faktör analizi kullanılmıştır: (a) sınırlamasız model; (b) faktör yükleri değişmezliği; (c) faktör yükleri ve hata varyansı değişmezliği; (d) faktör yükleri hata varyansı ve faktör korelasyonları gruplar arasında değişmezlik. Elde edilen veriler SPSS 11.5 ve LISREL 8.54 programları kullanılarak analiz edilmiştir

Araştırmanın Bulguları

Tüm alt gruplar için yapılan alt ölçeklere ait güvenilirlik analizlerinde tatmin edici değerler elde edilmiştir. Kestirilen en düşük güvenilirlik katsayısı .747 ve en yüksek .933 olmuştur. SE, VS ve IS için tüm ülke örneklemelerinde yüksek güvenilirlik katsayıları elde edilirken, ES ve SC için Brezilya ve Ürdün örneklemelerinde daha düşük iç tutarlılık katsayıları elde edilmiştir. Parametre eşitliği sınırlamasının olmadığı model 1 kıyaslama için taban kabul edilmiş ve diğer modeller bu model ile kıyaslanmıştır. Her model için ki-kare değerindeki değişme istatistiksel olarak anlamlı bulunmuştur. Bu anlamlılık parametre değişmezliğinin yokluğu anlamına gelir fakat örneklem çok büyük olması kısmen bu anlamlılığın sebebi olarak görülebilir. Model 3 ve model 4'ten elde edilen karşılaştırma indeksleri RFI, NNFI, CFI, IFI değerlerindeki düşüş kabul edilebilecek sınırı (.02) ve ayrıca model 3'ten itibaren RMSEA değeri kabul edilebilecek sınırları aşmıştır (.089). Bu durum, parametrelerin ülkelere göre değişmezliğinin reddedilmesi olarak yorumlanır.

Araştırmanın Sonuçları ve Önerileri

Bu çalışmada, PISA 2006'da uygulanan fen alanıyla ilgili anket sorularının kültürlerarası yapı eşitliği incelenmiştir. Genel anlamda, bu araştırmanın bulgularını incelediğimizde, diller, kültürler veya ülkeler arasında parametre değişkenliğine dair kanıtlar elde edilmiştir. Parametre kestirimlerinin ülkelere ayrı yapıldığı modelde parametre eşitliği sınırlaması getiren modellere göre daha iyi uyum değerleri elde edilmiştir. CFA modellerinde parametre sınırlamaları arttıkça, modelin uyumunu azaltmaktadır. Kestirilen parametre sayısının artmasının modelin uyumunda iyileşmeye sebep olması beklenen bir durumdur. Sınırlamasız modelde en fazla parametre kestirildiği için, bu modelin en iyi uyumu vermesi doğaldır. Fakat bu iyileşmenin ne kadarının kestirilen parametre sayısının artmasından kaynaklandığına ilişkin yöntem bölümünde belirtilen ölçütler kullanılmıştır. Bu çalışmada, faktör yüklerinin tüm ülkeler için eşit olması sınırlamasının getirildiği modelde (Model 2) taban modele göre (model 1) ölçütleri aşan bir uyum düşüşü görülmemiştir. Bu bulgu faktör yüklerinin ülkelere göre değişmediğini güçlü bir şekilde desteklemektedir. Fakat hata varyanslarının da sınırlandırıldığı modelde (Model 3) taban modele göre NNFI ve RFI uyum indeksleri önerilen .01

ölçütünden daha fazla düşüş göstermiştir. Bu bulgu hata varyanslarının ülkelere göre değişebileceğini göstermektedir. Ayrıca faktörler arası korelasyonların eşitliği sınırlamasının getirildiği modelde taban modele göre, uyum indekslerinde sınırları aşan düşüş vardır. Faktörler arası korelasyonların da ülkeler arasında değişebileceğini gösteren bu bulgu ülkelere göre faktörler arası korelasyonların da incelenmesini gerektirmiştir. Uluslar arası eğitim araştırması çalışmalarında kullanılan ölçek yapılarının kültürlerarası değişkenlik gösterip göstermediğini incelemek genellikle ihmal edilen bir durumdur. Çoklu-grup modeli uluslar arası çalışmalarda ölçek yapılarının parametre değişmezliğini incelemek için yardımcı bir yöntemdir. Bu yolla kültürlerarası parametre değişkenliğini bozan maddelerin tespit edilmesi ve eşitliği sağlayıcı önlemler alınması sağlanabilir.

Anahtar Sözcükler: PISA, DFA, kültürlerarası genellenebilirlik, parametre değişmezliği

Social Comparison and Shyness in Adolescents*

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Abstract

Problem Statement: Shyness, which can be broadly defined as the discomfort and inhibition that emerge in the presence of others, is an important variable that inhibites interpersonal communication processes. Shy individuals have a tendency to make negative evaluations of themselves and this tendency can be more clearly observed in their relationships with other individuals (particularly with people who have higher qualities and better performance). Therefore, the comparative judgments that shy individuals make with others can be said to be effective in their self-evaluation process. According to the theory of social comparison, individuals have the tendency to compare themselves with others to assess their social situation. Adolescence is a noteworthy period with regard to social comparisons and making social comparisons with peers is a prominent characteristic in adolescents. In the literature, studies that focus on the relationship between adolescents' perceptions and evaluations of themselves and shyness are encountered, yet it is worth investigating how social comparisons affect shyness in the adolescence period, during which social comparisons gain importance.

Purpose of Study: This study aims to examine the nature of change that social comparisons in adolescents cause in shyness in relation to gender and school grade level.

Method: The study was conducted on a total of 581 high school students, 247 of whom were female and 334 male. The data of the study were collected through the Social Comparison Scale and Shyness Scale. Two-way analysis of variance method was used to test whether there is a difference between the degrees of shyness according to gender and school

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grade among high school students at low, moderate and high social comparison levels.

Findings: The findings of the study indicate that adolescents at a low social comparison level are shyer than the adolescents at moderate and high social comparison levels. Based on social comparison level, the degrees of shyness in female and male adolescents were not significantly different. In addition, ninth grade students at a low social comparison level were found to be the shiest group.

Results and Recommendations: As a result, this study shows that social comparison plays a role in adolescent shyness. Moreover, it was seen that the relationship between social comparison and shyness changes by school grade.

Keywords: Shyness, social comparison, adolescence, high school students

Shyness, which is most commonly defined as discomfort and inhibition that emerge in the presence of others, is an important variable that inhibits interpersonal communication processes (Jones, Briggs, & Smith, 1986). Pilkonis (1977) describes shyness as the tendency to avoid social interactions and failure to show appropriate and effective participation in social situations. According to a broader description, shyness is excessive self-focus that inhibits attainment of interpersonal or professional goals, characterized by negative self-evaluation and leads to discomfort and inhibition in social situations (Henderson & Zimbardo, 2005). Considering these definitions, two basic aspects emerge characterizing shyness: failure to display effective social behaviors and negative self-evaluation.

Although shyness may be experienced at any period in life, individuals may experience shyness more intensively in specific developmental periods. Shyness reaches its peak in adolescence, which is characterized particularly by cognitive egocentrism and identity development (Bruch & Cheek, 1995). Since adolescents are in a period of physiological, social, emotional and sexual changes, shyness leads to the most problems during adolescence (Barrow & Hayashi, 1980). Considering that the most prominent characteristic of adolescence is identity development, shyness may play an inhibiting role in the achievement of numerous developmental tasks that contribute to identity development (Hamer & Bruch, 1994). For example, in adolescence, when belonging to a group and peer relationships are highly important, shyness may inhibit close peer relationship development (Kerr, 2000). Shyness also plays an inhibiting role in the development of career and exploration processes, which are other important developmental tasks in the adolescence period. It is observed that shy adolescents' efforts to learn about careers are lower and that they are more indecisive in making a career choice (Philips & Bruch, 1988). In addition, shyness makes a negative impact on adolescents' academic achievement and school lives. It is observed that, when compared to students who are not shy, students who are shy are more likely to avoid participating in class discussions, experience difficulty asking for help from their teachers when they have a problem, and display

more negative attitudes toward school (Friedman, 1980). Some studies on adolescents show that shyness is related to high levels of anxiety and neuroticism, low levels of self-esteem (Lawrence & Bennett, 1992; Gökçe, 2001) and that shy adolescents, compared to those who are not, display more hopelessness, are less physically active, have a greater tendency toward eating disorders, perceive themselves to be less physically attractive (Page, 1990a), and, particularly male adolescents, use dangerous and illicit substances more (Page, 1990b). Some longitudinal studies show that shyness that emerges in adolescence affects adaptation in adulthood more than the shyness that emerges in childhood. For example, Kerr (2000) found that the shyness that emerges in adolescence is more closely related with a depressive emotional state, lower self-esteem levels, a more negative attitude toward physical appearance, lower life-satisfaction and less positive affect, when compared to shyness that emerges in childhood. Considering the negative effects of shyness in adolescence on adult life, the importance of adolescent shyness can be seen clearly.

As mentioned before, shyness is conceptualized as a tendency toward excessive self-focus (Henderson & Zimbardo, 2005). This intense and exaggerated self-focus may lead shy individuals to criticize themselves more (Wadman, Durkin, & Ramsden, 2008), develop negative prejudices about themselves (e.g., "I am a socially inefficient, disliked, unattractive person.") (Henderson & Zimbardo, 1998). As reported by Hill (1989), shy people have a distorted self-perception. They have an unrealistic perception of themselves. They focus on their negative dimensions rather than their positive dimensions (Asendorpf, 1987). They perceive their social skills to be insufficient (Prisbell, 1991). Their levels of self-efficacy (Hill, 1989) and self-esteem are low (Kalliopuska, 2008; Yüksel, 2002), and their self-perception is negative (Amico, Bruch, Haase, & Sturmer, 2004; Durmuş, 2007). It has been reported that shy people expect to be evaluated negatively; they are ready to accept negative rather than positive feedback (Cheek & Melchior, 1990); and, they tend to blame themselves particularly when they encounter social difficulties (Henderson & Zimbardo, 1998). In light of these findings, it can be stated that shy individuals have a tendency to evaluate themselves negatively.

The tendency of shy individuals to evaluate themselves negatively is seen more clearly in their relationships with other people (particularly with people who have better qualities and perform better) (Henderson & Zimbardo, 2005; Mahone, Bruch, & Heimberg, 1993). Therefore, it can be stated that comparative judgments that shy individuals make with others are effective in the process of self-evaluation. Not surprisingly, the study by Eisert and Kahle (1982) shows that self-evaluation has a significant effect on social comparison. According to the theory of social comparison proposed by Festinger (1954), one has a tendency to compare oneself to evaluate one's own social situation. One important source of information for an individual about him or herself is comparisons that he or she makes with other people (Wood, 1989). When there are no objective standards, individuals compare themselves with other people (Festinger, 1954). Although social comparisons may be made intentionally, in general, they are made spontaneously and automatically (Gilbert, Giesler, & Morris, 1995). According to Festinger (1954), the aim of social comparison

is for individuals to make accurate evaluations of themselves. However, he emphasizes that humans cannot be totally objective and realistic in their evaluations. Social comparisons emerge as a function of the individual's personality and the process of social comparison shows differences according to personal characteristics (Buunk & Gibbons, 1990). This difference becomes salient in social comparison perceptions. Some individuals develop more positive perceptions of themselves, whereas some individuals tend to develop more negative perceptions when they compare themselves with others. As a result of these social comparisons, whether they evaluate themselves more positively or negatively is important.

Adolescence is a notable period with regard to social comparison because social comparison with peers is a prominent characteristic of adolescents, and peer groups play an important role in social comparison throughout adolescence (Eisert & Kahle, 1982). Adolescents need new patterns of behavior and coping strategies for their drastic changes, new problems, and new social roles. For adolescents, peer groups act as the comparative social reference point for appropriate appearance, behavior, and social activities (Kirchler, Palmonari, & Pombeni, 1993).

The degrees of shyness in girls and boys during adolescence may be expected to be different according to their social comparison levels. Traditional sex roles require males to be successful, strong, active, extraverted and self-confident, while requiring females to be calm, submissive, and introverted (Dökmen, 1999). It appears that according to traditional sex role expectations, the possibility of males with low social comparison levels to experience sex role conflicts is higher because it is difficult for males with negative perceptions of social comparison to meet such social expectations associated with the male sex as having initiative, self-confidence and strength. Conflict with traditional sex roles may limit males' interest and performance in participating in many activities. This limitation may hinder their development of effective and satisfactory social relationships (Bruch & Cheek, 1995). Therefore, males with negative social comparison tendencies may be expected to experience more shyness than females.

Although adolescence is a period when shyness is experienced intensively, it can be thought that ninth grade students, who are at the point of starting a new school, would be at a greater disadvantage than the students in the older grades. The ninth grade may be seen as an important social transition period for adolescents because it is the first stage of high school. In some previous studies (Maroldo, 1981; Mounts, Valentiner, Anderson, & Boswell, 2006), it was found that shy students experience social difficulties when they start a new school and are lonely because a new school requires developing new peer relationships and achieving this does not seem easy for shy adolescents. Adolescents who have difficulty adapting to a new school may make comparative judgments with their peers and evaluate themselves negatively. This tendency may cause an increase in the level of shyness among these adolescents.

Studies are focusing on the relationship between adolescents' self-perception and evaluations of themselves, and shyness. Some of these studies include research investigating the relationship between self-esteem (Wadman et al., 2008; Lawrence &

Bennett, 1992; Gökçe, 2001), social efficacy (Paulsen, Bru, & Murberg; 2006; Puklek & Vidmar, 2000), self-efficacy (Hill 1989), and shyness. However, how social comparisons affect shyness in adolescence when social comparisons gain importance is also worth investigating. This study aimed to examine the levels of shyness among adolescents with different social comparison levels according to gender and grade levels.

Method

Participants

The study was conducted on a total of 581 high school students (247 girls and 334 boys), who attended three high schools in Malatya. Of the participants, 229 were in the ninth grade, 233 were in the tenth grade, and 119 were in the eleventh grade. The subjects' ages ranged from 15 and 17, and averaged 16.08.

Measures

Social Comparison Scale. To determine social comparison levels in the study, the Turkish version of the five-item Social Comparison Scale (SCS), developed by Gilbert, Allan and Trent in 1991, was used. The Turkish adaptation of the scale was undertaken by Şahin, Durak, and Şahin (1993). Thirteen items were added to the original form of the scale, creating an 18-item scale. The items in the scale had two poles. However, responses were entered in Likert-style items with scales 1 to 6. The two-pole items were evaluated according to the points over a six-point dimension. The two-pole items of the scale were composed of the following dimensions: sufficient-insufficient, skilled-unskilled, successful-unsuccessful, liked-disliked, introvert-extravert, alone-not alone, excluded-accepted, patient-impatient, intolerant-tolerant, and obedient-has initiative, cowardly-brave, self-confident-not self-confident, timid-outgoing, scattered-orderly, passive-active, indecisive-decisive, unsympathetic-sympathetic, and submissive-assertive. As the points obtained in the scale increase, the tendency increases for individuals to perceive themselves positively when they compare themselves with others. In the reliability study of the scale, the Cronbach Alpha value was found to be .89. In the validity study of the scale, the Beck Depression Inventory correlation was found to be -.19. Its correlations with the sub-scales of the Short Symptom Inventory ranged from 0.14 to 0.34 (Savaşır & Şahin, 1997). The internal consistency coefficient of the scale obtained in this work was .83. An example item: "Sufficient (1), Insufficient (6)."

Shyness Scale. The Turkish version of the 13-item Shyness Scale developed by Cheek in 1990, was used to determine the level of shyness in the study. A 20-item form was obtained when seven items were added to the original form of the scale, which was adapted to Turkish by Güngör (2001). The scale is a five-item Likert-type scale. The highest score to obtain from the scale was 100 and the lowest score was 20. High scores indicated that the person perceived him or herself as shy. In the reliability study of the scale, the reliability coefficient was found to be .83 as a result of test re-test method, and the Cronbach Alfa coefficient was found to be .91. The

concurrent validity of the scale was tested using the Self-evaluation in Social Situations Inventory. The correlation coefficient for the correlation between the Shyness Scale and the Self-evaluation in Social Situations Inventory “social anxiety” subscale was .71, and with the “avoidance” subscale it was .78 (Güngör, 2001). The internal consistency coefficient of the scale in this work was .85. An example item: “I feel uneasy when I am with people I don’t know well.”

Procedure

In order to implement the data collection instruments on students in schools, formal permission was obtained from the local education office. Data collection instruments were administered to students by the researcher, and the counselors in the schools where the data were collected. The aim of the study was explained to the students and the confidentiality of the data obtained was particularly emphasized. The students were informed of how to enter their responses to the scales. The administration of the scales took about 30 minutes. The students participated in the study on a voluntary basis.

Findings

Descriptive statistics of shyness and social comparison scores were given in Table 1. As can be seen in Table 1, the skewness and kurtosis values of shyness and social comparison scores were within acceptable limits (± 1.96). These values can be considered an indicator of a normal distribution of the data.

Table 1

Descriptive Statistics of Shyness and Social Comparison for Total Group.

	<i>n</i>	<i>M</i>	<i>Sd</i>	<i>Range</i>	<i>Skewness</i>	<i>Kurtosis</i>
Shyness	581	57.70	14.19	20-95	.07	-.37
Social comparison		84.50	12.43	18-108	-1.03	1.91

The social comparison levels of the students were determined using means and standard deviation values (see Table 2). According to this, those who were below the social comparison points by one standard deviation were considered low, those who were above the social comparison points by one standard deviation were considered high, and those who were not in these two groups and fell within the 68% portion of the normal distribution curve were considered to be at a moderate level. The two-way analysis of variance (two-way ANOVA) was used to test whether high school students with low, moderate, and high social comparison levels had different shyness levels according to gender and grade.

Table 2
Descriptive Statistics of Shyness for Social Comparison Levels by Gender and Grade.

		Social Comparison								
		Low			Moderate			High		
		<i>n</i>	<i>M</i>	<i>Sd</i>	<i>n</i>	<i>M</i>	<i>Sd</i>	<i>n</i>	<i>M</i>	<i>Sd</i>
Gender	Female	30	65.76	13.68	187	56.35	13.98	30	49.40	15.13
	Male	53	63.01	14.71	237	58.62	13.07	44	52.27	14.83
Grade	Grade 9	28	69.07	11.95	176	58.68	13.44	25	46.68	13.86
	Grade 10	34	60.02	15.52	164	56.12	13.83	35	53.74	15.27
	Grade 11	21	63.71	13.73	84	58.32	12.90	14	52.42	15.05

As can be seen in Table 3, the students' means of shyness have a significant difference based on social comparison levels [$F(2, 581) = 17.86, p < 0.001$; $F(2, 581) = 16.88, p < 0.001$]; the shyness points do not differ significantly according to gender or grade. While social comparison and grade interactions were significant [$F(4, 581) = 2.67, p < 0.05$]; interaction between social comparison and gender was not significant. According to results of the Tukey HSD test, which was used to determine the source of the basic effect of different social comparison levels on shyness, the means of shyness in students with a low social comparison level were significantly higher than the means of those with moderate and high comparison levels, and the means of those with moderate social comparison levels were significantly higher than the means of those with high social comparison levels.

Table 3
Results of Two-Way Analysis of Variance.

	<i>df</i>	<i>F</i>	<i>p</i>
Social comparison	2	17.86	.000
Gender	1	.25	.614
Social comparison X Gender	2	1.14	.318
Social comparison	2	16.88	.000
Grade	2	.48	.619
Social comparison X Grade	4	2.67	.031
Levene's test of equality of error variances		<i>df1</i> = 11 <i>df2</i> = 339	.67

The changes in degree of shyness in students according to social comparison and grade interaction are presented in Figure 1. As can be seen in Figure 1, ninth grade students with low social comparison levels have a higher degree of shyness than

ninth grade students with moderate and high social comparison levels; they have a higher degree of shyness than tenth and eleventh grade students with low, moderate, and high social comparison levels.

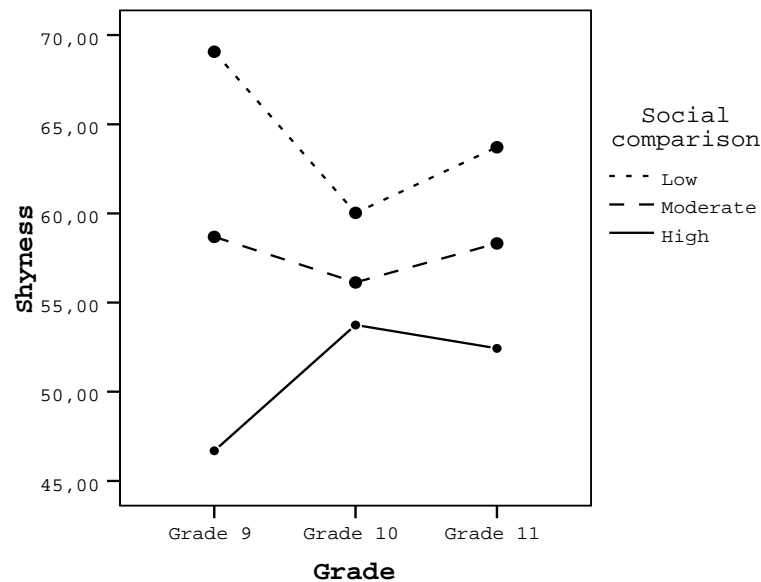


Figure 1. Interaction between Social Comparison and Grade.

Discussion

According to the results of this study, adolescents with low social comparison levels have a higher level of shyness compared to the students with moderate and high levels of social comparison. However, the levels of shyness in male and female adolescents do not show differences based on social comparison levels. Moreover, the ninth grade students were found to be the group with the highest level of shyness with a low social comparison level.

The findings of this study show that adolescents who have a negative perception of themselves when they compare themselves with others are more shy compared to those who have positive perceptions. This result seems to be consistent with the literature. Numerous previous studies (Miller, 1995; Amico et al., 2004; Kalliopuska, 2008; Cheek & Buss 1981; Gökçe, 2001; Lawrence & Bennett, 1992) have shown that shy people tend to evaluate themselves negatively. As a result, it is expected that this tendency is effective in the social comparison process. The study conducted by Eisert and Kahle (1982) shows that self-evaluation has a significant effect on social comparison. The tendency for shy people to negatively evaluate themselves increases more in their interactions with people who they perceive to be sufficient (more

intelligent, more attractive, etc.) (Scott, 2004). Particularly, when they interact with people who are socially confident, they concentrate on themselves with anxiety rather than focusing on the topic of a conversation. Similarly, in their interactions with sexually attractive people, they see themselves as inhibited, unskilled, distant and insufficient (Henderson & Zimbardo, 2005). Shy people expect other people to approach them and start a conversation, continue to talk and draw them out of their shyness (Carducci, 2000). In other words, they see others as more sufficient than they are. They tend to perceive themselves as weak and others as powerful (Henderson & Zimbardo, 1998). Shy individuals perceive themselves to be more insufficient and unskilled when comparing themselves to other individuals who they perceive to be sufficient, and they cannot evaluate themselves realistically. Yet, as Festinger (1954) points out, a person's success in social functioning requires that he or she realistically evaluates his own views and abilities. Shy individuals tend to focus on the positive characteristics of others in their interactions. Focusing others' positive characteristics increases both an individual's negative self-thoughts and social anxiety (Mahone, Bruch & Heimberg, 1993). An overall evaluation of findings reported in the literature indicates that shy individuals' cognitive processes are consistent with their tendencies to make negative social comparisons.

According to another finding obtained in the study, social comparison levels do not differ according to male and female adolescent shyness levels. This unexpected finding seems to be related to the developmental characteristic of late adolescence. Numerous studies indicate that the most important predictor of adolescent shyness is self-esteem (Cheek & Buss 1981; Gökçe, 2001; Lawrence & Bennett, 1992). It is striking that self-esteem is an important predictor of social comparisons (Wheeler & Miyake, 1992). When the development of self-esteem during adolescence is examined, it is observed that the level of self-esteem in late adolescence does not differ according to gender (Lynch, Myers, Kliewer, & Kilmartin, 2001). Therefore, no difference in self-esteem in late adolescence may be expected to reflect on the social comparison period. The similarities between male and female adolescent self-esteem levels may be thought to play a role in differences in level of shyness according to social comparison levels. Accordingly, in a study conducted by Nicksic and DuCharme (2004) on adolescents, it was found that the effect of social comparison on self-esteem does not differ according to gender.

Another noteworthy finding of the study is that ninth grade students with a low level of social comparison were the most disadvantaged group regarding shyness. The students in the ninth grade, who are required to start a new school, need to develop new friendships and adapt to a new social situation. In the first year of school, since their relationships with friends have not yet been established, fear of negative evaluation and social avoidance may increase (Bruch & Cheek, 1995). When the social difficulties of starting a new school are considered, this is clearly a difficult experience for adolescents. The findings of the study indicate that the social comparison levels of adolescents may play an effective role in coping with these difficulties. The students in the ninth grade who are faced with such a difficult experience as starting a new school may compare themselves with their peers. As a result of these social comparisons, the students who perceive themselves to be more insufficient than others may perceive incompetence regarding their skills and performances. Their perception of incompetence may inhibit the display of necessary

social behaviors to form new relationships and may reflect on their social performances. In this case, an increase in their level of shyness is an expected result. The findings from the study conducted by Alm and Frodi (2008) seem to be consistent with the finding of this study. Their study showed that people who are shy and those who are not shy behave in a similar way in new social situations. People in both groups take on a passive role. However, their thoughts about this behavior differ. Shy people experience anxiety and focus on their own behavior and others' thoughts. People who are not shy focus on the environment to grasp the social rules and act according to the social rules (Alm & Frodi, 2008). As Cheek and Melchior (1990) reported, focusing on oneself in an exaggerated manner leads the individual to evaluate their own social skills at lower levels than they really are, and to be insufficient in making correct judgments regarding how people evaluate them. Therefore, exaggerated self-focus causes negative self-evaluation and may lead the adolescent to make negative social comparisons.

The students in the ninth grade with low social comparison levels are the group with the highest levels of shyness. Yet, the sudden fall in levels of shyness among tenth grade students with low social comparison levels is noteworthy (see Figure 1). As mentioned before, since ninth grade is the first year of high school, students' friendships have not yet been established. For this reason, an increase can be observed in the fear from negative evaluation in ninth grade and thus an increase in social avoidance may emerge (Bruch & Cheek, 1995). Considering that the threatening aspect caused by the school's novelty and unknown social situation decreases in tenth grade; a decrease in fear from negative evaluations and social avoidance may be expected. As a result, a decrease in the levels of shyness is also an expected result.

When the results of the study are considered, the group with the lowest levels of shyness emerges to be ninth grade students with highest social comparison levels, which is an interesting finding. The more sufficient and positive perceptions that they have about themselves when they compare themselves to others, the more effective they may be in coping with the difficulties of entering a new social environment. Their positive perceptions of themselves decrease their fears of negative social evaluation and social anxieties, which may help to ease their adaptation to a new school. In this case, their lower levels of shyness may be understood. However, the increase in the levels of shyness among tenth grade students with high social comparison levels is noteworthy. This unexpected increase may be explained by the quality of developing friendships. For most adolescents, the importance of acceptance into peer groups increases with age, and in the mid-late adolescence period this reaches its peak (Brennan, 1982). In tenth grade, which coincides with the middle of late adolescence, changes occur regarding expectations from the quality of friends. When the positive perceptions of tenth grade students with a high social comparison level regarding themselves and the characteristic of this period are considered, an increase in the expectations of acceptance by peers and failure to meet their increasing needs for peer acceptance may increase their social avoidance behavior and shyness.

In conclusion, this study shows that social comparison plays a role in shyness in adolescents. In addition, it is seen that the relationship between social comparison

and shyness differs according to school grade. Considering that ninth grade students, who have a low level of social comparison, are the shiest group; they can have more difficulty coping with the adaptation problems of starting a new school. School counselors should administer orientation studies in order to ease the adaptation of these students and activities of individual and group counseling, and group guidance, which can be effective in overcoming negative self-evaluation and shyness.

However, the findings obtained may be evaluated within certain limitations. Primarily, the findings of the study are limited to the data obtained through self-report scales. The scale used in this study to determine the level of social comparison measures tendencies of an individual to perceive him or herself when he or she compares him or herself with other individuals. However, the scale does not determine the direction of an individual's comparison (downward comparison-upward comparison). It is thought that studies that will investigate shyness due to downward comparisons (comparison of an individual with those who have lower qualities and worse performance) and upward comparisons (comparison of an individual with those who have higher qualities and better performance) may contribute to obtaining more detailed findings. Moreover, the level of social comparison is seen to be limited to the comparison dimensions contained in the Social Comparison Scale. In this study, the study group comprised late adolescents. Thus, the findings of this study may only be generalized to similar groups. However, it is believed that further studies in different cultures and different developmental periods will contribute to the generalizability of the findings of this study.

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Ergenlerde Sosyal Karşılaştırma ve Utangaçlık

(Özet)

Problem Durumu: Kişilerarası iletişim sürecini engelleyen önemli değişkenlerden biri olan utangaçlık en yaygın biçimde, başkalarının varlığında ortaya çıkan rahatsızlık ve engellenme olarak tanımlanabilir. Utangaçlık yaşamın her döneminde yaşanabilse de özellikle benmerkezcilik ve kimlik gelişimi ile karakterize edilen ergenlik döneminde doruk noktaya ulaşır. Ergenler fizyolojik, sosyal, duygusal ve cinsel değişimlere uyum sağlama sürecinde olduklarından utangaçlık en çok ergenlik döneminde problemlere yol açmaktadır. Ergenlik döneminin en belirgin özelliğinin kimlik oluşumu olduğu gözönüne alındığında, utangaçlık kimlik gelişimine katkıda bulunan birçok gelişimsel görevin başarılmasını engelleyici bir rol oynayabilmektedir.

Utangaç kişiler kendilerini olumsuz değerlendirme eğilimindedirler ve bu eğilimleri, diğer insanlarla ilişkilerinde (özellikle de kendilerinden daha üstün nitelikli, daha iyi performansa sahip kişilerle) daha açık bir biçimde görülmektedir. Dolayısıyla, utangaç bireylerin başkaları ile karşılaştırmalı yargılarının kendilerini değerlendirme sürecinde etkili olduğu söylenebilir. Kendini değerlendirmek için objektif standartlar olmadığında, birey kendini diğer insanlarla karşılaştırır. Sosyal karşılaştırma teorisine göre; birey kendi sosyal durumunu değerlendirmek için başkaları ile kendini karşılaştırma eğilimindedir. Sosyal karşılaştırmalar bireyin kişiliğinin bir işlevi olarak ortaya çıkmakta ve sosyal karşılaştırma süreci bireysel özelliklere göre farklılık göstermektedir. Bu farklılık sosyal karşılaştırma algılarında da kendini göstermektedir. Bazı bireyler kendilerini başkalarıyla karşılaştırdıklarında kendilerine ilişkin daha çok olumlu algılar geliştirirken, bazı bireyler de daha çok olumsuz algılar geliştirme eğilimindedir. Bireyin yaptığı sosyal karşılaştırmalar sonucunda kendisini olumlu ya da olumsuz değerlendirmesi önemlidir. Çünkü bu değerlendirmeler sonucunda kendisini nasıl algılasa buna uygun davranma eğiliminde olacaktır. Ergenlik dönemi sosyal karşılaştırmalar açısından dikkat çekici bir dönemdir ve akranlarıyla sosyal karşılaştırmalar ergenlerin belirgin bir özelliğidir. Sosyal karşılaştırma düzeylerine göre kız ve erkek ergenlerin utangaçlık düzeylerinin farklılık göstermesi beklenebilir. Geleneksel cinsiyet rolleri erkeklerin başarılı, güçlü, girişken, dışa dönük ve kendine güvenen kişiler olmalarını gerektirirken; kızların sakin, itaatkâr ve içe dönük olmalarını gerektirmektedir. Geleneksel cinsiyet rol beklentilerine göre sosyal karşılaştırma düzeyi düşük erkeklerin cinsiyet rol çatışması yaşama olasılıkları daha yüksek gibi görünmektedir. Ergenlik dönemi utangaçlığın yoğun olarak yaşandığı bir evre olsa da yeni bir okula başlamak durumunda olan dokuzuncu sınıf öğrencilerinin diğer sınıflardaki öğrencilere göre daha dezavantajlı oldukları düşünülebilir. Çünkü, yeni bir okul yeni akran ilişkilerinin

gelişimini gerektirmektedir ve bunu yapmak da utangaç ergenler için kolay görünmemektedir. Yeni bir okula uyum sağlamada güçlük çeken ergenler akranları ile karşılaştırmalı yargılarda bulunup kendilerini olumsuz değerlendirebilirler. Kendilerini olumsuz değerlendirme eğilimleri de utangaçlık düzeylerinin artmasına yol açabilir. Literatürde, ergenlerin kendilerine ilişkin algı ve değerlendirmeleri ile utangaçlık ilişkisini ele alan çalışmalara rastlanmaktadır. Ancak sosyal karşılaştırmaların önem kazandığı ergenlik döneminde sosyal karşılaştırmaların utangaçlığı nasıl etkilediği de incelenmeye değerdir.

Araştırmanın Amacı: Bu çalışmada, sosyal karşılaştırma düzeyleri farklı lise öğrencilerinin utangaçlık düzeylerinin cinsiyet ve sınıf düzeylerine göre incelenmesi amaçlanmıştır.

Araştırmanın Yöntemi: Araştırma, 247'si kız ve 334'ü erkek olmak üzere toplam 581 lise öğrencisi üzerinde yürütülmüştür. Malatya'daki üç lisede öğrenim gören katılımcıların 229'u dokuzuncu sınıf, 233'ü onuncu sınıf ve 119'u onbirinci sınıf öğrencisidir. Yaşları 15-17 arasında değişen deneklerin yaş ortalaması 16.08'dir. Araştırma verileri, Sosyal Karşılaştırma Ölçeği ve Utangaçlık Ölçeği kullanılarak toplanmıştır. Öğrencilerin sosyal karşılaştırma düzeyleri, puanların aritmetik ortalama ve standart sapma değerlerine göre belirlenmiştir. Buna göre, sosyal karşılaştırma puanlarının bir standart sapma altında olanlar düşük, bir standart sapma üstünde olanlar yüksek ve bu iki grup dışında kalan ve normal dağılım eğrisinde %68'lik dilimde bulunanlar ise orta düzey olarak kabul edilmiştir. Düşük, orta ve yüksek sosyal karşılaştırma düzeyine sahip lise öğrencilerinin cinsiyet ve sınıf düzeyi açısından utangaçlık düzeylerinin farklı olup olmadığı çift yönlü varyans analizi ile test edilmiştir.

Araştırmanın Bulguları: Araştırma bulgularına göre, sosyal karşılaştırma düzeyleri düşük olan ergenler sosyal karşılaştırma düzeyleri orta ve yüksek olan ergenlere göre daha utangaçtırlar. Sosyal karşılaştırma düzeylerine göre kız ve erkek ergenlerin utangaçlık düzeyleri anlamlı bir farklılık göstermemektedir. Ayrıca, sosyal karşılaştırma düzeyi düşük olan dokuzuncu sınıf öğrencileri en utangaç grup olarak bulunmuştur.

Araştırmanın Sonuçları ve Öneriler: Sonuç olarak, bu araştırma, sosyal karşılaştırmaların ergen utangaçlığı üzerinde bir rol oynadığını göstermektedir. Ayrıca, sosyal karşılaştırma ve utangaçlık ilişkisinin sınıf düzeyine göre değiştiği görülmektedir. Sosyal karşılaştırma düzeyi düşük olan dokuzuncu sınıf öğrencilerinin en utangaç grup olduğu dikkate alındığında, bu öğrencilerin yeni bir okula başlamanın uyum güçlükleri ile başa çıkmada daha çok zorlanabilecekleri söylenebilir. Okul psikolojik danışmanlarına bu öğrencilerin okula uyum sağlamalarını kolaylaştıracak oryantasyon çalışmalarının yanı sıra kendilerine ilişkin olumsuz değerlendirmeleri ve utangaçlıkları ile başa çıkabilmede etkili olabilecek bireysel-grupla psikolojik danışma ve grup rehberliği etkinliklerini uygulamaları önerilebilir.

Bu çalışmada, sosyal karşılaştırma düzeyinin belirlenmesinde kullanılan ölçek, bireyin başkaları ile karşılaştığında kendisini algılama eğilimini ölçmekle birlikte, bireyin yaptığı karşılaştırmaların yönünü (aşağı doğru karşılaştırma-yukarı doğru karşılaştırma) belirlememektedir. Utangaçlığın aşağı doğru karşılaştırma (bireyin kendisinden daha düşük nitelikli, daha kötü performansı olan kişilerle yaptığı karşılaştırmalar) ve yukarı doğru karşılaştırma (bireyin kendisinden daha üstün nitelikli, daha iyi performansa sahip kişilerle yaptığı karşılaştırmalar) yönelimine göre incelendiği yeni araştırmalar daha kapsamlı bulguların elde edilmesine katkı sağlayabilir. Bu çalışmada, araştırma grubunu son ergenlik evresinde bulunan öğrenciler oluşturmaktadır. Dolayısıyla, bu araştırmanın bulguları, sadece benzer gruplara genellenebilir. Ancak, farklı kültürlerde ve farklı gelişim dönemlerinde yapılacak yeni çalışmaların bu araştırma bulgularının genellenebilirliğine katkı sağlayacağı düşünülmektedir.

Anahtar Sözcükler: Utangaçlık, sosyal karşılaştırma, ergenlik, lise öğrencileri.

A Study Based on Classic Test Theory and Many Facet Rasch Model

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Abstract

Problem Statement: Reliability is considered the weakest ring when measuring students' achievement through open-ended questions. Despite being an important source of errors that reduce reliability in rating responses given to questions, such factors as tasks or items are other sources of error that are equally important. However, all the methods employed in computing reliability are not handled with all sources of error at the same time. The reliability of measurements conducted with open-ended questions is studied through methods based on three basic theories of measurement: namely, classical test theory, item response theory, and generalizability theory.

Purpose of Study: The purpose of the study is to apply classical test theory (CTT) and many facet Rasch model (MFRM) to determine the reliability of the mathematic achievement scores and to compare the results of both theories.

Methods: Since the characteristics of CTT and MFRM are discussed and confirmed in this study, this is a descriptive study.

Findings and Results: According to CTT, the interconsistency of the mathematic scores was found to be 0.92. Although Kendall's concordance coefficient for four raters was obtained as 0.52, correlation coefficients for four raters were different values between 0.90 and 0.97. According to MFRM, the reliability of the person facet was 0.95, and the reliability of the

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rater facet was 0.99. For determining the students' mathematic success, the reliability of the mathematic scores was found to be very high. Although there was a difference between the means of the raters' scores, it was determined that the four raters scored the students consistently.

Conclusions and Recommendations: With this study, it was seen that the theory to be selected for determining the reliability of the scores depended upon the purpose for which the scores obtained would be used. However, it is concluded that it is more appropriate that at least two theories should be used for determining the reliability of the measurement.

Keywords: Reliability, classic test theory, Kendall's concordance coefficient, many facet Rasch model, interrater reliability.

Measurement and evaluation are employed in testing the extent to which educational curricula perform their function, determining the effectiveness levels of educational methods, determining students' success and academic attitudes, as well as specifying students' strengths and weaknesses in learning. In other words, measurement and evaluation are required in all dimensions of input, process, and output in education. Whereas measurement is defined as observing a property and representing the results in figures or symbols (Baykul, 2000), evaluation is a larger process that involves measurement results, criteria, and decision-making steps. Consistency of the criteria in addition to the reliability and validity of measurement results are highly important in performing an evaluation accurately. It is desirable that the reliability and validity of measurement tools employed be as high as possible in raising the accuracy of measurement results.

Reliability is defined as the degree to which a test is free from random errors of measurement results (Baykul, 2000). The more reliable a test is, the more probable it is that the results of the test will be similar in applications at different times. The degree of reliability is usually stated in a coefficient that receives values between 0 (unreliable) and 1 (perfectly reliable), and it shows the extent to which measurement results are free from random errors. Measurement results always have a certain amount of error.

Reliability is considered the weakest ring when measuring students' achievement through open-ended questions (Alharby, 2006). Despite being an important source of errors that reduce reliability in rating responses given to questions, such factors as tasks or items are other sources of error that are equally important. Therefore, ensuring interrater consistency is not sufficient for rating reliability; other sources of error should also be considered in calculating reliability. However, all the methods employed in computing reliability are not handled with all sources of error at the same time. The reliability of measurements conducted with open-ended questions is studied through methods based on three basic theories of measurement: namely, classical test theory, item response theory, and generalizability theory. Due to the fact that classical test theory and item response theory are employed in this research, only literature concerning these two theories is provided.

Classical Test Theory (CTT): Reliability coefficient is defined as the proportion of true score variance with observed score variance in CTT. The observed score variance comes from two different sources of variance here: true score variance and error score variance. It is thought that all the variance except for true variance may come from different sources of error. Reliability, which is usually stated as the consistency of scores obtained through measurements, may differ depending on the source of the error. The correlation of scores obtained through implementation of a test twice or more (test and retest) is called “stability” or “consistency,” and the source of error is considered to be the interval between applications. However, variance stemming from the items sample is not considered in this sense of reliability. The consistency obtained from the items in the test is called “internal consistency,” and the source of error here is each of the items in the test. Variance that might arise due to time is not taken into consideration in this sense of reliability. Here the “consistency” of scores obtained from two parallel forms for the same measurement is available in parallel forms reliability, and the source of the error is considered to be the test – where variance stemming from raters does not exist. The consistency between scores given by more than one rater for the same property measured is called “interrater reliability,” in which case the source of error is only the raters.

Interrater reliability is the extent to which different raters are consistent in assigning the same scores to each student. It is most commonly calculated through the correlation coefficient, which is the degree of linear relations between two raters, “Pearson product-moment correlation coefficient (r).” This correlation coefficient is obtained as the percentage of the true variance in the total variance. The remaining percentage is the error showing the inconsistency between the raters’ scores (Anastasi & Urbina, 1997). The calculation of this coefficient has advantages as a technique that is frequently used, commonly known, and easily interpreted. On the other hand, it is a disadvantage that the correlation coefficient is directly influenced by the size of the group for which it is calculated (Goodwin, 2001). A more considerable restriction for this coefficient is that it is independent of the average. Due to this independence, it does not display the similarities and the differences between scores obtained from the two raters in calculating reliability. Therefore, Pearson correlation coefficient is insufficient in determining the interrater reliability (Goodwin, 2001). In using this coefficient for predicting reliability, the t test of the averages of scores obtained from raters for matched groups would be more appropriate in a case of only two raters, whereas a comparison using ANOVA for repeated measurements and interpretation along with the correlation coefficient would be more appropriate when there are more than two raters (Goodwin, 2001). One of the methods for determining interrater reliability in a case of more than two raters’ scoring a particular performance, question, etc. is Kendall’s concordance coefficient, a non-parametric statistical technique (Howell, 2002), which is calculated as shown below:

$$W = \frac{12 \sum T_j^2}{k^2 N(N^2 - 1)} - \frac{3(N + 1)}{N - 1}$$

In this equation k is the number of raters, N is the number of tasks or items, and T is the total score given by all the raters for each item or task. Interpretation may also be made through the hypothesis of non-existence concerning Kendall's concordance coefficient. The hypothesis of nonexistence, in which case no interrater consistency is available, can be tested with χ^2 in cases where the number of raters is seven or more and in the $N-1$ degrees of freedom the value of $\chi^2_{(N-1)=k}$ displays approximately χ^2 distribution. However, since the number of raters required for the test of significance is usually smaller than 7 (the minimum number), this test is rarely implemented (Howell, 2002; Cooper, 1997).

Although a rater is an important source of error in measurement conducted with open-ended questions, other sources of error are also available. However, no more than one source of error could be considered when calculating reliability through the above-mentioned methods. Thus, predicting the size of different sources of variance requires conducting multiple analyses in the CTT; moreover, it is not possible to predict reliabilities of different variance sources at the same time.

Many Facet Rasch Model (MFRM): This model is an extended form of the Rasch model developed by Linacre (1989). In the original Rasch model, individuals' abilities and the difficulty level of the items are on the same interval scale, whereas the MFRM deals with more than two sources of variance and is the extended form of the Rasch model (Atılgan, 2005; Nakamura, 2000). This, in turn, enables differing sources of variance such as rater severity/leniency, or such as variance of measurements at different times to take place in the model. Rater severity or leniency is stated as "raters' systematic scoring above or below the average scoring of other raters" (Engelhard & Myford, 2003). MFRM based on item response theory and an extended form of one parameter logistic model provides a statistical technique for predicting individuals' level of ability, the difficulty level of tasks or items, and raters' level of severity. MFRM usually consists of three sources of variance (namely individuals, tasks, and raters) and is represented as:

$$\log \left(\frac{P_{nij k}}{P_{nij k-1}} \right) = B_n - D_i - C_j - F_k$$

$P_{nij k}$ is the probability of scores given by a rater (j) for the performance (k) an individual (n) demonstrates for an item (i). $P_{nij k-1}$ is the probability of a score given by a rater (j) for the performance ($k-1$) an individual (n) demonstrates for an item (i). B_n is an individual's (n) level of ability. D_i is the difficulty level of an item (i). C_j is a rater's level of severity (j). F_k is the difficulty level of passing from the category $k-1$ to category k .

Each source of variance is analyzed at the same time in MFRM, and the analyses are statistically independent of each other. This model is an approach based on the assumption that no interactions are available between the sources of variance. Thus, sources of variance are located on a general linear scale, usually on logit scale. Individuals' abilities are predicted independently of the distribution characteristics of particular items or independently of scores given by particular raters. In a similar

view, the difficulty levels of items and rater severity/leniency are also predicted independently of the distribution characteristics of other sources of variance located in the pattern where data are obtained (Smith & Kulikowich, 2004). In addition, since the sources of every type of systematic error are considered as a source of variance in MFRM, individuals – who are not considered to be sources of variance in CTT and in generalizability theory and are labeled as “the object of measurement” – are also a source of variance (Alharby, 2006). Reliability coefficients for each source of variance can be calculated separately at the same time in MFRM. MFRM enables prediction of parameters separately. Individuals’ abilities are predicted through scores given by all the raters for all the tasks and/or items. If the assumption of invariance concerning the data is assured, measurements for individuals are independent of the change occurring between raters and items.

Measurements concerning all sources of variance can be scaled on a single ruler or map to the extent that the data are compatible with the Rasch model. Probabilities of answering correctly are called “log-odds,” and the unit of measurements are called “log odds units” or “logits.” Logits state measurements with positive high values on the ruler, high levels of abilities in the case of individuals, severity of rater, and high levels of difficulty in the case of items, whereas high negative values express individuals with lower abilities, leniency of rater, and items with lower levels of difficulty. In addition to its advantage in that logit is a scale of intervals, it can also express how much more difficult an item is in a linear unit (Güler, 2008).

Another form of statistics obtained in MFRM is fit statistics, which shows the degree of inconsistencies in the data matrix and provides brief knowledge concerning the size and direction of residuals. Residuals are the values calculated by subtracting the expected scores from the observed scores. When the data are fit with the model, each residual value is expected to be zero. The prediction of the standardized residual displays more or less normal distribution in a way that its mean is 0 and its variance is approximately 1, to the extent that the data are close to the model. Thus, because it is a useful criterion for the fit of the data with the model, interpretation could be made by checking whether or not the standardized residuals display approximately normal distribution (Hetherman, 2004).

Similarly, the outfit and infit statistics may be studied as fit statistics that may be interpreted more easily (Nakamura, 2000). Each rater severity/leniency in scoring is predicted independently of other sources of variance taking place in an item. The high values arising out of this prediction indicate that the rater is more severe than the raters below him in the same scale. Following the prediction of each rater severity, the fit of the predictions with the data is evaluated. Similar evaluations may be made for predictions of each individual’s abilities, of the level of difficulty of each item, or of all the sources of variance in the model (Hetherman, 2004).

The consistency of a source of variance is the mean square of standardized residuals briefly, and these statistics are defined as the outfit statistics. While the outfit statistic is an unweighted mean square residual the infit statistic is the weighted mean square residual across all cases. Outfit statistics are more sensitive than infit statistics to outlier scores. The desired value for infit statistics is 1. Values

higher than 1 indicate variance more than expected, whereas values smaller than 1 indicate variance smaller than expected in rating: in other words, more dependence. It is recommended in the literature that commonly acceptable values for both infit and outfit statistics are between 0.5 and 1.5 (Turner, 2003). The infit and outfit statistics should be checked to determine whether or not they are in the range of 0.5 and 1.5 so as to determine whether the data are consistent with the MFRM (Hetherman, 2004).

Another statistic of MFRM for determining how consistent the data are with the model is the separation index (G). Separation index is the measurement of how much the objects in the source of variance differ from each other. This measurement is expected to be large for individuals and items, but it is expected to be close to zero for raters. The separation index may also be utilized for calculations through the formula $(4G+1)/3$, showing how many different levels the elements in the source of variance could be categorized into for each source of variance (Lee & Kantor, 2003; Hetherman, 2004).

Another statistic useful in interpreting how well parameter predictions are made is separation index reliability. As in the classical reliability coefficient, the reliability for separation index receives values ranging between 0 and 1, which show how reliable each element in the variance dimension is distinguished from one another. The separation index reliability that is obtained for the related source of variance (individuals or students are sources of variance, and this source of variance is called the "object of measurement" in generalizability theory) is equivalent to KR-20, Cronbach alpha, or the generalizability coefficient in the classical theory, and it may be interpreted in the sense of internal consistency (Nakamura, 2000). It is desired that the separation index reliability for individuals and items have a value very close to 1. A value of separation index reliability close to 1 for the source of rater variance indicates how reliable raters differ from each other in terms of severity/leniency. This is not desirable for the source of rater variance. According to Linacre (1989), separation index reliability for the source of rater variance is used in the form of "1-separation index reliability" in calculating interrater agreement index. The lower is the separation index reliability; the higher is the interrater agreement in this case.

It is believed in this study that a theoretical contribution may be made by using the measurement method based on CTT that is recommended for similar measurement situations and the MFRM approaches and by testing consistency against each other as well as internal consistency. Educators in mathematics wish to know how reliable the scores they give for their students' mathematical knowledge are when they employ subjective tools of measurement in measuring mathematical achievement. Besides, they also need to know what the most effective source of variance is in measuring mathematical achievement and what should be done to reduce measurement errors to the minimum. Therefore, it is another aim of this research to illuminate educators of mathematics by making points in these issues.

Method

The research group consisted of 203 students who attended school in the spring semester of the 2007 academic year. The research group is composed of 8th and 9th graders living in such different neighborhoods of Ankara. Because the measurement of mathematical achievement was performed within class hours, students and teachers were chosen mainly on the basis of willingness. Twenty-four open-ended items in the TIMSS were applied to the students. Six of the 24 items were removed following explanatory and confirmatory factor analysis because they were found to have a relatively high load value for two factors (Büyüköztürk, 2006). All the analyses in the research were conducted with the remaining 18 items. Four mathematics experts were available in the research to measure mathematical achievement. The correlation values assigned to the 24 items by the four raters are shown below in Table 1.

Table 1

The Correlation Coefficients Holding Between Scores Assigned to 24 Items by the Raters

	Rater 1	Rater 2	Rater 3	Rater 4
Rater 1	-	0.946	0.903	0.958
Rater 2		-	0.956	0.972
Rater 3			-	0.935

The analysis of the data was performed in three phases. In the first phase, the descriptive statistics of the scores given by each of the 203 students to the 24 items were calculated. The factor structures determined through explanatory analysis were tested with confirmatory factor analysis. It was found that the explanatory factor analysis produced results similar to the ones performed with the scores obtained from the four raters. However, since the descriptive statistics of all the raters available in the research differed, the results of explanatory and confirmatory factor analyses were presented for the means of scores given by the raters to each item. In the final stage, the data were analyzed through patterns based on CTT and MFRM according to the sub-problems of the research. SPSS 14 program was employed for Cronbach α , explanatory factor analysis, and Kendall's concordance coefficient. Moreover, the Lisrel 8.7 program was used for confirmatory factor analysis, and the FACETS program was used for the MFRM analyses (Linacre, 2007).

Findings and Results

The reliability analyses for scores given to students by the four raters to measure mathematical achievement were conducted. For this purpose, the Cronbach α reliability coefficient was found for the scores given by each rater. Cronbach α reliability coefficients were found to be 0.91 for the first and second raters, whereas

they were found to be 0.92 for the third and fourth raters. Based on these coefficients, it could be stated that the items are available for measuring mathematical achievement consistently.

The degree of consistency holding between the scores in the four raters' scoring of each student under the same circumstances was analyzed through Kendall's concordance coefficient, and it was found to be 0.52 for 18 items ($X^2=315.16$, $sd=3$, $p=0.00<0.05$). Besides, correlation coefficients between scores given by each rater and scores given by another rater were calculated. The correlations between scores given by the raters for 18 items are shown in Table 2.

The Correlation Coefficients Holding Between Scores Assigned to 18 Items by the Ratets

	Rater 1	Rater 2	Rater 3	Rater 4
Rater 1	-	0.943	0.902	0.955
Rater 2		-	0.956	0.974
Rater 3			-	0.940

As is evident from Table 2, the correlation coefficients between scores given by the four raters for 18 items are in the range of 0.90 and 0.97, quite high values. These values support the conclusion that interrater consistency is available. However, since the interrater correlation coefficients are calculated independently of averages, they fail to reveal the differences between the averages of scores given by the raters. Therefore, it is recommended that the differences between means for the scores given by the raters be tested (Goodwin, 2001). The differences between the means of the scores given by the four raters to the 203 students were tested through single variable variance analysis on a correlated sample, and a statistically significant difference was found ($F=13.801$, $p=0.00<\alpha$). Following the post-hoc study on these results and a pairwise comparison of raters' score means, no significant differences were found for raters' score means except for the first rater's.

A three variance source pattern was used containing students, items, and raters for the MFRM analyses in the FACET program. At this stage of the research, model-data fit obtained, students' abilities and fit statistics, and statistics for rater severity/leniency and item difficulty were presented, respectively.

Measurements concerning each source of variance may be represented in a single linear scale called logit map (ruler) in FACET analyses results for the MFRM. Each source of variance is scaled beginning with observed values of students' performance and beginning with 0 point (Turner, 2003). The logit map obtained for the three sources of variance concerning the data is shown in Figure 1. As can be seen in Figure 1, all of the sources of variance may be scaled in the same scale. The map in this figure is composed of five columns. The first column shows the logit scale through which each source of variable in the model is evaluated. The second column shows each student with a number, and students are ordered on the basis of their ability scores (θ). The students with a higher logit value are scaled in a way

Measr	+student	-item	-rater	S.1
3				(5)
	179			
2	105			
	201			
	123			
	197			
	194 196			
	60 137 161 166 185 188			
	182			
1	195			
	16 19 129 140 176 177			
	199			
	103 116 124 170 189			
	159 178 186 200			
	12 59 67 145 184			
	72 93 104 160 167 193 198			
	131 192 203			
	26 55 163 191			
	25 57 87 122 125 174 175 183 202			
	53 99 106 130 133 135 164			
	66 80 110 126 190			
	11 52 111 162			
	9 35 84 141 165 169 173			
	15 127 148 158 168 181			
	51 58 108 114 120 121 142 150 171	7		
	10 28 56 86 101 144			
	3 32 61 132 151			
	8 33 54 71 78 90 112 143 146 155	15		4
	34 91 115 118 128 156 187			
	4 7 24 37 62 117 138 180			
	18 113			
	6 29 36 63 97 109 139 152 154 172		1	
	5 74 102 136 157	9 12		
	47 88 119 153	1 17		3
	23 30 31 64 69	6		
0	65 68 73 83 95 134 149	2 8 14 18		
	13 49 70 85 96 107 147	5 16	2 4	
	38 43 46 75 81 94 100	3 11	3	
	2 14 27 98			2
	89			
	17 22 76 77 79	10 13		
	1 20 21 92			
	42			
	82			
	41	4		1
	45			
	39 50			
	40			
-1				
	44			
-2	48			(0)
Measr	+student	-item	-rater	S.1

Figure 1. Logit map for all facets

so as to be at a higher level of ability. Accordingly, the student at the highest level of ability is the student numbered 179 (at 2.50 logit unit), and the one at the lowest level of ability is the student with number 48 (at -4.50 logit unit). The next column shows the ordering of items in the logit scale according to their level of difficulty. Accordingly, the most difficult question is located at the top, whereas the easiest one is placed at the bottom of the scale. Thus, number 7 is the most difficult question, while number 4 is the easiest. And the next column shows the scaling of the raters. The values on this column are interpreted as follows: raters with a high logit score are more severe, whereas those with a low logit score are more lenient in rating. Therefore, number 1 is the most severe, but number 3 is the most lenient rater. The final column shows the place of rating categories in the logit scale. An examination of the column makes it clear that scores 0, 1, and 2 are below 0 unit in the rating category, but the scores 3, 4, and 5 are above 0 unit in the logit scale. Clearly, score 3 of the majority of the students in the rating scale is above 0 unit in the logit scale. Further information concerning the sources of student, rater, and item variance is presented below, respectively.

For fitting the data with the model, approximately 5% of the standardized residuals at most should be outside ± 2 , and approximately 1% at most should be outside ± 3 (Linacre, 2007). Two hundred and forty-four (1.6%) out of the standard residual values of 14.616 data that were obtained from mathematics scores were outside ± 2 , and 88 (0.6%) were outside ± 3 . Accordingly, it can be concluded that the measurement of mathematical achievement that was performed in 2007 provided model-data fitting for FACET analysis.

Following the measurements, the logit values of 203 students were in the -4.50 and 2.50 ranges. The mean of these logit values was 0.51, whereas the standard deviation was 0.11. The separation index (G) was found to be 4.39, and reliability to be 0.95, which were high enough. Separation index is a statistic showing the extent to which measurements obtained in relation to the sources of variance differed from one another (Turner, 2003; Wright & Stone, 1979). Because the separation index reliability for student variance can be interpreted in a way similar to Cronbach alpha and generalizability coefficient, it can be concluded that test reliability in the sense of internal consistency is high (Nakamura, 2000). A calculation of how many different levels of ability into which students can be divided can be made through the formula $(4G+1)/3$ (Lee & Kantor, 2003; Hetherman, 2004). According to the formula, the 203 students may be divided into approximately six levels of ability on the basis of their mathematics scores. Both the infit statistics (mean=1, std.dev.=0.3) and the outfit statistics (mean=1, std. dev.=0.4) indicate that the data are fully consistent with the model. It was seen that the infit mean squares of 96% (excluding 9 students) and the outfit mean squares of 91% (excluding 18 students) out of 203 students were between 0.5 and 1.5. These values showed that the data fit the measurements (Linacre, 2007).

Table 3*Raters' Report for Measurements Conducted with Open-ended Mathematics Questions*

Rater No	Rater Mean	Rater Total r	Rater severity		Infit		Outfit	
			Logit Meas.	S.H.	MeanSq	ZStd	MeanSq	ZStd
1	3.2	3.60	0.22	0.01	0.9	-3	1.1	1
2	3.8	4.25	-0.06	0.01	1.0	0	1.0	0
3	3.8	4.32	-0.10	0.01	1.0	0	1.0	0
4	3.7	4.23	-0.05	0.01	1.1	3	0.9	-1
Average	3.6	4.10	0.0	0.01	1.0	0.2	1.0	0.4
Std. deviation	0.3	0.29	0.13	0.0	0.1	2.5	0.0	1.1
RMSE (Model)=0.01			std.deviation=0.13		Separation index=10.59		Reliability=0.99	
			All same $X^2=496.4$		sd=3	p=0.00		
			Random normal $X^2=3.0$		sd=32	p=0.22		

The properties and statistics – which were obtained through the MFRM analyses – concerning the four raters' rating the students, are shown in Table 3. Findings in relation to the four raters' severity/leniency in rating are presented in Table 3. It is clear from the table that the raters' logit values are between -0.10 and 0.22. The mean for these logit values is 0.0, and the standard deviation is 0.13. Clearly, the most lenient rater is the third rater (-0.10), while the most severe one is the first rater (0.22). On examining the separation index, we find 10.59, a quite high value. This is an indicator of differences between raters (Nakamura, 2002).

The separation index reliability was found to be 0.99. However, since the rater severity/leniency values ranged within a small logit interval such as 0.5, the interrater difference could be said to be acceptable (Lee & Kantor, 2003). Additionally, it was seen that raters made consistent ratings as a whole. Both the infit (mean=1.0, std. dev.=0.1) and the outfit values (mean=1, std. dev.=0.0) indicated that the data fit the model well in general. As can be seen in Table 3, infit and outfit mean square received values between 0.5 and 1.5. These values show that the data were efficient for measurements (Linacre, 2007). In other words, it could be concluded that although the scores given by the four raters differed, the raters measured all the students in terms of all the items consistently according to the Rasch model (Nakamura, 2000).

Table 4 shows the values and statistics concerning the 18 items in the MFRM analysis. The difficulty levels of the items are between -0.46 and 0.48 (a change of 1 logit unit is observed) as shown in Figure 1. Whereas item seven with a logit value of 0.48 was the most difficult item, item four with a logit value of -0.46 was the easiest item. The logit mean value was 0.0, and standard deviation was 0.22 for the items.

The separation index was found to be 8.36 and the reliability 0.99. That the separation index in the dimension of item variance was 8.36 showed that the predicted error (0.03) concerning item difficulty levels was an eight times larger variation, a result that is desirable for test developers (Hetherman, 2004).

Both the infit values (mean=1.0, std. dev.= 0.2) and the outfit values (mean=1.0, std. dev.=0.2) showed that the data fit the model well in general. Besides, the infit mean squares and outfit mean squares received values between 0.5 and 1.5. These findings show that the data were efficient for the measurements (Linacre, 2007).

Table 4

Measurement Report for 18 Items Conducted with Open-ended Mathematics Questions

Item No	Item Mean	Item Total r	Item difficulty		Infit		Outfit			
			LogitMeas.	S.H.	MeanSq	ZStd.	MeanSq	ZStd.		
7	2.6	2.65	0.48	0.02	1.0	0	1.0	0		
15	2.9	3.18	0.34	0.02	0.8	-5	0.6	-5		
9	3.3	3.75	0.16	0.02	1.0	0	1.0	0		
12	3.4	3.82	0.14	0.02	0.8	-4	0.9	-1		
1	3.4	3.86	0.12	0.02	1.0	0	1.2	2		
17	3.5	3.94	0.09	0.02	0.9	-2	0.9	-1		
6	3.6	4.06	0.04	0.02	0.9	-2	0.8	-1		
8	3.7	4.13	0.00	0.02	1.1	1	1.0	0		
14	3.7	4.14	0.00	0.02	0.9	-1	0.8	-1		
18	3.7	4.14	0.00	0.02	1.0	0	1.1	0		
2	3.7	4.17	-0.02	0.03	0.8	-3	0.9	-1		
5	3.8	4.22	-0.04	0.03	1.3	5	1.2	1		
16	3.7	4.21	-0.04	0.03	1.1	2	1.2	1		
3	3.9	4.33	-0.11	0.03	1.2	3	1.3	2		
11	3.9	4.33	-0.11	0.03	1.1	1	1.1	1		
13	4.2	4.54	-0.29	0.03	1.1	1	0.9	-1		
10	4.2	4.56	-0.31	0.03	1.2	3	1.0	0		
4	4.4	4.67	-0.46	0.03	1.1	0	1.4	2		
Average	3.6	4.04	0.0	0.03	1.0	0.0	1.0	-0.1		
Std.deviation	0.4	0.47	0.22	0.0	0.2	2.9	0.2	2.1		
RMSE (Model)=0.03			std.deviation=0.21		separation index=8.36		Reliability=0.99			
All same $\chi^2=1213.3$			sd=17	p=0.00						
Random normal $\chi^2=17.0$			sd=16	p=0.39						

Conclusions and Suggestions

The Cronbach alpha reliability coefficient was calculated to determine the internal consistency level of the measurement of mathematical achievement that was performed in 2007 according to CTT. On the basis of reliability coefficients obtained from the mean of scores given to each item by raters and for every rater separately, it was concluded that the items are available for measuring mathematical achievement in a consistent way. First, Kendall's concordance coefficient was employed in determining the consistency among the four raters. Apart from that, the correlation coefficients for the scores given by each rater and for the scores given by another rater were calculated, and whether or not there were any differences between mean scores was tested through one-variable variance analysis on a dependent sample. Consequently, it was found that the four raters' levels of severity/leniency were different, but the ordering of scores given by these raters was parallel and the raters gave scores consistently with one another.

Model-data fit was examined in FACET analysis according to MFRM, and the model was considered to fit the data. The separation index was calculated through FACET analysis, and the value was found to be quite high. The separation index is a statistic showing the extent to which measurements concerning the sources of variance differ in a continuum, and the separation index reliability for the dimension of student variance is interpreted in a way similar to KR-20, Cronbach alpha, and the generalizability coefficient. Accordingly, it was concluded that reliability in the sense of internal consistency was high according to MFRM. The separation index calculated through FACETS analysis according to MFRM for the four raters was found to be quite high. These values led to the conclusion that the raters differed in terms of severity/leniency in scoring. However, as fit statistics showed, raters performed consistent rating as a whole. In other words, although scores given by the four raters differentiated, according to the Rasch model each rater measured all the students consistently in terms of all the items. According to MFRM, it was concluded through the FACETS analysis that the items differed in terms of difficulty levels. That is to say, the 18 items available for measuring mathematical achievement were at different levels of difficulty.

The statistical data obtained through analyses based on CTT and MFRM for mathematical achievement scores in 2007 were compared according to student and rater variance dimensions. As comparable values in the students' dimension, the Cronbach alpha coefficient was found to be 0.92 according to CTT, and the separation index reliability concerning the source of student variance was found to be 0.95 according to MFRM. In line with these values, it was concluded that the reliability of measurement results in the sense of internal consistency was quite high. On the dimension of raters, Kendall's concordance coefficient was found to be 0.52 according to CTT. It was seen that interrater correlation coefficients were in the range of 0.90 and 0.97, and it was concluded through the F test that there was a statistically significant difference between the mean scores given by the raters. Based on these results, it was found that mean scores were different but the raters rated consistently. According to MFRM, separation index reliability for the source of rater variance was calculated as 0.99. This value showed that there were differences between scores given by the raters. However, the fact that fit statistics concerning the source of rater

variance were between 0.5 and 1.5 indicated that the raters performed consistent rating in terms of severity/leniency.

As MFRM enables calculations of different reliabilities concerning each source of variance in a single step, it makes it possible to provide further information concerning each source of variance. Thus, when evaluation of all sources of variance in a single scale is needed, when misfits in each source of variance need specifying, and when it is necessary to see the problems stemming from an item or a rater, it might be appropriate to use MFRM. Considering the advantages of the theories, especially in cases where more than one rating is done, using MFRM might be recommended in predicting reliability. It is believed that conducting similar studies in which two theories are used together in different measurement situations will contribute to reliability research.

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Klasik Test Kuramı ve Çok Değişkenlik Kaynaklı Rasch Modeli Üzerine Bir Çalışma

(Özet)

Problem Durumu: Ölçme, bir özelliğin gözlenerek gözlem sonuçlarının sayı ya da sembollerle ifade edilmesi olarak tanımlanırken, değerlendirme daha geniş kapsamlı bir süreç olup; ölçme sonuçları, ölçüt ve karar verme basamaklarını içermektedir. Ölçme sonuçlarının bir ölçütle karşılaştırılarak karara varılması olarak tanımlanan değerlendirmenin doğru yapılmış olmasında, kullanılan ölçütün uygunluğu yanısıra, ölçme sonuçlarının güvenilir ve geçerli olmasının çok büyük önemi bulunmaktadır. Değerlendirme sonuçlarının isabetli olma derecesini arttırabilmek için yapılan ölçme işlemlerinde kullanılan ölçme araçlarının güvenilirliğinin ve geçerliğinin olabildiğince yüksek olması istenir. Güvenirlik, ölçme sonuçlarının tesadüfi hatalarından arınık olma derecesi olarak tanımlanmaktadır. Güvenirlik, ölçümlerin zaman içerisindeki tutarlılıklarının derecesidir. Güvenirliğin derecesi genellikle bir katsayı ile ifade edilir. Bu katsayı "0" (güvenilir değil) ile "1"(mükemmel güvenirlik)

arasında değişen değerler alır ve ölçme sonuçlarının tesadüfi hatalardan ne derece arınık olduğunu gösterir. Öğrenci başarısını açık-uçlu sorularla ölçülmesinde, güvenilirlik en zayıf halka olarak düşünülmektedir. Puanlayıcı, açık-uçlu sorulara verilen cevapların puanlanmasında güvenilirliği düşüren önemli bir hata kaynağı olmakla birlikte, görev ya da madde gibi diğer faktörler de en az o kadar önemli diğer hata kaynaklarıdır. Bu nedenle sadece puanlayıcılar arası tutarlılığı sağlamak puanlamanın güvenilirliği için yeterli olmamakta, diğer hata kaynaklarının da güvenilirliğin hesaplanmasında göz önünde bulundurulması gerekmektedir. Ancak güvenilirliğin hesaplanması için kullanılan tüm yöntemler, tüm hata kaynaklarıyla aynı anda ele almamaktadır. Açık-uçlu sorularla yapılan ölçmelerin güvenilirliği, ölçmenin üç temel kuramı olan klasik test kuramı, madde tepki kuramı ve genellenebilirlik kuramına dayalı yöntemlerle çalışılmaktadır.

Araştırmanın Amacı: Bu araştırmayla, güvenilirliğin belirlenmesinde klasik test kuramı klasik test kuramına dayalı ölçme yöntemi ve çok değişkenlik kaynaklı Rasch modeli (ÇDKRM) yaklaşımları kullanılarak birbirleriyle ve kendi içlerinde tutarlılıkları sınanarak benzer ölçme durumları için kuramsal bir katkı sağlanabileceği düşünülmektedir. Matematik eğitimcileri, matematikle ilgili başarının ölçülmesinde subjektif ölçme araçları kullandıklarında, öğrencilerinin matematiksel bilgilerine ilişkin verdikleri puanların ne kadar güvenilir olduğunu bilmek isterler. Bununla birlikte, matematik başarısının ölçülmesinde en etkili olan değişkenlik kaynağının ne olduğunu ve ölçme hatasını en aza indirmek için ölçmenin nasıl yapılması gerektiğini bilmeye ihtiyaç duyarlar. Aynı zamanda bu noktalara temas edilerek matematik eğitimcilerini bu konularda aydınlatmak, çalışmanın bir diğer amacıdır.

Araştırmanın Bulguları: Çalışmada kullanılan 18 matematik sorusunun Cronbach α güvenilirlik katsayıları birinci ve ikinci puanlayıcılar için 0.91 ve üçüncü ve dördüncü puanlayıcılar için 0.92 olarak bulunmuştur. Elde edilen bu katsayılara göre, maddelerin matematik başarısını birbirleriyle tutarlı bir şekilde ölçtükleri yorumu yapılabilir. Yapılan uygulamada, dört farklı puanlayıcının aynı koşullar altında her bir öğrenciyi puanlamasına ilişkin elde edilen puanlar arasındaki tutarlılık derecesi, Kendall'in uyum katsayısı ile analiz edilmiş ve sonuç olarak 18 madde için 0.52 olarak bulunmuştur ($X^2=315.16$, $sd=3$, $p=0.00$). Ayrıca, her bir puanlayıcının verdiği puanlar ile diğer bir puanlayıcının verdiği puanlar arasındaki korelasyon katsayıları hesaplanmıştır. Puanlayıcıların 18 madde üzerinden verdikleri puanlar arasındaki korelasyonlar 0.90 ile 0.97 arasında değişen oldukça yüksek değerlere sahiptir. Elde edilen bu değerler puanlayıcılar arası uyumun olduğu yorumunu destekler niteliktedir. Çalışmada yer alan dört puanlayıcının puanları ortalamaları arasındaki farklılık, ilişkili örneklem üzerinde tek değişkenli varyans analizi ile test edilmiş ve istatistiksel olarak anlamlı bir fark olduğu sonucuna varılmıştır ($F=13.801$, $p=0.00$). Bu sonuç üzerine yapılan post-hoc çalışmasıyla puanlayıcıların

puanları ortalamalarının ikili karşılaştırılması sonucunda birinci puanlayıcı hariç diğer tüm puanlayıcıların verdikleri puanların ortalamaları arasında manidar bir farklılık görülmemiştir. ÇDKRM için FACET analizi sonuçlarında, verilerin modelle olan uyumu için standartlaştırılmış artık değerlerin (residuals) yaklaşık en fazla %5'i ± 2 'nin dışında ve yaklaşık en fazla %1'inin de ± 3 'ün dışında olması gerekmektedir (Linacre, 2007). Matematik puanlarından elde edilen toplam 14.616 verinin standart artık değerlerinin 244'ü (%1.6) ± 2 'nin dışında ve 88'i (%0.6) de ± 3 'ün dışında yer almıştır. Buna göre, FACET analizi için model veri uyumunu sağladığı yorumu yapılabilir.

Ölçme sonucu, toplam 203 öğrencinin logit değerleri -4.50 ile 2.50 arasında değişmektedir. Bu logit değerlerin ortalaması 0.51 ve standart sapması 0.11'dir. Ayırma indeksi (G) 4.39 ve güvenilirliği 0.95 olarak yeterince yüksek bulunmuştur. Hem iç uyum (infit) istatistikleri hem de dış uyum (outfit) istatistikleri verilerin modele çok iyi uyum gösterdiğine işaret etmektedir. Öğrencileri puanlayan dört puanlayıcının puanlamasındaki katılık/cömertliklerine ilişkin logit değerlerin -0.10 ile 0.22 arasında değiştiği görülmektedir. Ayırma indeksine bakıldığında 10.59 gibi oldukça yüksek bir değerle karşılaşılmaktadır. Bu değer puanlayıcılar arası farklılık olduğunun bir göstergesidir. Ayırma indeksi güvenilirliği de 0.99 olarak elde edilmiştir. Hem iç uyum hem de dış uyum değerleri, verinin genel anlamda modele çok iyi uyum gösterdiğine işaret etmektedir. Diğer bir deyişle, dört puanlayıcının birbirlerine göre puanlamaları farklılık göstermesine karşın, Rasch modeline göre puanlayıcılar kendi içinde öğrencilerin tümünü, tüm maddeler açısından birbirleriyle tutarlı olarak ölçmüştür yorumu yapılabilir. Maddelerin güçlük düzeyleri -0.46 ile 0.48 arasında değişmektedir. Maddelere ilişkin ayırma indeksi 8.36 ve güvenilirlik 0.99 olarak elde edilmiştir. Hem iç uyum hem de dış uyum değerleri, verinin genel anlamda modele çok iyi uyum gösterdiğine işaret etmektedir. Bu değerler, verilerin ölçüm için uygun olduğunu işaret etmektedir.

Sonuç ve Öneriler: 2007 yılında uygulanan matematik başarısının ölçülmesinde yer alan maddelerin matematik başarısını oldukça tutarlı bir şekilde ölçtüğü sonucuna varılmıştır. Çalışmada yer alan dört puanlayıcının puanlamadaki katılık/cömertlik düzeylerinin birbirinden farklı olduğu görülmekle birlikte puanlayıcıların puanları sıralaması paralellik göstermekte olup, birbirleriyle tutarlı olacak şekilde puanlama yaptıkları sonucuna varılmıştır.

ÇDKRM'ne göre, FACET analizi ile modelin veri için uygun olduğu sonucuna varılmıştır. FACET analizi ile ayırma indeksi hesaplanmış ve bu değerler oldukça yüksek olduğu belirlenmiştir. Öğrenci değişkenlik boyutu için ayırma indeksi güvenilirliği; KR-20, Cronbach alfa ve genellenebilirlik katsayısına benzer yorumlanmaktadır. Buna göre, matematik puanlarının ÇDKRM'ne göre iç tutarlılık anlamında güvenilirliğinin yüksek olduğu sonucuna varılmıştır. Dört puanlayıcının, FACETS analizi ile hesaplanan

ayırma indeksinin oldukça yüksek bir değerde olduğu belirlenmiştir. Bu değere göre puanlayıcıların cömertlik/katılık açısından birbirlerinden farklı oldukları sonucuna varılmıştır. Bununla birlikte, uyum istatistiklerinin işaret ettiği şekliyle; bir bütün olarak puanlayıcıların tutarlı puanlama yapmış oldukları belirlenmiştir. FACETS analiziyle maddelerin güçlük dereceleri açısından birbirlerinden farklı oldukları sonucuna varılmıştır.

ÇDKRM, tek bir çalışma ile her bir değişkenlik kaynağına ilişkin farklı güvenilirliklerin hesaplanmasına imkan verdiği için her bir değişkenlik kaynağı için ayrıntılı bilgi sağlamaya olanak tanır. Tüm değişkenlik kaynaklarının tek bir ölçekte birlikte değerlendirilmesi, her bir değişkenlik kaynağı içindeki uyumsuzlukların belirlenmesi ve böylece hangi madde ya da puanlayıcıdan kaynaklı bir sorun olduğunun açıkça görülmesinin istendiği durumlarda ÇDKRM'nin kullanılması uygun olabilir. Özellikle birden fazla puanlamanın yapıldığı durumlarda güvenirliliğin kestirilmesinde, klasik test kuramının yanı sıra ÇDKRM'inin kullanılması önerilebilir. Farklı ölçme durumlarında iki kuramın birlikte kullanıldığı benzer çalışmaların yapılmasının güvenilirlik çalışmalarına katkı sağlayacağı düşünülmektedir.

Students' Perceptions Regarding the Fairness of Learning Environment in Faculty of Education

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Abstract

Problem Statement: The desire to be treated fairly is a common human preference. Hence justice can be regarded as an important concern in everyday life including educational settings. There are many studies aiming at determining students' perceptions of distributive, procedural, and interactional justice pertaining to educational settings. The findings of these studies indicate that students' perceptions of justice are of great importance with regard to many variables contributing to the efficacy and productivity of the education-instruction activities, such as improving a productive teacher-student communication, and enhancing student attention, motivation and achievement.

Purpose of the Study: The aim of this research is to determine how the students in the Faculty of Education perceive their learning environment in terms of fairness.

Method: The population of this descriptive study comprised a total number of 3.817 students (F= 1.822, M= 1955) attending Faculty of Education at İnönü University during the 2007-2008 fall semester. A sample of the study included a total number of 405 (F= 195, M= 210) students selected from all departments and classes by a proportional stratified sampling method. Data was gathered by a survey instrument entitled: Fair Learning Environment Questionnaire. Independent Samples t-test, One Way

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ANOVA, and LSD tests were performed for the analysis of the data obtained in the survey.

Findings and Results: As a result of the research it was found that compared to male students, female students are more likely to perceive their learning environment fair. It was also revealed that students' perceptions differ significantly in terms of department variable, and students' perceptions of fairness decrease, as grade level increases.

Conclusions and Recommendations: An analysis of the overall findings leads us to conclude that the "partially" and "moderately" fair perception of education institutions' training future teachers indicates a serious drawback. It is important to note that educational faculties are not only responsible for equipping the future teachers with some sets of knowledge, but above all they are, and supposed to be, the institutions to furnish them with professional teaching attitudes and behaviours.

Keywords: learning environment, pre-service teachers, fairness, faculty setting.

As the desire to be treated fairly is a common human preference (Houston & Bettencourt, 1999), justice can be regarded as an important concern in everyday life. Besides, the demand for justice, in terms of equal opportunities for everyone, lays an important foundation for democracy (Tai, 1998). Defined as the "primary virtue of the social institutions" (Rawls, 1971, p.3), justice also affects the way individuals behave in a society or group. Therefore, the concept of justice has frequent reference in legal, political, and religious texts aiming at regulating social life, and receives multi-disciplinary attention.

The scope of the term justice can change and transform depending on social developments and changes. Today, when globalization and/or modernization break existing social structures into pieces (Meindl, Hunt & Cheng, 1994) and cause rapid economic, technological, cultural, political, etc. changes and transformations, the concept of justice can be said to include the concept of social justice as well. Social justice, a process based on respect, care, recognition, and empathy (Theoharis, 2007), is defined as "the exercise of altering institutional and organisational arrangements by actively engaging in reclaiming, appropriating, sustaining, and advancing inherent human rights of equity, equality, and fairness in social, economic, educational, and personal dimensions" (Goldfarb & Grinberg, 2002, p.162). In this respect, the provision of the humanitarian rights already provided in social life in the organisational settings as well necessitates organisational justice. For what social justice means for a society coincides with what organisational justice means for an organisation (Beugre, 2002).

Organisational justice is nothing new in administrative literature (Forray, 2006), yet has long been neglected in the field of educational administration (Hoy & Tarter, 2004). Organisational justice can be defined, in the broadest sense, as the explanation and determination of the role of justice (Greenberg, 1990) in terms of outputs, processes and interaction in an organisation (Rogelberg, 2007). The theory of

organisational justice is interested in the extent to which employees perceive justice in work-related issues (Greenberg, 1990).

Perceived justice has significant effects on the behaviours and attitudes of employees (Rogelberg, 2007). Previous studies show that perception of justice affects many behaviours including organisational attachment, performance, organisational behaviour, stress, sabotage, thievery etc. With regard to the findings suggesting that the perception of organisational justice is related to many employee behaviours, different approaches have been put forward (Irak, 2004). Based on these approaches, different dimensions of organisational justice have been determined so far. The relevant literature refers to organisational justice under three distinct dimensions (Paterson, Green & Cary, 2002): 1) *distributive justice*, 2) *procedural justice*, and 3) *interactional justice*.

Distributive Justice

It deals with, in a general sense, the distribution of things (*who receives what*) in an organisation (Hoy & Tarter, 2004). Distributive justice can be said to date back to the Adams' theory of equity. According to this theory (1965, as cited in Robbins, 1994), employees perceive what they obtain [outputs] from a work in relation to what they have contributed to that work [inputs]. This is followed by a comparison between their input/output rate and others' input/output rate (Robbins, 1994). They make a judgement as a result of this comparison. If the individuals think they do receive what they deserve in response to what they have contributed, they will perceive their situation as just. The grades teachers give to students for assessment in the educational context can be an example of distributive justice. To illustrate, while judging the fairness of a grade s/he had in a lesson, a student may compare his/her grade with the grade s/he had expected to have, the grade s/he thinks s/he deserves, or the grades his/her peers were given (Chory-Assad & Paulsel, 2004b). A student perceiving his/her grade as unjust in distributive terms may suffer some depression, state explicitly or implicitly that s/he has been offended, or take an action, which s/he thinks will restore justice (Lizzio, Wilson & Hadaway, 2007).

Procedural Justice

In other words, justice of a distributive mechanism in an organisation (Byrne & Cropanzano, 2001; Hoy & Tarter, 2004) is related with the decision making process (Konovsky, 2000). Procedural justice is generally associated with the structural characteristics of the decision making process such as the participation of the employees in the decision making, the appropriateness of the evaluation criteria, the reliability of the information used in the decision making process (Cropanzano, Prehar & Chen, 2002). The employees expect the organisation to use equal decision making procedures. In this way all employees can have the right to benefit from the procedures equally (Irak, 2004). While deciding what products or rewards to give to the employees, the employers in an organisation use some standards to evaluate the employees' performance. For instance, an employer can scrutinize an employee's personal records, previous performance assessments and productivity reports as criteria before deciding an annual increase in his salary (Chory-Assad & Paulsel, 2004b). In instructional terms, on the other hand, procedural justice comprises the issues such as policies regarding students' behaviours; the way teachers manage their classes and give grades (i.e., whether subjective or objective criteria are used)

(Chory-Assad, 2007). As an example, teachers can use such criteria as the students' attendance, class behaviours, written assignments, and exam scores while granting an end-of-term grade. Procedural justice is related with the way a decision is made about the criteria to be used in evaluating the students' achievement.

Interactional Justice

It has been reported in some of the studies about organisational justice that individuals in an organisation are sensitive not only to the justice of the procedures and their outcomes, but also to the treatments they are exposed to while the procedures are actually taking place. This third aspect of organisational justice has been defined as the communication criterion of the justice and is called interactional justice (Irak, 2004). Interactional justice can be practiced generally through interpersonal communication (Cropanzano, Prehar and Phen, 2002). Interactional justice indicates that individuals are made to behave respectfully by the people around them, especially authorities and decision makers (Lizzio et al., 2007). In terms of educational contexts, respectful and fair treatment by the instructors and administrators towards students will create a sense of being a respected member of the group (Lizzio et al., 2007). For instance some researchers state that (Chory-Assad & Paulsel, 2004a) students might perceive interactional justice based on how well instructors treat them and understand their feelings, concerns, and needs.

There are many studies aiming at determining students' perceptions of distributive, procedural, and interactional justice pertaining to the educational setting (Chory-Assad, 2002; 2007; Chory-Assad & Paulsel, 2004a; 2004b; Paulsel, 2005; Paulsel & Chory-Assad, 2004a; 2004b; 2004c; Paulsel, Chory-Assad & Dunleavy, 2005; Tata, 1999). The data obtained in these studies show students' perceptions of justice have both negative and positive effects on their behaviour and the teaching-learning environment. For instance, a decrease in students' perception of justice [*procedural, distributive and/or interactional*] gives rise to a variety of undesired behaviours such as aggressiveness towards the teacher, subjective assessment of the teacher, bearing grudges, constant objection, desires for revenge and deception/lying etc. Moreover, other studies (Chory-Assad, 2002; Lizzio et al., 2007) reported a positive association between the students' perceptions of justice and their attachment to their department and motivation.

These findings indicate that students' perceptions of fairness are of great importance with regard to many variables contributing to the efficacy and productivity of educational and instructional activities, such as improving productive teacher-student communication, and enhancing student attention, motivation and achievement. Therefore the main goal of this study is to determine the perceptions of the university students at the faculty of education about the justice of their educational environment. This study also aims to determine whether students' perceptions differ according to certain variables including gender, department, and class.

Method

Participants

This research is based on its survey design. The population of the study comprised a total number of 3.817 students (F= 1.822, M= 1.955) attending the Faculty of Education at İnönü University during 2007-2008 fall semester. The sample of the study included 430 students selected from all departments and classes using a stratified sampling method (Cohen, Manion & Morrison, 2005). All of the students in the sample were given the questionnaire. The questionnaires were handed out to and collected from the studnets just before their regular lessons with the permission and help of the instructors, which took about ten minutes. After incomplete and erroneous forms were discarded only 405 forms completed by 195 females and 210 males were considered for analysis.

Research Instrument

In this study, the *Fair Learning Environment Questionnaire* (FLEQ) originally developed by Lizzio et al. (2007) was used in order to measure the college students' perceptions of fairness [*distributive, procedural, and interactional*] in their learning environment. The FLEQ comprised a total number of 16 items in two subscales: 1) *respectful partnership* and 2) *systemic fairness*. The first sub-scale comprised ten items that focused on the quality of interpersonal treatment students were exposed to. This factor also reflects students' concerns about the transparency, objectivity, and comparative equity of the learning and assessment process. Overall on this sub-scale, "students appear to be describing an environment that evidences both consistent and fair procedure and a mode of staff-student relating that participatively engages them in the life and governance of school" (Lizzio et al., 2007, p. 203). Some sample items include: "Staff members ask students for their ideas on how things could be improved", "Rules and procedures are applied consistently and fairly to all students". The systemic justice sub-scale, on the other hand, comprised six items characterizing an effective and fair academic system as providing quick access to information and consultation, the existence of effective and clearly explained problem solving procedures, and the encouragement of complaints and negative feedback procedures. Overall in this sub-scale, students appear to be characterizing an effective and fair academic system as providing readily accessible information and advice, effective problem solving procedures and a process of complaints and negative feedback. Some sample items include: "There are effective procedures in place to help students solve their problems", "There is an effective system in place for making complaints about unfair treatment". The Turkish adaptation of the scale was conducted by the researchers.

Scale Adaptation

When adapting the original scale, firstly the items were translated into Turkish using a two-way translation method (first English to Turkish, then Turkish to English). Next this initial scale form was forwarded to experts of English and Turkish languages for evaluation. Following the modifications in line with the experts' reviews, the form was given to five of the students randomly selected from the sample of the study to test the clarity of the scale. The initial form was developed

into its final version in line with the experts' and students' views. This final version of the scale was administered on one hundred students from twelve different departments in the faculty of education to test the validity and reliability. After incomplete and faulty forms were discarded, a total of eighty-four forms were used in the analysis. After the data were coded in the SPSS software, they were tested for their appropriateness for the factor analysis using Kaiser-Meyer-Olkin (KMO) and Bartlett tests. The KMO value was found to be ".83" and Bartlett Test of Sphericity value was found to be 465.336 ($p=.000$), which indicated that the data could undergo factor analysis.

The construct validity of the instrument was tested using principal components analysis method, which revealed a two-factor structure with high factor loadings as in the original scale. It was detected, however, that the ninth item had a low factor loading. So, the ninth item was discarded from the scale. Following the elimination of this item, the factor analysis was repeated, which revealed that the scale explains 44.71% of the total variance (35.82% for respectful partnership and 8.89% for systemic justice). Internal consistency coefficients were found ".81" for respectful partnership, ".76" for systemic justice and ".87" for total. These results show that the validity and reliability values of the adopted scale are quite similar to those of the original scale. The item-total correlation coefficients of the scale vary between ".39" and ".75". The factor loadings, item-total correlations, and mean values of the items are given in the Appendix.

Data Analysis

In this study, quantitative research methods were used in order to fully investigate the research problems. Student responses to the questionnaire were statistically analysed according to independent variables. A t-test was used for the analysis of the difference between students' responses to the items by gender, while ANOVA analysis was used to test any difference by the registered department and class, and an LSD test was used to find the sources of differences between groups (Büyüköztürk, 2002, p. 153).

Results

The findings of the study are presented and interpreted respectively for each of the independent variables.

Findings and Interpretations regarding Gender Variable

To find whether there is a significant difference between male and female students' perceptions of the faculty environment in terms of fairness, a t-test was applied. The findings obtained from the t test are shown in Table 1.

Table 1*Analysis Results Regarding Gender Variable*

Scale	Gender	N	Mean	SD	t	p
<i>Respectful Partnership</i>	Female	195	23,43	7,38	,935	,350
	Male	210	22,78	6,70		
<i>Systemic Fairness</i>	Female	195	18,20	5,30	2,585	,010*
	Male	210	16,88	4,99		
<i>Total</i>	Female	195	41,64	11,76	1,770	,076
	Male	210	39,66	10,64		

* $p < ,05$

As seen in Table 1, female and male students' perceptions of faculty environment in terms of justice only differ significantly in the systemic fairness sub-scale. Given the mean scores of the participating students, female students are observed to perceive the systemic fairness in the faculty fairer than male students. Female students fairness perceptions can be associated with the fact that the majority of females are generally well adjusted (Huff, Abuzz & Omar, 2007). For instance, results from some previous researches (i.e., Brockner & Adsit, 1986; Greenberg & McCarty, 1990) investigating the effect of gender on justice perceptions and satisfaction in a different context about payment, revealed that both gender groups tend to be dissatisfied with unfair payment, but women tend to be less dissatisfied or more accepting of unfair pay than men. Moreover, low expectations of the female students may have affected this result. It is stated that gender equality has been ensured in Turkey in legal terms, but that the general public opinion regarding the gender roles limit female participation in the public sphere and impede their exercise of civil rights (Arat, 1996). In this respect, the low fairness expectations of the females can stem from the fact that women have rather a secondary status in social life; especially the women in rural and suburban settings, which have already accepted this to a great extent. As for the findings of this study, the fairer perceptions of the female students in Faculty of Education at İnönü University can be regarded as one result of different treatment in the faculty environment. College staff and administrators should treat all students fairly. However, some faculty may intentionally or, more often, inadvertently treat male and female students differently (Hall & Sandler, 1982).

Findings and Interpretations regarding Department Variable

The difference between students' fairness perceptions regarding the faculty environment in terms of the department variable was tested using a one-way ANOVA test. The results of the variance analysis are given in Table 2. The departments students are attending are grouped as *Social Sciences*, *Fine Arts & Physical Training*, *Mathematics & Science*, and *Class Teaching*. Class teaching was classified distinctly because of the structure and characteristics of the department. Beside training teachers for the first five years of primary school, the class teaching

department accepts students with both quantitative and qualitative skills who will teach almost all subjects during this five year period. These features of the department required it to be classified distinctly.

Table 2
Analysis Results Regarding Department Variable

Scale	Department	N	Mean	SD	F	P	LSD
<i>Respectful Partnership</i>	CT	76	20.85	5.87	5.715	.001*	CT-SS
	SS	140	24.68	7.34			CT- FA&PE
	FA&PE	57	23.79	7.23			SS- S&M
	S&M	132	22.41	6.89			
	Total	405	23.09	7.04			
<i>Systemic Fairness</i>	CT	76	16.79	5.18	2.485	.060	
	SS	140	18.43	5.44			
	FA&PE	57	17.56	5.19			
	S&M	132	16.95	4.81			
	Total	405	17.51	5.19			
<i>Total</i>	CT	76	37.64	9.85	4.833	.003*	CT-SS
	SS	140	43.10	11.88			SS- S&M
	FA&PE	57	41.35	11.34			S&M -FA&PE
	S&M	132	39.36	10.71			
	Total	405	40.61	11.22			

* $p < .05$

Note: CT = Class teaching, SS = Social Science Departments, FA&PE = Fine Arts and Physical Education Departments, S&M = Science and Math Departments

As seen in Table 2, students' views regarding the systemic justice sub-scale do not differ significantly in terms of the department variable, while there was a significant difference in terms of respectful partnership. The LSD analysis to determine the source of the significant difference between students' views revealed differences between 1) the views of students at the Class Teaching Department and the Social

Studies and Fine Arts & Physical Training Departments, and 2) the views of students at the Social Studies Department and the Science & Mathematics Department. Considering the mean scores of the groups, it was found that students at the Class Teaching Department perceived their faculty setting less positively in terms of respectful partnership compared to the students at the Social Studies and Fine Arts & Physical Training Departments. On the contrary, students at Social Sciences Departments judge their faculty settings more positively in terms of respectful partnership compared to students in Science and Mathematics Departments. The students' scores regarding fairness of their learning environment ranged between "medium" to "low" for all departments. If we sort the departments in terms of the mean scores, we can see that Social Sciences Department ($\bar{X}=43.10$) ranks first, followed by the Fine Arts & Physical Sciences Department ($\bar{X}=41.35$), the Science and Mathematics Department ($\bar{X}=39.36$), and finally the Classroom Teacher Department ($\bar{X}=37.64$). It is, on one hand, possible to imply a connection between this result and the personal and pedagogic characteristics of the instructors in the departments. On the other hand, this result can be associated with profiles of students attending these departments.

An analysis of the group mean scores regarding this variable reveal that the students with the lowest fairness perceptions towards faculty are those studying at the Class Teaching Department. This finding seems reasonable given the students' comments during personal interviews suggesting that a great number of them chose this department reluctantly owing to parental pressure, low scores from the University Exam, etc. On the other hand, the higher scores from these students in terms of fairness expectations from the learning environment can be accounted for due to such reluctance.

The highest mean scores regarding the fairness perception of the faculty were found to belong to the students studying in Social Studies Departments. The highest scores in the sub-scales were also found with these participants. One important reason for this can be a general point of view that social studies inherently teach to students, which includes "possibility" and more "tolerance". Another important reason can be the fact that students come to these departments more willingly and thus they adopt the faculty more. Still another reason may be the low expectations of the students in these departments.

Findings and Interpretations regarding the grade variable

The one-way ANOVA test was used to show any significant differences between students' perceptions of fairness of the faculty environment, after variances were found homogeneous in terms of grade variable. The results of the test are shown in Table 3.

Table 3
Analysis Results Regarding Class Variable

Scale	Grade	N	Mean	SD	F	p	LSD
<i>Respectful Partnership</i>	1 th	79	25,53	7,22	7,227	,000*	1-2
	2 nd	77	22,53	6,89			1-4
	3 rd	116	23,93	6,96			3-4
	4 th	133	21,24	6,59			
	Total	405	23,09	7,04			
<i>Systemic Fairness</i>	1 th	79	18,78	4,89	4,970	,002*	1-4
	2 nd	77	17,51	5,54			3-4
	3 rd	116	18,12	5,48			
	4 th	133	16,23	4,62			
	Total	405	17,51	5,18			
<i>Total</i>	1 th	79	44,31	10,89	7,350	,000*	1-2
	2 nd	77	40,05	11,52			1-4
	3 rd	116	42,06	11,39			3-4
	4 th	133	37,48	10,29			
	Total	405	40,61	11,22			

* $p < .05$

As seen in Table 3, as the grade differs, students' perceptions of faculty environment in terms of fairness also differ significantly for all dimensions. The analysis of the mean scores of the students from respective partnership subscale revealed that first graders perceive the faculty environment fairer compared to second and fourth graders, and similarly third graders perceive the faculty environment fairer compared to fourth graders. An analysis of the students' views about systemic fairness revealed that first and third graders perceive the faculty environment fairer compared to fourth graders. This result can stem from the fact that lower graders have not known fully the faculty environment and all of the teaching staff and thus their comments were possibly based on a more positive point of view. The higher graders, however, might have based their evaluation on their better knowledge of the faculty and teaching staff, which seems more realistic.

Another reason for the higher graders to have negative fairness perceptions about the faculty environment can be the fact that given the recent trends regarding possibilities and opportunities for employment in Turkey, students might have moderately lost confidence in their faculty and teachers because of future concerns.

A comparison of the group scores regarding respectful partnership showed that the faculty environment is perceived the least fair by fourth graders ($\bar{X} = 21.24$, partly) and the most fair by first graders ($\bar{X} = 25.53$, moderate). The same is also true for the systemic fairness subscale. An analysis of the overall scale indicated that as the grade level increases the students regard their learning environment as less fair. The mean scores of the groups show that students from all grade levels perceive their faculty environment to be “moderately” fair.

Conclusions and Recommendations

The importance of students’ sense of fairness is well documented in the related literature. Moreover, a large body of research results suggest that fairness is deemed necessary in order to develop productive teacher-student interpersonal relationships (Chory, 2007). In this regard, this study intended to give an insight into the nature of fair practices (*distributive, procedural, and interactional fairness*) in a college from students’ point of view.

Participating students got mean scores of 2,56 and 2,91 from respectful partnership and systemic fairness sub-scales, respectively. These scores lead us to conclude that the participants have some concerns about the consistency and fairness of the procedures in the faculty environment, as well as about transparency, objectivity and the equity of the learning and assessment process. An analysis of the scores of the individual items reveals that except for two items with maximum and minimum scores [*Course information is made available to students in a user friendly form*] ($\bar{X} = 4.03$) and *Staff members ask students for their ideas on how things could be improved* ($\bar{X} = 1.88$), participants generally agree with the statements at moderate levels ranging from $\bar{X} = 2.19$ to $\bar{X} = 3.19$.

Participants’ perceptions about fair practices, such as assessment [*Methods of assessment give students a fair opportunity to demonstrate their mastery of a subject*] ($\bar{X} = 2.49$) seemed to be moderate, reflecting some moderate *distributive justice*. On the other hand, it was remarkable that items with relatively lower scores were about *interactional justice*, e.g., *Staff members ask students for their ideas on how things could be improved.* ($\bar{X} = 1.88$) and *Students’ views and needs are considered when decisions are made.* ($\bar{X} = 2.19$). Results also show that students seem to be moderately enjoying *procedural fairness*, such as equal practice of procedures for all students [e.g., *Rules and procedures are applied consistently and fairly to all students.*] ($\bar{X} = 2.71$).

Overall, these results suggest that though students are relatively moderately pleased with fair practices, lower scores from items about interaction with administration or staff imply that they do not seem to be taking roles and participating in the life and governance of school adequately. This result may be associated with students’ communication apprehension. This apprehension prevents students from taking an active part in class discussions, or from asking for teachers’ help when needed (Eren Gümüüş & Kolburan Geçer, 2008). The same communication apprehension may adversely effect active participation in the faculty governance, which requires communication. Moreover, today a democratic and transparent

management mechanism where students take an increased part in the decision-making process is preferred to a traditional understanding of management in higher education (De-Boer & Goedegebuure, 2001; Jones, Shanahan & Goyan, 2001). Therefore, universities as decentralized institutions are required to become models for society in realizing democracy, which is an administrative tool established through experience (Dönmez & Özer, 2007).

Results also revealed that students' perceptions of fairness differ in terms of gender, department, and class variables. Given the gender variable, results showed that compared to the males, female students perceive the *systemic fairness* in the college environment as more fair. In line with these results, some previous research findings (Nichols & Good, 1998) showed females regard their school fairer in terms of personal experiences, socioeconomic status, and ethnic differences. For the department variable, it was found that students at the Class Teaching Department perceive their faculty settings less positively in terms of fairness. Students at the Social Sciences Departments, on the contrary, judge their faculty settings more positively. Considering grade level, it was found that as the grade level increases students' perceptions of fairness regarding their learning environment tend to decrease.

An analysis of the overall findings of the current study leads us to conclude that the "partially" and/or "moderately" fair perceptions of pre-service teachers indicate a serious drawback. It is important to note that educational faculties are not only responsible for equipping the future teachers with some sets of knowledge, but above all they are, and are supposed to be, the institutions to furnish them with professional teaching attitudes and behaviours. Otherwise, it should be discussed to what extent a candidate teacher who perceives his faculty environment as unfair will be fair in the future when performing the teaching profession.

Based on the findings of this study, it is suggested that future studies be conducted with different groups of students from different educational institutions (primary, secondary, high schools) in order to fully examine the students' views on fairness. As some meaningful differences were found in the present study in terms of student gender, grade and department variables, future researchers might try to determine the causes and sources of differences in college students' views, especially using a qualitative research design. Moreover, further studies may address the factors that affect students' perceptions about fairness, and how they do so. Also, further research may investigate the distinct outcomes of students' procedural, interactional and distributive fairness perceptions.

Overall, considering the research results we conclude with several practical suggestions that may assist college administrators and teaching staff to promote a fair and collaborative learning environment. Students' moderate perceptions of systemic fairness may be associated with their limited knowledge regarding the operation of the college. Therefore, college administrators should take action to promote active student participation in the decision-making process, if needed. For instance, when making decisions about students (i.e., *students' academic duties and*

rights, assessment procedures), faculty or department level student representatives should be invited to the faculty meetings. Students' lower scores from the items regarding interactional justice show that student-instructor communication should be improved. In this regard, some social activities (i.e., student-instructor meetings, school trips) should be arranged with students' and instructors' participation.

Consequently, the perceptions of candidate teachers regarding fairness should be viewed as an important part of the teacher training process, since teaching is a profession that is based on a clear and sound sense of fairness towards students.

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Eğitim Fakültesi Öğrencilerinin Fakülte'deki Öğrenme Ortamına İlişkin Adalet Algıları

(Özet)

Problem Durumu: Sosyal kurumların ilk erdemi (Rawls, 1971, s.3) olarak nitelendirilen adalet; bireylerin, toplum ya da grup içerisinde sergiledikleri davranışları etkilemekte ve bu davranışlardan etkilenmektedir. Bu nedenledir ki, toplumsal yaşamı düzenlemeyi amaçlayan hukuki, siyasal ve dini pek çok metinde adalet kavramına sıklıkla vurgu yapılmaktadır. Toplumsal yaşamda sağlanan insani hakların, örgütsel yaşamda da sağlanabilmesi örgütsel açıdan adaleti zorunlu kılmaktadır. Çünkü bir toplum için sosyal adalet neyi ifade ediyorsa, bir örgüt içinde örgütsel adalet aynı şeyi ifade etmektedir (Beugre, 2002).

Örgütsel adalet, yönetim alanyazınında çok yeni bir konu değildir. Ancak eğitim yönetiminde ihmal edilmiş bir kavramdır (Hoy ve Tarter, 2004). Örgütsel adalet en genel hatlarıyla; bir örgütte sonuç, süreç ve etkileşim açısından (Rogelberg, 2007) adaletin rolünün açıklanması ve tanımlanması ile ilgili bir kavram (Greenberg, 1990) olarak nitelendirilebilir. Örgütsel adalet algılarının çalışanların pek çok davranışlarıyla ilgili olduğunun belirlenmesiyle birlikte farklı yaklaşımlar öne sürülmüştür (Irak, 2004). Bu yaklaşımlar ışığında örgütsel adaletin farklı boyutlarının olduğu belirlenmiştir. Literatürde örgütsel adalet üç farklı boyutta incelenmiştir (Paterson, Green ve Cary, 2002): (1) dağıtımsal adalet, (2) işlemsel adalet ve (3) etkileşimsel adalet.

Öğrencilerin eğitim ortamlarına ilişkin dağıtım, işlem ve etkileşim adaleti algılarını belirlemeye yönelik pek çok çalışma yapılmıştır (Chory-Assad, 2002; 2007; Chory-Assad ve Paulsel, 2004a; 2004b; Paulsel, 2005; Paulsel ve Chory-Assad, 2004a; 2004b; 2004c; Paulsel, Chory-Assad ve Dunleavy, 2005; Tata, 1999;). Bu çalışmalardan elde edilen sonuçlar, adalet algısının öğrenci davranışları ve eğitim-öğretim ortamı üzerinde hem olumlu hem de olumsuz bazı etkilerinin olduğunu göstermektedir. Örneğin öğrencilerde adalet [işlemsel, dağıtımsal ya da etkileşimsel] algısının azalması sonucunda; öğretmene karşı saldırgan olma, öğretmeni değerlendirirken yanlı davranma, kin besleme, muhalefet etme, intikam alma ve öğretmeni aldatma/kandırma vb. gibi farklı bazı istenmeyen davranışların gözlemlendiğini göstermektedir. Bunun yanı sıra bazı çalışmalardan (Chory-Assad, 2002; Lizzio, Wilson ve Hadaway, 2007) elde edilen sonuçlar ise öğrencilerin adalet algıları ile bölümlerine olan bağlılıkları, motivasyonları arasında olumlu bir ilişki olduğunu göstermektedir.

Literatürde yer alan bu çalışmalar, öğrenci-öğretmen arasında verimli bir iletişimin geliştirilmesi, öğrenci ilgisinin, motivasyonunun ve başarısının artırılması gibi eğitim-öğretim faaliyetlerinin etkililiğinde ve verimliliğinde rol oynayan pek çok değişken açısından öğrencilerin adalet algılarının ne denli önemli olduğunu göstermektedir. Ancak örgütsel adalet konusunda ulusal düzeyde yapılan çalışmalarda öğrencilerden çok öğretmen ya da yöneticilerin görüşleri araştırma konusu olmuştur.

Araştırmanın Amacı: Bu araştırma ile Eğitim Fakültesi öğrencilerinin, fakültelerindeki eğitim ortamına ilişkin adalet algılarının ne olduğunun belirlenmesi amaçlanmıştır. Bu amaca ulaşmak üzere Eğitim Fakültesi öğrencilerine “Adil Öğrenme Ortamı Ölçeği” uygulanmıştır. Öğrencilerin algılarının cinsiyet, okunmakta olan bölüm ve sınıf değişkenlerine göre farklılık gösterip göstermediğinin belirlenmesi araştırmanın alt amaçları olarak alınmış ve öğrenci görüşleri bu bağımsız değişkenlere göre değerlendirilmeye çalışılmıştır.

Araştırmanın Yöntemi: Araştırma, tarama türü bir çalışmadır. Araştırmanın evrenini, 2006-2007 eğitim-öğretim yılında, İnönü Üniversitesi Eğitim Fakültesinde öğrenim görmekte olan öğrenciler oluşturmaktadır. Araştırmanın evreninde 1.822 kız, 1955 erkek olmak üzere toplam 3.817 öğrenci yer almaktadır. Araştırmanın örneklemini ise, evrenden oranlı tabakalı örnekleme yolu ile bütün bölümlerden ve sınıflardan seçilen 420 öğrenciden oluşmaktadır. Örnekleme yer alan öğrencilerin tamamına ölçek formu dağıtılmış, bu formlardan eksik ve hatalı doldurulanlar elendikten sonra 195’i kız, 210’u erkek öğrencinin doldurduğu toplam 405 ölçek formu değerlendirmeye alınmıştır. Araştırmada veri toplamak amacıyla Lizzio, Wilson ve Hadaway (2007) tarafından, üniversite öğrencilerinin eğitim ortamlarını ne düzeyde adil algıladıklarını belirlemek amacıyla geliştirilen, “Adil Öğrenme Ortamı Ölçeği (Fair Learning Environment Questionnaire)” kullanılmıştır. Ölçeğin orijinali, birinci boyutta 10, ikinci boyutta 6 olmak üzere toplam 16 maddeden oluşmaktadır. Ölçeğin birinci boyutu öğrenciler ile öğretim elemanları ve yöneticiler arasındaki ilişkilerin niteliği ile ilgilidir. Bu boyut genel olarak tutarlı ve adil uygulamaları, işleyiş ve yönetimde öğrenci ve personelin katılımcı ilişkisini ve öğrenciye değer verilen bir eğitim ortamını betimleyen maddelerden oluşmaktadır. İkinci boyut ise genellikle problem çözme süreçleri ve prosedürlerinin şeffaflığı, yeterliği ile ilgili maddelerden oluşmaktadır. Bu boyut genel olarak; fakültede öğrencilerin bilgiye ve danışmaya kolay ulaşması, etkili ve iyi açıklanmış problem çözme prosedürlerinin var olması, şikâyet ve olumsuz dönüt süreçlerinin desteklenmesi gibi, sistemin işleyişi ile ilgili konuları kapsamaktadır. Ölçeğin Türkçe için geçerlilik ve güvenilirlik çalışmaları araştırmacılar tarafından yapılmıştır.

Araştırmanın Bulguları: Cinsiyet değişkeni açısından, öğrencilerin fakülte ortamına ilişkin adalet algıları yalnızca, adil kurumsal işleyiş boyutu açısından anlamlı farklılık göstermektedir. Öğrencilerin aritmetik ortalamaları dikkate alındığında, kız öğrencilerin erkek öğrencilere göre fakültelerindeki kurumsal işleyişi daha adil algıladıkları görülmektedir. Kız öğrenciler, fakültelerine ilişkin adalet algılarını ölçeğin hem alt boyutlarına hem de tamamına ilişkin olarak orta düzeyde ifade ederken, erkek öğrenciler ise saygıya dayalı işbirliği boyutu için ($\bar{X}=22,78$) kısmen, adil kurumsal işleyiş için ($\bar{X}=16,88$) orta düzeyde ve ölçeğin tamamı için ($\bar{X}=39,66$) orta düzeyde-ortanın alt sınırına yakın- olarak ifade etmişlerdir.

Adil fakülte ortamına ilişkin öğrenci görüşlerinin, bölüm değişkeni açısından, saygıya dayalı işbirliği boyutunda anlamlı farklılık gösterdiği, adil kurumsal işleyiş boyutunda ise anlamlı bir farklılık göstermediği belirlenmiştir. Saygıya dayalı işbirliği alt boyutu açısından gözlenen anlamlı farklılığın, hangi grup ya da gruplardan kaynaklandığının belirlenmesi için yapılan LSD testi sonucunda; (1) Sınıf Öğretmenliği bölümünde okuyan öğrenciler ile Sosyal Bilimler ve Beden Eğitimi ve Güzel Sanatlar bölümlerinde okuyan öğrencilerin, (2) Sosyal Bilimler bölümlerinde okuyan öğrenciler ile Fen ve Matematik bölümlerinde okuyan öğrencilerin görüşleri arasında anlamlı farklılık olduğu belirlenmiştir.

Öğrencilerin fakülte ortamına ilişkin adalet algıları sınıf değişkeni açısından, bütün boyutlar için anlamlı farklılık göstermektedir. Öğrencilerin aritmetik ortalamaları saygıya dayalı işbirliği boyutu açısından incelendiğinde, birinci sınıf öğrencilerinin ikinci ve dördüncü sınıf öğrencilerine göre fakülte ortamını daha adil algıladıkları, benzer biçimde üçüncü sınıf öğrencilerinin de dördüncü sınıf öğrencilerini göre fakülte ortamını daha adil algıladıkları görülmektedir. Adil kurumsal işleyiş boyutu açısından öğrenci görüşleri incelendiğinde, birinci ve üçüncü sınıf öğrencilerinin, dördüncü sınıf öğrencilerine göre fakülte ortamını daha adil algıladıkları görülmektedir. Bunun nedeni alt sınıf öğrencilerinin fakülte ortamını ve öğretim elemanlarını yeterince ve tamamını tanıyamamaları, üst sınıf öğrencilerinin ise fakülteyi ve öğretim elemanlarını tanımış olmaları olabilir.

Araştırmanın Sonuçları ve Önerileri: Kız öğrenciler, erkek öğrencilere göre fakültelerindeki kurumsal işleyişi daha adil algılamaktadırlar. Bu veri kız öğrencilerin daha uyumlu ve duyarlı olmaları ile ilişkilendirilebilir. Eğitim fakültesinin değişik bölümlerinde okuyan öğrenciler, fakültelerindeki ortamı “kısmen” ve “orta” düzeylerde adil olarak algılamaktadırlar. Bu durumu öğretmen yetiştiren bir kurum adına olumlu olarak değerlendirmek olanaklı değildir. Geleceğin öğretmenlerinin adil olması biraz da kendilerine ne ölçüde adil davranıldığı ile ilişkilidir. Sınıf düzeyi yükseldikçe göreceli olarak öğrencilerin fakültelerini daha az adil olarak değerlendirdikleri görülmektedir. Yine sınıf değişkeni açısından, tüm sınıflardaki öğrenciler fakültelerini “orta” düzeyde adil olarak değerlendirmektedirler.

Elde edilen bulgular bütün olarak değerlendirildiğinde, geleceğin toplumunu biçimlendirecek öğretmenleri yetiştiren eğitim kurumlarının öğrencilerince “kısmen” ve “orta düzeyde” adil olarak değerlendirilmelerini, bu kurumlar adına bir eksiklik olarak değerlendirmek olanaklıdır. Unutulmamalıdır ki eğitim fakülteleri, geleceğin öğretmen adaylarına sadece bir takım bilgiler veren kurumlar değil, öncelikle onlara öğretmenlik tutum ve davranışları kazandıran kurumlardır ve öyle olmalıdırlar da. Öğrenimi süresince, öğrenim gördüğü fakülteye ilişkin adalet algısı yüksek olmayan bir öğretmen adayının, öğretmenliğini icra ederken ne ölçüde adil olacağı tartışılabilir bir konudur.

APPENDIX

Items	Factor Loadings			Means
	Respectful Partnership	Systemic Justice	Item-Total Correlations	
1. Staff in this school care about students' opinions.	.591	.017	.456*	2.46
2. Students' views and needs are considered when decisions are made.	.684	.210	.628*	2.19
3. Staff show concern for students' rights.	.556	.309	.620*	2.85
4. Staff members ask students for their ideas on how things could be improved.	.533	.200	.593*	1.88
5. Staff apologize if they make mistake or inconvenience students.	.656	.164	.594*	2.20
6. Staff members invite students to raise their concerns or problems.	.681	.022	.490*	2.71
7. Rules and procedures are applied consistently and fairly to all students.	.470	.103	.616*	2.71
8. Students' suggestions are ignored or not taken seriously.	.551	.211	.689*	2.39
9. Students are assessed on clear and objective criteria.*	.487	.510		
10. Methods of assessment give students a fair opportunity to demonstrate their mastery of a subject.	.597	.239	.591*	2.49
11. There are effective procedures in place to help students solve problems.	.316	.540	.642*	2.34
12. It's not made clear what a student should do when they have problems.	.196	.654	.605*	3.19
13. There is an effective system in place for making complaints about unfair treatment.	.150	.664	.562*	2.23
14. Students are readily able to get the advice or assistance they need.	.199	.727	.620*	2.91
15. There is no point complaining about things around because nothing real would be done.	.390	.560	.749*	2.81
16. Course information is made available to students in a user friendly form.	.030	.599	.387*	4.03

*Discarded item

Identifying Dimensions of Students' Ratings That Best Predict Students' Self Efficacy, Course Value and Satisfaction

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Abstract

Problem Statement: Students' evaluations are used widely around the world both as a research tool and as a guide to improve the higher education process. However, in spite of the bulk of research, no previous study investigated the relationships of students' evaluations to self-efficacy beliefs. Also, since teaching is multidimensional, it is not clear what aspects of teaching quality are more important in determining academic outcomes such as self efficacy, motivation and overall satisfaction with a course.

Purpose of Study: The purpose of this study is three-fold: (a) to establish the validity and reliability of a widely used student evaluation instrument, namely, the course experience questionnaire for Turkish College Students; (b) to test the relationships between students' evaluations and self efficacy beliefs, and (c) to assess the importance of different aspects of teaching quality in predicting self-efficacy, course value and overall satisfaction levels of the students.

Methods: The validity of the instrument was established with three separate validity analyses: exploratory factor analysis, confirmatory factor analysis and concurrent validity analysis. The reliability was assessed by internal consistency coefficient, test-retest reliability and test split half reliability coefficients. The predictive value of different aspects of teaching quality is tested by stepwise regression analysis.

Findings and Results: Both validity and reliability analyses supported statistics properties of the CEQ as a useful instrument for Turkish college students attending the Department of Education. Further, the results extended the current findings showing a positive relationship between

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teaching quality and self-efficacy beliefs and indicating that the predictive values of each aspect vary based on the outcome variable such as self-efficacy beliefs, overall satisfaction and course value. The most important aspects of teaching quality in predicting self-efficacy beliefs were clear instruction and standards and good teaching subscales, whereas course value was explained by both generic and clear goals and assessment aspects of the teaching quality.

Conclusions and Recommendations: The CEQ could be used for research purposes and as an academic tool to improve the Turkish higher education system. However, further studies are advised to provide generalizability of the results across departments and universities with different orientations.

Keywords: Students' evaluations, teaching quality, satisfaction, self-efficacy, course value.

Students' evaluation constitutes one of the "hottest" topics in the field of higher education with more than 2000 studies cited in ERIC database (Centra, 2003). As a result of the tremendous interest in the topic, several lines of research such as development of the scales to capture the students' perceptions of teaching performance (e.g., Marsh, 1987; Ramsden, 1991), students' evaluations as a tool to improve student performances (e.g., Cohen, 1980; Entwistle & Ramsden, 1983; Lizzio, Wilson & Simons, 2002), utility of student evaluations to improve instructors' skills (Cohen, 1980; Marsh and Roche, 1993), faculty and students' opinions about the use and utility of evaluations (e.g., Chen and Hoshower, 2003), validity concerns and effect of grading leniency (e.g., Cohen, 1981; Greenwald & Gilmore, 1997a; Greenwald & Gilmore, 1997b) have emerged within higher education. However, the findings created controversy and inconsistencies regarding the utility, usage and validity of student evaluations rather than resolving the issues at hand.

On one side, there are many studies linking positive evaluations to adaptable academic variables such as student learning (Entwistle & Ramsden, 1983), achievement (e.g., Cohen, 1981; Marsh, 1987), motivation (e.g., Howard & Maxwell, 1980), students' approaches to learning (e.g., Karagiannopoulou & Christodoulides, 2005; Kreber, 2003; Ramsden & Entwistle, 1981), self-reported development of generic skills (Lizzio et al., 2002) and student engagement (Richardson, Long & Woodley, 2003) (see meta-analyses for further information such as Cohen, 1981; d'Apollonia & Abrami, 1988, 1997; and Marsh, 1984). On the other hand, there is concern and skepticism about the validity of student evaluations as a fair reflection of an instructor's actual performance since many factors which should bear no theoretical relationship with the quality of teaching such as the instructor's gender, physical appearance or personality, time of the day of the course, class size and halo effect that might bias or effect evaluations have been correlated to student evaluations (e.g., Marsh, 1984; Watchel, 1998).

A vast majority of the aforementioned studies were initially conducted either in North America or countries with similar cultural practices such as Australia. They produced several valid and reliable instruments to measure student evaluations

(Marsh & Bailey, 1993) such as Teacher Behavior Inventory (Murray, 1983), course experience questionnaires (Ramsden & Entwistle, 1981; Wilson, Lizzio & Ramsden, 1997) and Students' Evaluations of Teacher Behaviors (Marsh, 1987) (see also Marsh, 1991). However, validation of these instruments in cultures with different educational characteristics such as Germany (Rindermann & Schofield, 2001), Ireland (Byrne & Flood, 2003) and China (Kember & Leung, 2008) provided supporting evidence for the generalizability of the findings to other cultures around the world. However, as Collins (2002) has pointed out, although international studies report a high rate of use of student evaluations by the institutions (approximately 75 percent), the absence of similar studies does not allow a comparison of the results regarding the utility and validity of student evaluations and assessment of the potential biasing factors within the context of Turkish higher education. However, only a few studies have been published regarding students' evaluations and their effects in Turkey since Collins's remarks (e.g., Murat, Aslantaş & Özgan, 2006; Turanlı, 2009). Therefore, there is a need to develop a valid instrument to assess the validity and utility of student evaluations in Turkish higher education and to contribute to the world's literature by conducting studies to resolve the conflicting issues. As a result, the primary purpose of the current study was to adapt the course experience questionnaire (CEQ), one of the most widely used instruments to measure the quality of teaching in a course, into the Turkish context (Wilson et al., 1997). Numerous studies supported the validity and reliability of the instrument (Ainley & Long, 1994; Byrne & Flood, 2003; Lawless & Richardson, 2002; Ramsden, 1991; Wilson et al., 1997).

Although research supporting the effect of student evaluations on important academic variables facilitating learning such as approaches to learning is abundant, the extent and generalizability of this effect to other motivational variables such as self efficacy beliefs has not been studied to establish the construct validity of the students' evaluations (Marsh and Roche, 1997). A limited number of studies designed to determine the most important aspects of teaching quality reported that the most efficient teachers often are also the most successful in making the course content valuable (e.g., Young & Shaw, 1999). Therefore, it is expected that student evaluations should be related to the course value and the students' self-efficacy beliefs since numerous studies linked value of the content to the self-efficacy beliefs (e.g., Bong, 2001; Wigfield & Eccles, 2000). The second purpose of this study was to test the relationship of student evaluations to students' self-efficacy beliefs.

Finally, although student evaluations of teaching quality are important in determining student behavior, the effect of different aspects of teaching should not be considered the same across academic outcomes since teaching is defined as a multidimensional construct (e.g., Marsh, 1984; Marsh & Roche, 1993). Therefore, each aspect of teaching might have differentiated implications for different academic outcomes. Ramsden and Entwistle's (1981) study demonstrated that the heavy load dimension of teaching is more closely related to the surface approaches of studying such as rote learning than other aspects of teaching. In Finlay-Newmann's study (1994), both clarity of instructional tasks and feedback provided by the instructors were better predictors of course satisfaction levels of students than other aspects of

teaching. Although these studies provide valuable insight into the dimensionality of teaching, the relative importance of different aspects of teaching in determining academic outcomes such as students' course value or self-efficacy beliefs are still unknown (Marsh & Roche, 1997). The final purpose of this study was to determine the relative importance of different aspects of teaching in predicting students' course value, self-efficacy beliefs and overall satisfaction.

In summary, the purposes of this study were:

- a) To determine the validity and reliability of the course experience questionnaire for Turkish college students attending the Department of Education.
- b) To assess the relationships of student evaluations to students' self-efficacy beliefs.
- c) To determine the most important aspects of teaching quality in predicting students' self-efficacy beliefs, task value and overall satisfaction levels with the course.

Method

Participants

The sample consists of 586 students (369 females and 217 males) attending different programs in the Department of Education in Pamukkale University during the spring semesters in 2007-2008. There were 185 freshman, 120 juniors, 137 sophomores and 141 seniors. Three of the students did not report their class level. The ages of the students ranged from 17 to 25. The distribution of the students according to programs in the study was comparable to the actual distribution of the students in the Department of Education (26,4 percent elementary teaching, 13,8 percent science teaching, 14 percent Turkish language education, 14,3 percent preschool teaching, 11,4 percent social sciences, 9,7 percent art teaching and 4,8 percent psychological counseling and guidance in the current sample and 30 percent elementary teaching, 12 percent science teaching, 14,5 percent Turkish language education, 15 percent preschool teaching, 11 percent social sciences, 7 percent art teaching and 6 percent psychological counseling and guidance in the faculty). The participation was completely voluntary; however, students were reminded of the importance of such studies to improve teaching quality and enhance student satisfaction levels. Nearly all the students present in the class at the time of data collection (99 percent) agreed to participate to the study.

Instruments

The course experience questionnaire (CEQ). The CEQ was developed initially by Ramsden (1991) to measure the quality of teaching in a course. The original instrument consisted of 30 items representing five aspects of quality teaching; good teaching, clear goals and standards, appropriate workload, appropriate assessment and emphasis on independence. The validity and reliability of the instrument was established by testing more than 65.000 students (Ramsden, 1999; Wilson et al., 1997). The scale was shortened by Ainley and Long (1994) and the emphasis on

independence scale was replaced by a generic skills subscale. In the short form, the good teaching (GT) component consists of items that capture instructors' knowledge, ability to motivate students to learn and to enhance students' understanding of the content. The clear goals and standards (CGS) subscale taps whether or not the instructors made their expectations from students clear. Appropriate assessment (AA) captures the degree of fairness in an instructors' evaluation methods such as targeting understanding rather than facts or memorization. The appropriate workload (AW) subscale evaluates whether instructors' expectations of work from students for a passing performance was too heavy. The generic skills (GS) subscale assesses the instructor's contributions to development of students' skills such as problem solving, analytic thinking and dealing with unfamiliar problems. The current study used the shortened version because it is cited more often as the most valuable and reliable version of the instrument in recent studies (Wilson et al., 1997; Lizzio et al, 2002), and the generic skills component measures an important aspect of teaching quality in higher education that is missing from earlier versions.

Overall course satisfaction. Although it is typical to measure overall satisfaction level with a single item in the literature, in the current study a three-item scale borrowed from students satisfaction research (e.g., Thomas & Galambos, 2004) was used based on Peter's recommendations (1979) that the alpha coefficient is an appropriate measure of the internal coefficient provided that at least three questions about the same concept are used to measure the variable. The scale's statistics properties have been tested in a previous study where they were found reliable (Cronbach's alpha = .81) and valid because its relationship with student motivation was .244 ($p < .000$) (Özgüngör, 2009). The internal reliability of the scale for the current sample was = .89.

Self efficacy and course value. Students' self-efficacy beliefs and the degree to which students value the learning content of the course were measured by the related items of MSLQ. The MSLQ was developed by Pintrich, Smith, Garcia and McKeachie (1991) and adapted to Turkish by Büyüköztürk, Akgün, Kahveci and Demirel (2004). In the current study, internal reliability of self efficacy and value subscales were .93 and .90, respectively.

Procedure

Permission to use the instrument was obtained from the author. Then, the questionnaire items were translated into Turkish and translated back to English by two researchers who are fluent in English. The items were pilot studied with 200 students who had similar characteristics with the main study's subjects. The students were 121 females and 79 males attending different programs in the Department of Education at Pamukkale University during the spring semesters in 2006 and 2007. There were 66 freshman, 46 juniors, 39 sophomores, and 49 seniors.

Based on the pilot data some modifications mostly related to wording were made. These modifications were to rephrase Item 9 (development of writing skills) as the development of critical skills, and Item 11 (development of working as a group member) as to the development of ability to consider different view points. The

modifications were based on factor analysis and justified by the previous research. Byrne and Flood (2003) also reported that although writing communication items loaded on the generic skills as expected, it also was cross-loaded onto the good teaching and appropriate workloads, albeit less strongly. In the study by Wilson et al., (1997) items tapping the development of skills as a team member loaded most strongly onto generic skills; however, they also loaded moderately onto appropriate assessment.

Actual data collection started right after the first exam and was completed right before the final exam, when students did not know their final exam scores, as is typical in the literature. During the initial data collection phase, students were instructed to rate the appropriateness of each statement for an instructor of their choice who might be considered the best, worst or average in terms of teaching skills; however, it must be an instructor with whom they have sufficient experience to be able to judge her/his instructional behaviors on a five-point Likert scale. Data was recollected three weeks later for reliability purposes with the same directions.

Results

Two sets of analyses were run to address the research questions. First, several types of validity and reliability analyses were carried out to determine the properties of the CEQ and its subscales. Second, a regression analysis was run to determine the relationships between student evaluations and self-efficacy beliefs and the best predictors of each dependent variable. The results are organized around each research question.

Establishing Validity and Reliability of CEQ

Validity analyses. Three sets of validity were analyzed to establish the psychometric features of the instrument—exploratory factor analysis, confirmatory factor analysis and concurrent validity analysis. In order to determine the appropriateness of the sample for the analysis, the Kaiser-Meyer-Olkin (KMO) measure and the Bartlett's test of sphericity were examined. The KMO measure of sampling adequacy index (.93.) and Bartlett's test of sphericity ($\chi^2(171, N = 586) = 6508.89, p < .005$) were significant, indicating that the sample and correlation matrix were appropriate for the analysis.

Exploratory factor analysis. A factor analysis using principal component extraction with an oblique rotation was used. A combination of scree test and the Eigenvalue greater than one rule were used to determine the number of factors to be extracted (Stevens, 1996). Selecting only factor loadings greater than .4 for interpretation (Kaiser, 1974) indicated that there were four underlying factors. A close examination of the data revealed that all four of the appropriate work load items loaded on the appropriate assessment subscale. Since previous studies defined a similar complexity with work load items (see Wilson et al., 1997), these items were excluded from subsequent analyses. The remaining items resulted in a four-factor structure in the

expected direction with items loading the appropriate subscales and explained 70.68 percent of the variance (see Table 1).

Table 1
Results of the Factor Analysis of the CEQ

Item s	Factor loadings			
	Generic skills	Clear goals and standards	Appropriate assessment	Good teaching
2.	.706	-.023	-.039	.226
5.	.672	.017	-.010	.248
9.	.782	-.085	-.148	.070
10.	.773	.002	.014	.102
11.	.810	-.011	-.131	.045
21.	.853	.129	-.005	-.137
3.	.238	.008	-.003	.676
7.	.055	-.025	.051	.868
15.	-.107	.029	-.017	.935
16.	.002	-.011	.042	.890
17.	.022	.096	-.060	.782
19.	.051	.021	-.087	.782
8.*	-.016	-.362	.664	-.046
12.*	-.139	.039	.809	-.045
18.*	-.176	.111	.801	-.073
4.	-.003	-.163	.469	.33
1.	.124	.746	.227	.079
6.	.276	.702	.244	.032
13.*	-.092	.774	-.197	.044
23.	-.068	.643	-.208	.064
Total				
Variance	46.7	9.9	8.18	5.9

Note: * Reversed items

Confirmatory factor analysis. Confirmatory factor analysis was performed to determine the appropriateness of a four-factor structure of CEQ using Lisrel 8.7 (Jöreskog & Sörbom, 2001). A number of fit indices in addition to widely used chi-square statistics were used to assess the adequacy of fit of the model including goodness of fit index (GFI), the comparative fit index (CFI), the root mean square residual (RMSR), the non-normed fit index (NNFI) and the root mean square error of approximation (RMSEA). In general, a fit index exceeding .90 and higher suggested by GFI, NNFI and CFI and less than .05 suggested by RMSR and RMSEA is considered an adequate to good fit (Byrne, 1998). The hypothesized measurement model with four latent variables resulted in a large chi-square indicating a poor fit to the model. However, respecification of the model according to the modification index resulted in a good fit to the data. ($\chi^2(df) = 522(121)$, $p < .0001$; GFI=.92; CFI=.98, NNFI=.98; RMSR=.05; RMSEA=.06). As a result, the findings of CFA confirmed the structural validity of the four-factor CEQ for the current sample. The path diagram of the final model is presented in Figure 1.

Concurrent validity. Past studies showed that students who evaluate their instructors positively also valued the course content and reported higher amounts of satisfaction with the course in general (e.g., Marsh et al., 1997; Young & Shaw, 1999). In contrast, past studies indicated that student evaluations are independent from past achievement measured by GPA (Marsh, 1980; Lizzio et al., 2002). In light of the past studies, correlation of the subscales with value placed to course content, GPA and satisfaction levels of the students were computed to determine the concurrent validity of CEQ. As seen in Table 2, the significant relationships between course value and the subscales and lack of meaningful correlations between GPA and subscales confirm the concurrent validity of the CEQ.

Reliability analyses. In order to establish reliability, internal consistency, test-retest reliability and test split half reliability coefficients were computed. Cronbach's alpha values for generic skills, clear goals and standards, appropriate assessments and good teaching scales were .92, .75, .80, .92, respectively. The three week test-retest reliability coefficients for the same subscales were .82, .70, .74 and .85, respectively. Finally, spearman brown split half coefficient values for the four subscales were .88, .68, .70 and .92, respectively.

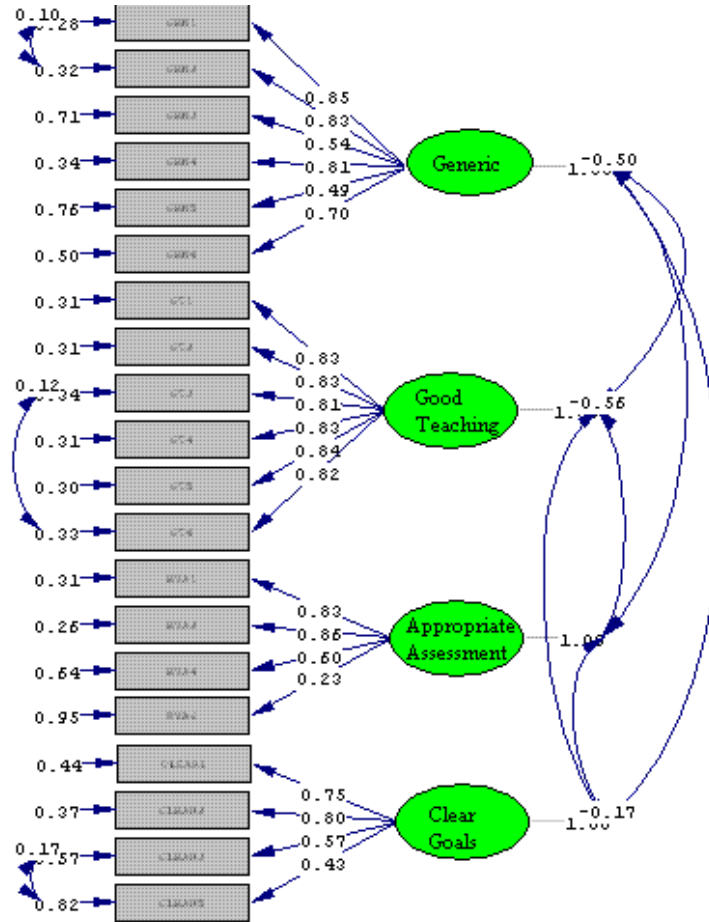


Figure 1. Standardized solution of four-factor model

The Relationship of Students' Evaluations to Self-Efficacy Beliefs

As seen in Table 2, students' self-efficacy beliefs were related significantly to overall satisfaction level and all of the subscales with the exception of the appropriate assessment subscale. Cohen (1977) defined a coefficient of .50 and higher as large, .30 as moderate and .10 as small. These results indicate a strong relationship between self efficacy and overall satisfaction and clear goals and standards as well as a moderate relationship between self efficacy and generic skills and good teaching.

Table 2
The Correlations Between CEQ Subscales and the Study's Variables

	GT	CGS	AA	CV	SE	Sat	GPA
GS	.738***	.395***	.479***	.509***	.346***	.711***	.084
GT		.473***	.509***	.447***	.331***	.778***	.099
CGS			.276***	.446***	.498***	.534***	.136
AA				.174***	.093	.490***	.056
CV					.636**	.557**	.102
SE						.418**	.139
Sat							.095

Note: GS: generic skills, GT: good teaching, CGS: clear goals and standards, AA: appropriate assessment, CV: course value, SE: self efficacy, Sat: overall satisfaction

*** $p < 0.01$

Identifying the Teaching Dimensions That Best Predict Students' Self-Efficacy Beliefs, Course Value and Overall Satisfaction

Three separate stepwise regression analyses were run to determine the relative contribution of each teaching dimension to self efficacy, course value and overall satisfaction. Since there is a well established link between values students place to learning content and self efficacy beliefs (e.g., Bong, 2001; Wigfield & Eccles, 2000), self efficacy also was entered into the regression when course value was the dependent variable to control its effect. The results are given in Table 3. According to the regression analyses, the best predictor of self efficacy was course value, followed by CGS and GT dimensions. Also, class level was a significant predictor of self efficacy where the students of upper classes had higher self efficacy beliefs. The results of the second regression indicated that the course value was best predicted by GS and CGS. Finally, all dimensions of the CEQ were predictive of the overall satisfaction levels of the course, where the highest variance is accounted for by the GT. In addition to teaching aspects, course value also predicted satisfaction levels of the students.

Table 3

Summary Results of the Regression Analyses with CEQ Scales as Predictors of Self Efficacy, Course Value and Satisfaction

Criterion variables	Predictor variables	B	SEB	Beta
Self efficacy	Task value	.344	.057	.366***
	Clear goals	.242	.067	.231***
	Class	.139	.049	.140**
	Good teaching	.146	.059	.170*
Task value	Clear goals	.248	.061	.223***
	Generic	.524	.053	.543***
Satisfaction	Task value	.340	.064	.249***
	Clear goals	.158	.070	.104*
	Good teaching	.462	.077	.369***
	Generic	.240	.075	.182**
	Appropriate assessment	.159	.054	.135*

Note: $R^2 = .34$ for Step 1, $R^2 = .42$ for Step 2, $R^2 = .44$ for Step 3, $R^2 = .45$ for Step 4 (ps<.001) for Self Efficacy; $R^2 = .41$ for Step 1, $R^2 = .45$ for Step 2, (ps<.001) for task value and $R^2 = .62$ for Step 1, $R^2 = .69$ for Step 2, $R^2 = .71$ for Step 3, $R^2 = .72$ for Step 4, $R^2 = .73$ for Step 5 (ps<.001) for overall satisfaction.
 ***p<.001, **p<.005, *p<.01

Discussion

Students' evaluations are widely accepted as a valid and useful measure of teaching quality although the opponents also argue that the biasing factors overshadow its validity. In any case, there is no valid and reliable instrument to evaluate quality in higher education in Turkey or to assess the generalizability of the issues for Turkish college students. The results of this study provide support for the validity and reliability of a widely used instrument in the field, namely CEQ, with a sample attending the Department of Education at Pamukkale University in Turkey. The results of this study are consistent with the other validity and reliability studies conducted in Europe and the U.S. (e.g., Wilson et al., 1997) with the exception of appropriate workload subscale, which was not discriminated from appropriate assessment subscale in the current sample. Although previous research discriminated the workload items from assessment items, they also reported complexity with workload subscale. Both Wilson et al. (1997) and Kreber (2003) reported that CEQ comprises a higher-order two factor structure where appropriate workload makes up the second order higher order factor. Kember and Leung (1998) suggested that workload is made up of a range of complex factors rather than being a good measure of actual workload. Further, Marsh (2001) distinguished between good workload hours which were valuable for learning and bad workload which was the total hours

spent minus valuable hours, where only good workload was related to student evaluation scores. This study further suggests that students might perceive course workload as part of the assessment process rather than as a tool for active participation and learning. Therefore, a heavy workload is also perceived as causing an inappropriate evaluation for the current sample. These unexpected results could be an artifact of cultural effects or a result of the profile of the current sample. Further studies are needed to untangle the relationship between workload and assessment subscales.

This study provides a useful tool to assess and enhance the quality of higher education. By means of such instruments many important questions in higher education such as the effect of grading leniency could be evaluated. Past research emphasized a growing level of challenge to remain productive in the field in spite of increasing student population with decreasing economic resources along with a pressure to provide quality higher education (Martin & Ramsden, 2000). The issue is even more evident in Turkey with growing pressure on universities to accept more students. The past research indicated that class size is inversely linked to the instructors' performance (Marsh, 1987; Marsh et al., 1997). Therefore, it would be interesting to study the question of whether the changing face of working conditions in the universities would result in decreasing levels of satisfaction by the students. In summary, this study provides an instrument by which findings reported in the literature regarding student evaluations could also be assessed within Turkish higher education. Furthermore, new issues such as whether a mismatch between instructors' learning style and students' learning style would negatively affect student evaluations could be assessed for its contribution to the literature.

In addition to establishing reliability and validity of the CEQ, this study replicates the existing research by providing supporting evidence for the relationship between student evaluations and both general satisfaction levels of the course and the value of the content (e.g., Marsh et al., 1997; Young & Shaw, 1999). The study also extends current research by providing evidence of further relationships between student evaluations to their self-efficacy beliefs, which provides additional evidence for the validity of student evaluations. The self efficacy was most closely related to students' own value levels as documented in previous research (e.g., Bong, 2001). Also, it was strongly related to teachers' ability to organize instruction in a clear way and to use good teaching practices. The results are in line with conceptual and theoretical expectations because both clearly organized instruction and good teaching would be especially helpful for those who need it most, in this case students who think they are not good at performing the necessary tasks in the course. The findings are also in line with the research, although not directly. Karagiannopoulou and Christodoulides (2005) reported that the good teaching subscale was most closely related to students' endorsement of deep approaches to study, and there exists a strong research base linking deep approaches to study to higher efficacy beliefs in students (Zimmerman, & Martinez-Pons, 1992). By the same token, previous research generally links positive evaluations to value of the content. There also is a strong correlation between the value and self-efficacy beliefs. Although the mechanisms whereby

student evaluations are related to self-efficacy beliefs are not clear, this study establishes a positive correlation between positive evaluations and self-efficacy beliefs, which proves the utility and validity of student evaluations as a good indicator of teaching quality.

This study also extends current research by showing that the different aspects of teaching have implications across academic outcomes such as self efficacy, course value and overall satisfaction. Overall satisfaction was a function of all dimensions of teaching, although the effect of good teaching was more pronounced than the other aspects of teaching. These results are similar to Karagiannopoulou and Christodoulides's study (2005), where the strongest predictor of satisfaction was appropriate assessment and good teaching had an indirect effect on satisfaction through endorsement of deep approaches to study. Also, the findings are comparable to the findings of both studies assessing student evaluations' effects on student behavior (e.g., Barth, 2008; Wilson et al., 1997) and studies investigating the characteristics of the most distinguished teachers. Young and Shaw (1999) reported that the most effective items to determine the most effective and ineffective instructors were items tapping the value of the course, motivating students to do their best, course organization, effective communication and concern for students' learning, which are very similar to the items in the good teaching component of the CEQ.

Although this study offers a useful tool to measure instructors' teaching behaviors, there is no attempt to suggest using the instrument as a sole tool of decision making process since evaluation of the teaching performance is a complex issue, where many preexisting factors such as students' prior interest and motivation levels toward the content, academic fields, expectations, grading leniency, and class size might confound the results (Marsh & Dunkin, 1992; Marsh & Roche, 1997; Murat et al., 2006). Therefore, as many others did in the literature, it is suggested that students' ratings are most useful when they are evaluated by proficient researchers along with a combination of other comprehensive evaluative tools with the caution of overgeneralization of the results or using as sole administrative decisions.

A final word of caution is warranted regarding to the generalization of the results since the conclusions are drawn from a sample with limited generalizability and therefore require replication across different universities and departments. Also, since this is a correlational study, it does not permit causal conclusions. Future studies are warranted to assess the generalizability of the study's findings and to seek answers for many questions that remain.

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Öz-yeterlilik, Derse Verilen Değer ve Genel Doyum Düzeyinin Yordayıcısı Olarak Öğrenci Değerlendirmeleri

(Özet)

Problem Durumu: Öğrencilerin öğretmenin yeterliliğine ilişkin değerlendirmeleri özellikle Amerika ve Avrupa başta olmak üzere tüm dünyada gerek önemli bir araştırma konusu olarak, gerekse yüksek öğretimde kaliteyi artırma çabasında önemli bir araç olarak yaygın olarak kullanılmaktadır. Ancak Türkiye’de yurt dışı çalışmalara ilişkin bulguların ötesinde yeni anlayışlar oluşturmayı sağlamada araç olarak kullanılacak geçerliliği ve güvenilirliği kanıtlanmış bir ölçek bulunmamaktadır. Bununla birlikte, her ne kadar yurt dışında yapılan çalışmalarda öğrenci değerlendirmelerinin öğrencinin başarısı ve doyumunu ile ilişkisi yaygın bir şekilde çalışılmış olsa da (Cohen, 1981; Entwistle & Ramsden, 1983; Howard & Maxwell, 1980; Marsh, 1987; Ramsden & Entwistle, 1981) öğrenci değerlendirmelerinin öğrencilerin öz yeterlilikleriyle ilişkileri çalışılmamıştır. Yazın alanında öğrenci değerlendirmeleri çok boyutlu bir değişken olarak tanımlanır (Marsh, 1984; Marsh & Roche, 1993). Bu yüzden her ne kadar öğrenci değerlendirmeleri öz yeterlilik algıları ile ilişkili olsa da, bu ilişkinin öneminin farklı öğretmen davranışları için değişmesi beklenmektedir. Benzer şekilde, her ne kadar geçmiş çalışmalar öğretmen değerlendirmelerinin öğrencilerin derse verdiği değerle ilişkili olduğunu göstermiş olsa da (örn., Young & Shaw, 1999), öğretmen davranışlarının hangi alt boyutlarının öğrencinin derse verdiği değeri artırmada daha önemli olduğu bilinmemektedir.

Araştırmanın Amacı: Bu çalışmanın 3 temel amacı bulunmaktadır: (a) Öğrenci değerlendirmelerini ölçmek amacıyla yurt dışında en sık kullanılan ölçme araçlarından biri olan Ders Deneyim Ölçeğinin (Course Experience Questionnaire) geçerlik ve güvenilirlik düzeyinin belirlenmesi ve Türkçeye uyarlanması (b) Öğrenci değerlendirmelerinin öğrencinin öz yeterlilik algıları ile ilişkisinin belirlenmesi (c) Öğretmene ilişkin değerlendirmelerin farklı boyutlarının (iyi öğretebilme, açıklık, adil değerlendirme gibi) öz yeterlilik algıları, derse verilen değer ve derse ilişkin genel doyum düzeyini yordama gücünün karşılaştırılması olarak belirlenmesi

Araştırmanın Yöntemi: Bu çalışmanın bulguları Pamukkale Üniversitesi Eğitim Fakültesinin farklı bölümlerine devam etmekte olan 586 öğrenci (369 bayan ve 217 erkek) üzerinden sağlanmıştır. Öğrenci değerlendirmelerini ölçmek amacıyla Ramsden (1991) tarafından geliştirilen ve geçerlik ve güvenilirlik kanıtları farklı araştırmacılar tarafından yinelenen The Course Experience Questionnaire (CEQ) kullanılmıştır. Bu çalışmada ölçeğin iyi öğretmen, değerlendirme, açık beklenti, ders yükü ve bilişsel beceri alt boyutlarından oluşan kısa formu kullanılmıştır. Öğrencilerin öz yeterlilik ve derse verdikleri değeri ölçmek amacıyla Pintrich, Smith, Garcia ve McKeachie (1991) tarafından geliştirilen ve Büyüköztürk, Akgün, Kahveci ve Demirel (2004) tarafından Türkçe uyarlanması yapılan Öğrenci Güdülenme ölçeğinin ilgili alt boyutları kullanılmıştır. Ölçeğin geçerliliğini belirlemek amacıyla 3 farklı analiz gerçekleştirilmiştir: Açıklayıcı faktör analizi, doğrulayıcı faktör analizi ve uyum geçerliliği. Ölçeğin güvenilirliği iç tutarlılık, test-tekrar ve test-yarı güvenilirlik katsayıları hesaplanarak belirlenmiştir. Son olarak, öğretmene

ilişkin değerlendirmelere ait farklı alt boyutların öz yeterlilik, derse verilen değer ve genel doyum düzeylerini yordama gücünü belirleyebilmek amacıyla 3 ayrı regresyon analizi yapılmıştır.

Araştırmanın Bulguları: Doğrulamalı faktör analizi sonuçları ölçeğin orijinal yapısının ders yükü alt boyutu dışında Türk örnekleminde de korunduğunu ortaya çıkarmıştır. Bu yüzden ders yükü alt boyutuna ilişkin maddeler analizden çıkarılmıştır. Elde edilen 4 boyutlu yapının geçerliliğini test etmek amacıyla yapılan açımlayıcı faktör analizi sonuçları ölçeğin geçerliliğinin yeterli olduğunu göstermektedir. Aynı zamanda, ölçeğin uyum geçerliliğini belirlemek amacıyla yapılan analizler alt boyutlardan alınan puanların motivasyon ve doyum ölçeklerinden alınan puanlarla ilişkisinin beklendiği yönde ve istatistik olarak manidar olduğunu, öğrencinin geçmiş başarısıyla ilişkisinin geçmiş çalışmalarla paralel olarak manidar olmadığını ortaya çıkarmıştır. Takip eden analizler öğrencilerin öz yeterlilik algıları ile açık beklenti, iyi öğretmen ve bilişsel beceri alt boyutları arasında manidar bir ilişki olduğunu ortaya koymuştur. Öz-yeterlilik algılarını yordayan en önemli alt boyutları belirlemek amacıyla yapılan regresyon analizi öz yeterliliği yordayan alt boyutların açık beklenti ve iyi öğretmen alt boyutlarının olduğunu göstermiştir. Buna karşılık öğrencilerin derse verdiği değeri belirleyen en önemli alt boyutlar bilişsel beceri ve açık beklenti alt boyutlarıdır. Öğrencilerin derse ilişkin genel doyum düzeyleri tüm alt boyutlarla ilişkiliyken en önemli alt boyut iyi öğretmen boyutudur.

Araştırmanın Önerileri: Bu çalışmanın bulguları Öğrenci Deneyimi Ölçeğinin Türk üniversite öğrencileriyle kullanılabilir geçerli ve güvenilir bir ölçek olduğunu göstermektedir. Bu ölçek Türkiye’de üniversitede öğretmen davranışlarının öğrenci davranışlarına etkilerini inceleme olanağı sağlayarak yüksek öğretimde kaliteyi artırmaya ilişkin çalışmalara ivme kazandırabilir ve aynı zamanda yurt dışında elde edilen bulguların karşılaştırılarak dünya literatürüne katkıda bulunmayı sağlayabilir. Ancak, sonuçların güvenli bir şekilde genellenebilmesi için benzer çalışmaların farklı fakülte ve üniversite öğrencileri üzerinde de tekrarlanması gerekmektedir. Bu çalışmanın bulguları aynı zamanda öğrenci değerlendirmelerinin farklı boyutlarının öğrenci davranışlarında farklı etkilere sahip olduğunu ortaya çıkarmıştır. Her ne kadar öğretmen davranışlarının tüm boyutları öğrencilerin dersten aldıkları genel doyumla ilişkili olsa da, öğretmenin özellikle konuyu açık bir şekilde sunabilme gibi davranışlarını kapsayan iyi öğretim alt boyutu ile öğrencinin bilişsel becerilerini geliştirmeye yönelik öğretmen davranışlarının daha önemli olduğu ortaya çıkmaktadır. Bu sonuçlar genel olarak ele alındığında öğrenci davranışlarını belirlemede her ne kadar iyi öğretmen, bilişsel beceri ve açık beklentiler boyutları daha önemli görülsede, öğrencide istenilen davranışın yaratılması açısından farklı öğretmen davranışlarının değiştirilmesi gereği ortaya çıkmaktadır.

Anahtar Sözcükler: Öğrenci değerlendirmeleri, öğretim kalitesi, doyum, öz-yeterlilik, derse verilen değer.

Should Native Language Be Allowed in Foreign Language Classes?

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Abstract

Problem Statement: Whether, why, when and how much the native language (Turkish) should be used in the foreign language learning has been under discussion for years.

Purpose of the Study: This study examines when and how much the target language should be used in second/foreign language teaching. In this study, the appropriateness i.e., the possible reasons for using or not using the native language (Turkish) in foreign language (FL) classes) is investigated. Furthermore, questions such as: How much it should be used; if it would help improve learners' skills; and if it is pedagogically appropriate or not, are examined.

Method: To conduct this study, the researcher used Pre and Post Conference Techniques to observe the need and to prepare a survey to be administered to the students in order to get reliable data on the issue. To design the questionnaire that aimed to unearth the need to use L1 in L2 learning, the researcher also made use of the literature by existing researchers in this area. The questionnaire consisted of six sections. The first section tried to see whether it is appropriate to use Turkish in an English class. The second section, with its 28 items, investigated the reasons why L1 should be used in an English classroom. Section three examines the amount of L1 use, whereas section four tried to see if using Turkish in an English class helps students learn L2. In Section five, with three items, the researcher sought to see if the use of Turkish in the classroom can be minimized. The last section aimed to see whether using L1 in English classes could be an appropriate academic tool. As to the reliability of Cronbach's Alpha, it is .83, which indicates a high level of reliability. The subjects of this study were preparatory class students (n =

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96; 30 boys and 66 girls), all from different departments at Ufuk University in the 2007-2008 academic year. They ranged in age from 17 to 21.

Findings and Conclusion: Relying on the findings of the study, NL is used to explain difficult concepts, define new vocabulary, explain the relationships between NL and FL, to motivate students, to manage the classroom, and to translate upon request, etc. Additionally, at the end of the study some recommendations for FL teachers are also presented.

Keywords: Native language, L1, foreign/second language, L2, foreign language learning/teaching.

In foreign language education, speaking skills are some of the most important aspects, which are very difficult to teach. To produce speech in the classroom setting by using the target language (English) instead of the native language (Turkish), each speaker needs a turn to express their opinions on the topic they are discussing. He needs to speak individually and also needs someone to listen and respond to him. When he feels that he will not be able to express his ideas in the target language, he naturally switches to his own native language. Similarly, sometimes teachers feel the need to switch to L1 to make sure that their students understand a difficult grammar concept or a new word (Stern, 1992). Therefore, the first part of this study will focus on the background in which the place of L1 and L2 in learning a foreign language is put forward (Stern, 1992, p. 295). Then, the initial reflection of the classroom and the research hypothesis will be stated. In addition, the data collection procedures that are employed to prove the hypothesis will be presented. Later, the data gathered throughout the study will be analyzed and the results and conclusions will be stated at the end of the study.

Background to the Study

We are inclined to think about knowledge of a foreign language as what we teach rather than what students learn. The teachers with whom the researcher of this study has worked with have witnessed their students having many problems. They typically have noticeable accents. They also make many mistakes in grammar, morphology and especially in word choice.

Most of the time, foreign language students prefer using Turkish to English due to the fact that they tend to rely on their existing language knowledge (L1 and any other languages they can use) to understand the logic and organisational principles behind the target language (Gabrielatos, 2001). What's more, most of the students have had trouble finding correct wording and using correct grammar while speaking. In this vein, Kanatlar (2005) seems to support this idea. She asserts that the limited knowledge of English is the most important factor affecting both the teachers and the students' use of L1 in their L2 speaking lessons. Furthermore, Rolin-Ianziti and Brownlie (2002) support these assertions, too. They exhibit two strategic uses of L1: (a) translating L2 words into L1, and (b) contrasting L1 and L2 forms, both of

which involve intrasentential code switching with L1 words embedded in an L2 sentence. Their study suggests that “these strategies may facilitate acquisition during immersion in L2.”

Another striking point in this issue is that in Gabrielatos’ (2001) study the teachers observed that most of the time their students were not very eager to use their chance to speak English. Most of the students translated every single word during the vocabulary activities. In addition, nearly all the students kept asking questions in Turkish. In this context, Gabrielatos (2001) maintains that when L1 is used in the foreign language classroom, this will surely reinforce the tendency mentioned above. Therefore, a great deal of attention should be given to this, as it has a profound effect on the learning process. At the beginning levels it is a popular communication strategy, especially word-for-word translation, according to Ellis (1985: 180-189).

Of course, there are some techniques to insert L1 into the foreign language classroom when necessary. However, the motto should be “at the right time, at the right place and how much (in adequate doses)?” To clarify this issue, Cook (2001) argues that the exclusive use of the TL in SL or FL teaching is not theoretically justified and does not lead to maximum language learning. He suggests that teachers maximize their FL use, without avoiding the L1 ‘at all costs.’ On the same issue, Turnbull (2001) agrees with Cook, but he calls into question what ‘maximize’ really means in terms of an optimal or acceptable amount of TL and L1 use by foreign language teachers in the classroom setting. Therefore, it seems logical to argue that the more exposure to the target language the students have, the better they will become.

In the typical foreign language classroom with monolingual settings, the common belief is that the fullest competence in the TL is achieved by means of the teacher providing a rich TL environment, in which instruction and drills should be executed (Turnbull, 2001) in the TL as much as possible, only because exposing learners to TL input provides the strongest theoretical rationale for maximizing both teachers’ and students’ TL use in the classroom (Gass, 1997; Ellis, Tanaka, & Yamazaki, 1994; Larsen-Freeman, 1985; Lightbown, 1991). That is why foreign language teachers try new methods and techniques in order to provide their learners with as much L2 input as possible. There have been some methods that have links between L1 and L2 as indicated in Cook (2001).

The Grammar Translation Method involves teaching the foreign language in the student’s first language, with assignments that include lots of reading and translation, but little use of it in communication.

Community Language Learning (Counselling-learning) allows students to talk to each other spontaneously in the L2 with the help of L1 (Curran, 1976). Students listen to the tape and give their *native language translation* to make meanings clearer. They feel *secure* when they *understand* everything.

“Dodson’s Bilingual Method requires the teacher to read an L2 sentence aloud several times and to give its meaning in the L1 (a technique termed ‘interpreting’

rather than 'translating'). Next, students 'imitate' by repeating the sentence, first in chorus and then individually" (Dodson, 1967 cited in Cook, 2001).

Another problematic case lies in understanding the culture of the foreign language. "Individuals tend to transfer the forms and meanings, and the distribution of forms and meanings of their native language and its culture to the foreign language and its culture" as Lado (1957: p. 2) says. Kramersch (1993, cited in Prodromou, 2001) points out that the excitement in learning a foreign language lies to a significant degree in the interplay of cultures; the movement by the learner within the spaces that separate cultures, and in those spaces where cultures overlap. However, if cultures greatly differ from each other, then the learning process becomes difficult. That occurs when L1 features interfere with L2 features at the beginning levels in the foreign language learning process. These features are errors that come about as a result of negative transfer from L1. "If the transfer works well in the second language, it is called a *positive transfer*. If the transfer produces errors (*interference errors*), this process is called a *negative transfer*. Those errors that stem from L1 are inter-lingual, while those that stem from the limited L2 rules are intra-lingual. In order to predict these problems and stop them, first and second languages should first be analyzed to see how they differ. Then, these differences should be used as the basis for developing curriculum. With the help of contrastive analysis, teachers can expect to find out the most difficult areas that cause interference or language transfer. For example, false cognates can be considered as a problematic case for Turkish students. In Turkish, the meaning of the word 'sempati' is different from the word 'sympathy' in English. Thus, Turkish students may not understand the meaning of the word 'sympathy' easily due to some shades of meaning. Also, Turkish speakers have difficulty acquiring the correct use of the English perfect forms because we generally use tenses (present and past) and make no distinction between the different kinds of past usages like in English. In our case, most of the students prefer using the expression 'I went to Istanbul' instead of 'I have been to Istanbul'.

Method

This study focuses on not only the attitudes towards using L1 in L2 learning but also why, when, how much and where to use it. To conduct this study, the researcher asked foreign language (English) teachers at Ufuk University School of Foreign Languages (Service English Section) to work in collaboration with him and monitor the use of the native language (Turkish) of the students in their English language education preparatory classes. The researcher had two conferences with the teachers.

Pre-conference. Prior to the design of the questionnaire, in the pre-conference the researcher asked the teachers whether their students needed to use their native language (Turkish) in their foreign language (English) teaching process. Upon hearing the expected answers, the two professional parties decided to observe the need and prepare a survey to be administered to the students in order to get reliable data on the issue.

Post-conference. After the questionnaire was administered, in the post conference the researcher and the teachers discussed the findings obtained from the questionnaire.

Subjects

The subjects of this study were preparatory class students (n = 96; 30 boys and 66 girls), all from different departments at Ufuk University in the 2007-2008 academic year. They ranged in age from 17 to 21. Of the 96 students, eleven of them are from the Department of Business Administration (BA); one is from the Department of English Language Teaching (ELT); nine are from the Department of International Trade (IT); eighteen are from the Faculty of Law (L); three are from the Faculty of Medicine (M); three are from the Department of Management (MN); nine are from the Vocational School of Nursing (N); nineteen are from the Department of Psychology (PSYC); two are from the Department of Politics (P); sixteen are from the Department of Political Sciences and International Relations (PSIR); and five are from the Department of Statistics. All the subjects were at the beginning phase of their intermediate level in English, which the researcher regarded as enough to conduct his study.

As to the curriculum, the students had an intensive English language program because the academic year at Ufuk University consists of two terms, each of which has a sixteen-week study period (27 hours per week). The overall goal of the program was to improve the four main language skills. Grammar was taught as a separate course (40% of the program). The students received two hours listening, four hours speaking, reading, and writing respectively each week. There was no separate course for vocabulary inasmuch as it is given within the language skills. In the wake of completing their preparatory program, students become upper-intermediate and continue studying language skills related to their majors at the university right from the first year.

The Questionnaire

To design the questionnaire that aimed to unearth the need to use L1 in L2 learning, the researcher made use of the literature by Gabrielatos (2001), Cook (2001), Kramsch (1993, cited in Prodromou, 2001), Turnbull (2001), and Çelik (2003). It consisted of six sections. The first section tried to see whether it is appropriate to use Turkish in an English class. The second section, with its 28 items, investigated the reasons why L1 should be used in an English classroom. Section three examined the amount of L1 use, whereas section four tried to see if using Turkish in an English class helps students learn L2. In Section five, with three items, the researcher sought to see if the use of Turkish in the classroom can be minimized. The last section aimed to see whether using L1 in English classes could be an appropriate academic tool. As to the reliability of Cronbach's Alpha, it is .83, which indicates a high level of reliability.

Problem

Using native language in an English classroom more than necessary is not considered the only problem of the students who participated in this study. It is

widely believed that this is a common problem among all Turkish learners of English. However, the reasons for and the situations where this problem arise may vary from one student to another; let alone one class to another. Here are the teachers' initial reflections when the students mostly use Turkish in the classroom:

1. When they do not understand a difficult grammar point.
2. When they need to check for vocabulary comprehension.
3. When the situation becomes more important than speaking English, such as a discussion about a recent event like a football match, politics etc., stories or playing games.
4. When the students get stuck trying to comprehend a point.

Therefore, for these situations the researcher wanted to look for the *reasons* why the students switch to Turkish to convey their message either "as part of their collaborative learning or individual strategy use" (Cook, 2001).

Research Questions

The questions in the survey are all considered to inquire about the possible reasons and situations of L1 use in an EFL class. Thus, this study aims to find answers to the following questions:

1. Do EFL students think that it is appropriate to use Turkish in an EFL class?
2. What are the possible reasons for using Turkish in an EFL classroom?
3. How much do they think Turkish should be used in an English classroom?
4. Do they think that their teachers' using Turkish in their English classes will help them learn English better?
5. Would the use of Turkish in English classes improve their skills in learning English?
6. Could using Turkish in English classes be pedagogically appropriate?

Data Analysis and Discussion

As to the data analysis, the statistical program SPSS 11.0 was used. The results were calculated according to the number of the students who were administered the questionnaire.

Attitudes of Students towards Using Turkish in English Classes

The subjects of the study were asked about the appropriateness of using Turkish in an English class. The following table reports interesting results on the long lasting debate in the foreign language teaching and learning process.

Table 1
Why Do You Think It Is Appropriate to Use Turkish in an English Class?

	Always		Often		Sometimes		Rarely		Never	
	n	%	n	%	n	%	n	%	n	%
Q1	5	5,2	73	76	8	8,3	9	9,4	1	1

The findings obtained from the study indicate that 75 subjects (81,2%) have positive attitudes towards using Turkish in an English class. They think that it is almost always appropriate to use Turkish (their native language) in their English lessons.

Reasons for Using Turkish

As to the reasons for using Turkish (NL) in English (FL) classes, the researcher aimed to classify the reasons in different headings. He wanted to see the main reasons for classroom management, metalinguistic uses, and translation. Classroom management reasons consists of four sub-categories: (A) managing the class, (B) motivation: teachers' reactions to students' requests in their native language and expressing their state of mind, (C) testing, and (D) error correction. Metalinguistic uses include comment and contrast. Lastly, translation contains code mixing and translation of classroom instructions.

Classroom Management

Managing the Class

Table 2
Classroom Management

	Always		Often		Sometimes		Rarely		Never	
	n	%	n	%	n	%	n	%	n	%
Q2.6	11	11,5	40	41,7	13	13,5	22	22,9	10	10,4
Q2.7	27	28,1	31	32,3	19	19,8	16	16,7	3	3,1
Q2.9	11	11,5	32	33,3	27	28,1	12	12,5	14	14,6
Q2.11	37	38,5	29	30,2	19	19,8	8	8,3	3	3,1
Q2.13	15	15,6	43	44,8	28	29,2	10	10,4	0	0
Q2.16	27	28,1	28	29,2	27	28,1	10	10,4	4	4,2
Q2.17	20	20,8	33	34,4	16	16,7	9	9,4	18	18,8
Q2.18	18	18,8	28	29,2	20	20,18	11	11,5	19	19,8
Q2.19	12	12,5	21	21,9	9	9,4	10	10,4	44	45,8
Q2.21	14	14,6	38	39,6	17	17,7	15	15,6	12	12,5
Q2.22	26	27,1	32	33,3	23	24	13	13,5	2	2,1
Q2.24	9	9,4	27	28,1	15	15,6	21	21,9	24	25

There are thirteen questions (6, 7, 9, 11, 13, 16, 17, 18, 19, 20, 21, 22, and 24) in the second section of the questionnaire asking for the reasons for managing the class. As to the analysis of Table 2, it is clearly seen that Turkish can be used to summarize the material already covered (Q2.6: n = 51; 53,2%), check for comprehension by asking a

relevant question (Q2.7: n = 58; 59,5%), understand the teacher (Q2.11: n = 66; 68,7%), organize tasks (Q2.13: n = 58; 60,4%), draw attention to a certain point/topic (Q2.16: n = 55; 57,3%), warn about off-task behaviours (Q2.17: n = 53; 55,2%), maintain discipline (Q2.21: n = 52; 54,2%), and make contact individually (Q2.22: n = 58; 60,4%). These findings indicate that using Turkish in English classes helps teachers to manage their classrooms to a certain degree since almost slightly over the half of the respondents have positive attitudes towards that issue.

Motivation

Table 3

Teachers' Reactions to Students' Requests and Expressing State of Mind

	Always		Often		Sometimes		Rarely		Never	
	n	%	n	%	n	%	n	%	n	%
Q2.4	11	11,5	17	17,7	5	5,2	19	19,8	44	45,8
Q2.8	22	22,9	25	26	12	12,5	20	20,8	17	17,7
Q2.20	21	21,9	31	32,3	14	14,6	18	18,8	12	12,5
Q2.27	15	15,6	40	41,7	20	20,8	14	14,6	7	7,3

Table 3 reports three interesting results. Firstly, 63 subjects (Q2.4: n = 63; 65,6%) have reported that their teachers almost never use NL to help them feel more comfortable and confident through praise and giving compliments. Instead, they use English to praise and give compliments. Secondly, almost half of the respondents (Q2.8: n = 47; 48,9%) think that their teachers use Turkish to joke around. Thirdly, 52 subjects agree that using NL motivates them to speak English in class (Q2.20; 54,2%). Lastly, more than the half of the respondents (Q2.27: n = 55; 56,3%) think that their teachers use NL to express their own emotions about the topic under discussion in their English classes. According to the findings above, it can be said that teachers almost always need to use NL to express their own emotions just to motivate their students and help them to develop positive attitudes towards learning a foreign language.

Testing

Table 4

Testing

	Always		Often		Sometimes		Rarely		Never	
	n	%	n	%	n	%	n	%	n	%
Q2.10	16	16,7	15	15,6	9	9,4	8	8,3	48	50
Q2.23	16	16,7	38	39,6	18	18,8	15	15,6	9	9,4

As to the use of NL in testing, 56 subjects (Q2.10; 58,3%) have reported that their teachers seem not to prefer to use the native language. However, 54 respondents have stated that their teachers use NL in planning exams and activities. This may imply the fact that in testing procedures the foreign language must unavoidably be used only because we test not only their linguistic and language skills, but also their comprehension of the questions themselves.

*Error Correction***Table 5***Error Correction*

	Always		Often		Sometimes		Rarely		Never	
	n	%	n	%	n	%	n	%	n	%
Q2.14	30	31,3	37	38,3	17	17,7	12	12,5	0	0

Table 5 indicates that 67 respondent think that NL should be used in error correction procedures (Q2.14; 69,6%). Relying on this finding, it can be said that it is more comprehensible when teachers use NL to correct errors at this proficiency level.

*Metalinguistic Uses***Table 6***Comment and Contrast*

	Always		Often		Sometimes		Rarely		Never	
	n	%	n	%	n	%	n	%	n	%
Q2.5	47	49	20	20,8	22	22,9	5	5,2	2	2,1
Q2.15	12	12,15	31	31,3	23	24	20	20,8	11	11,5

An analysis of Table 6 points out the fact that most of the subjects believe that NL should be used to explain the relationships between the two languages (Q2.5: n = 67; 69,8%). As to the use of their native language in explaining cultural aspects in the foreign language, subjects seem to have mild attitudes.

*Translation***Table 7***Code Mixing and Translation of Other Items, Usually from Instructions*

	Always		Often		Sometimes		Rarely		Never	
	n	%	n	%	n	%	n	%	n	%
Q2.1	51	53,1	23	24	15	15,6	7	7,3	0	0
Q2.2	52	54,2	16	16,7	20	20,8	6	6,3	2	2,1
Q2.3	19	19,8	35	36,5	11	11,5	19	19,8	12	12,5
Q2.12	30	31,3	31	32,3	21	21,9	11	11,5	3	3,1
Q2.25	31	32,3	25	26	10	10,4	18	18,8	12	12,5
Q2.26	49	51	18	18,8	23	24	3	3,1	3	3,1
Q2.28	17	17,7	29	30,2	22	22,9	14	14,6	14	14,6

In this section of the questionnaire there are seven questions concerning translation. Relying on the findings obtained from the questionnaire, foreign language learners report that NL is used to explain difficult concepts (Q2.1: n = 74;

77,1%), define new and unknown vocabulary items (Q2.2: n = 68; 70,9%), introduce new material (Q2.3: n = 54; 56,3%), explain and instruct how to do an activity (Q2.12: n = 61, 63,6%), answer students' questions, and translate upon their request (Q2.26: n = 56; 58,3%). This finding indicates that learners need their native language to comprehend the new concepts, vocabulary and materials, which are unfamiliar to them. This finding also agrees with the findings obtained in Şensoy and Özad's (2009) research in which they report that the vocabulary the learners have in their first language should be used while teaching English (p.178) since primary school students have not developed fully their target vocabulary enough to translate. Therefore, they may not fully benefit from a translation activity in which they need to use their first language vocabulary in order to comprehend the new concepts.

How Much Turkish Should Be Used in an English Class

Table 8

How Much Do You Think Turkish Should Be Used in an English Classroom?

	Always		Often		Sometimes		Rarely		Never	
	n	%	n	%	n	%	n	%	n	%
Q3	8	8,3	48	50	16	16,7	22	22,9	2	2,1

Of the 96 respondents, 56 agreed that NL should be used in their foreign language learning. Only 16 of the respondents said that NL should sometimes be used in FL classes. This finding implies that students often preferred using NL in FL classes.

The Contribution of Using Turkish

Table 9

Do You Believe That the Teacher's Using Turkish in Your English Classes Will Help You Learn English Better?

	A lot		Fairly much		A little		No	
	n	%	n	%	n	%	n	%
Q4	3	3,1	2	2,1	2	2,1	9	9,4

Table 9 reports that most of the respondents (n = 58; 60,5%) have positive attitudes towards the benefits of using NL in learning English. However, 29 of them think that it has made little contribution to their learning English as a foreign language (EFL). Thus, it can be speculated that using one's native language helps learn a foreign language to a certain extent.

*The Contribution of Using Turkish to Learner Skills***Table 10***Would the Use of Turkish in English Classes Improve Your Skills in Learning English?*

	Yes		To a degree		No	
	n	%	n	%	n	%
Q5	2	33,3	6	47,9	8	18,8

As to the use of NL to improve learners' skills in learning English, a considerable number of the subjects (n = 46; 47,9%) agreed on the issue to a certain degree. 32 of them said "Yes", while only 18 subjects disagreed on this fact. Relying on this finding, some of the learners seem to have almost positive attitudes towards using NL to improve their skills. However, there are still some learners who think the opposite.

*The Pedagogical Appropriateness of Using Turkish***Table 11***Could Using Turkish in English Classes Be Pedagogically Appropriate?*

	Yes		To a degree		No	
	n	%	n	%	n	%
Q5	23	24	57	59,4	16	16,7

It is reported in Table 11 that using NL in FL classes is pedagogically appropriate to a certain degree (n = 57; 59,4%). This may suggest that learners still believe that foreign language teachers could use their native language in the teaching process.

Conclusion and Recommendations

There is no doubt that the use of native language, in our case Turkish, in foreign language learning and teaching has been a matter of discussion for a long time, and has constituted the weakest aspect of Turkish learners of English. However, there is no clear-cut answer to this problematic case and it is understood that this will last forever. Hence, this study has tried to put forth the probable reasons and bring some immediate and practical solutions to the discussion.

Through the highlights of the findings obtained from this study, it is clearly understood that it is almost appropriate to use NL in English classes. Students learning a foreign language switch to the use of their native language simply for

a. some classroom management issues such as

1. Understanding the teacher (68,7%).
2. Making contact individually (60,4%).

3. Organizing tasks (60,4%).
4. Checking for comprehension (59, 5%).
5. Drawing attention (57, 3%).
6. Warning about off-task behaviors (55, 2%).
7. Maintaining discipline (54,2%).
8. Summarizing the material already covered (53,2%).

b. Motivation

1. Joking around (58,9%).
2. Explaining teachers' own emotions (57,3%).
3. Motivating to speak in FL (54, 2%).

c. Testing

1. Planning activities (56,3%).

d. Error correction (69,6%).

e. Metalinguistic uses

1. Explaining the relationships between NL and FL (69,8%).

f. Translation

1. Explaining difficult concepts (77,1%).
2. Defining new vocabulary items (70,9%).
3. Explaining and instructing how to do an activity (63,6%).
4. Answering students' questions and translating upon request (58,3%).
5. Introducing new material 56,3%).

What can we do to remedy this situation? One of the key elements to increase students' FL usage is task-based speaking activities. Each student should choose a topic from a list given by their teacher and present it in front of the class in the following lesson. The presentation usually takes five to ten minutes during which a student, or sometimes more than one, comes to the board and talks about his topic. After each presentation, the other students are allowed to ask questions on that topic. Despite the restricted implementation of this activity, the outcome is believed to be satisfactory since the use of FL (L1) has noticeably increased to a certain degree. In addition, this type of activity is not only useful for helping students to learn and actively use some new words, but also in practicing asking and answering questions in English as well.

As to the importance of the L1 input by the foreign language teachers in the teaching process, Ellis (1994) argues that SL or FL teachers who overuse L1 deprive learners of valuable FL (L2) input (mother tongue interference). Similarly, Wong-Fillmore (1985) suggests that trying to make out or cope with what the teacher says to them is an important part of language learning process. She also suggests that

learners who are used to hearing their teacher use L1 tend to ignore L2 and therefore do not benefit fully from valuable L2 input. If teachers rely far too much on L1, they deprive their students of the valuable L1 input. Then, it can be claimed that the more learners are exposed to the L2 input, the more they will learn (Wong-Fillmore, 1985) and the more communicatively competent they will become because it is commonly believed that the use of L1 in class creates mental setbacks. However, it should be noted that maximizing does not mean not using L1 at all. That is, L1 and L2 can exist simultaneously to save time in the foreign language classroom. With regard to this point, this study agrees with the ideas of Turnbull (2001) in that it is efficient to make a quick switch to the L1 to ensure that learners understand a difficult grammar concept (Table 2, Item A) or an unknown word (Table 2, Item B). However, it should be kept in mind that when Turkish learners of English have little contact with the L2 outside the classroom (EFL in Turkey), it is crucial for foreign language teachers to use the L2 as much as possible in real-life like situations in the classroom since maximizing the L2 in the classroom contributes to not only the students' proficiency, but also their success as pointed out by Turnbull (2001), Carroll (1975), Wolf (1977), Burstall (1968, 1970), Burstall, Jamieson, Cohen, and Hargreaves (1974). The empirical evidence obtained from the above mentioned studies and this study once again supports the argument that teachers should try to use the L2 as much as possible in their foreign language teaching process since it seems to foster and provide a positive role in developing students' L2 proficiency.

It must be kept in mind that L1 mostly interferes with L2 because they are not from the same language family. The more differences between the two languages, the more difficult, then, it is to learn. Therefore, it is suggested that we should minimize or ban, if possible, L1 from the classroom to maximize the L2 input as much as possible. As Cook (2001) suggests, L1 is not something to be utilized in teaching but rather something to be set aside.

To conclude, "learners and teachers alike need to be made aware of the limitations and pitfalls of L1 use in the classroom, as unprincipled use of L1 can have long-lasting negative effects on the learners' awareness and production of the target language" (Gabrielatos, 2001).

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Yabancı Dil Eğitiminde Anadil Kullanımına İzin Verilmeli Mi?

(Özet)

Problem Durumu: Anadilin (Türkçe) yabancı dil öğreniminde kullanılıp kullanılmayacağı, niçin, ne zaman ve ne kadar kullanılacağı yıllardır tartışılmaktadır. İngilizce derslerinde gereğinden fazla ana dili kullanmak çalışmaya katılan deneklerin tek sorunu değildir. İngilizceyi öğrenen Türk öğrencilerin ortak bir sorunu olduğu yaygın bir şekilde bilinmektedir. Ancak, bu soruna ilişkin nedenler ve durumlar, bırakın bir sınıftan diğerine, bir öğrenciden diğerine değişiklik göstermektedir.

Araştırmanın Amacı

Bu çalışma, ana dilin ikinci/yabancı dil öğretiminde kullanılıp kullanılmaması gerektiğini ele almaktadır. Mevcut çalışmada uygunluk, ana dilin (Türkçe) yabancı dil eğitiminde kullanılmasına ilişkin olası nedenler, ne kadar kullanılması gerektiği, öğrencilerin dil becerilerini geliştirmede yardımcı olup olmadığı ve pedagojik olarak uygun olup olmadığı araştırılmaktadır.

Yöntem : Bu çalışmanın yapılabilmesi için araştırmacı güvenilir veriler toplayabilmek amacıyla ihtiyacı görmek ve anket geliştirmek üzere Ön ve Son Konferans Tekniğini kullanmıştır. Araştırmacı, ikinci dil öğreniminde birinci dilin kullanılması ihtiyacını ortaya çıkarmak üzere bu konuyla ilgili araştırmacılara ait alan yazısı taramasından da yararlanmış. Çalışmada kullanılan anket altı bölümden oluşmaktadır. Birinci bölüm, İngilizce dersinde ana dilin kullanılmasının uygun olup olmadığını, 28 sorudan oluşan ikinci bölüm İngilizce dersinde birinci dilin kullanılmasına ilişkin nedenleri, üçüncü bölüm ana dilin ne kadar kullanılması gerektiğini sorgularken, dördüncü bölüm Türkçe'nin kullanımının öğrencilerin ikinci dili öğrenmelerine yardımcı olup olmadığını irdelemekte ve üç sorudan oluşan beşinci bölümde araştırmacı Türkçe'nin kullanımının azaltılabiliş azaltılamayacağını araştırmaktadır. Sonuncu bölümde ise araştırmacı, İngilizce dersinde birinci dil kullanımının akademik olarak uygun olup olmadığını görmeye çalışmaktadır. Çalışmada kullanılan anketin güvenilirlik çalışması (Cronbach's Alpha) .83 olarak bulunmuştur. Çalışmaya katılan deneklerin hepsi Ufuk Üniversitesi 2007-2008 akademik yılı farklı bölümlerin hazırlık sınıfı öğrencileridir (n=96; 30 erkek ve 66 kız). Deneklerin yaşları 17 ila 21 arasında değişiklik göstermektedir.

Bulgular ve Sonuç: Çalışmanın sonucunda elde edilen bulgulara dayanılarak ana dilin, zor kavramları açıklamak, yeni sözcükleri tanımlamak, ana dil ile yabancı dil arasındaki ilişkiyi açıklamak, öğrencileri güdülemek, sınıfı yönetmek, istenildiğinde çeviri yapmak gibi konularda kullanıldığını

söyleyebiliriz. Ayrıca, çalışmanın sonunda konuya ilişkin olarak yabancı dil öğretmenleri için bazı öneriler de sunulmaktadır.

Anahtar Sözcükler: Ana dil, D1, yabancı/ikinci dil, D2, yabancı dil öğrenimi/öğretimi.

The Change of School Employees' Organizational Justice (OJ) Perceptions Concerning Geography According to Socio-Culture

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Abstract

Problem Statement: Recently, OJ has started to be searched with cultural variables. Unfortunately, in Turkey, it has only been searched with demographic variables, but there are common perceptual effects of socio-cultural variables.

Purpose of Study: The purpose of this study is to determine the effect of some socio-cultural variables on OJ, and whether or not OJ differs concerning geographic parts according to employees' perceptions.

Sample and Data Analysis: A survey method was used, and the research sample of the study consists of 1016 school employees in Turkey who were selected randomly. In this research, "Perceptions of Fair Interpersonal Treatment Scale," which was adapted to Turkish by Wasti (2001), was used to gather data. Research questions were tested with MANOVA analysis, which consists of Wilks' Lambda results (Λ).

Findings: Results showed that socio-cultural variables, especially ideology, are significant in Turkish schools in relationships with managers and relationships among employees. Besides, considering geography, school employees who work in west Anatolia and in the schools of densely populated cities have more positive perceptions about OJ than those who work in central and east Anatolia.

Conclusion and Recommendations: To develop OJ in school, current research findings should be supported with qualitative research findings; formal rules and procedures have to be practiced based on equity for all employees in schools of all geographic regions in Turkey.

Keywords: Organizational justice (OJ), schools, employees, socio-culture, geographic region, ideology.

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Organizational justice (OJ) was based on Adam's Equality Theory. Adam (1965) wanted to understand when and why employees might perceive such exchanges as fair or unfair (cited: Greenberg, 1990; Eker, 2006; Poole, 2007). Greenberg (1996) coined the term OJ, which refers to individuals' perceptions of fairness in organizations. OJ focuses on how individuals socially construct incidents involving justice? (Folger, Rosenfield, & Robinson, 1983; Folger & Martin, 1986; Greenberg, 1990; Cropanzano & Greenberg, 1997; Folger & Cropanzano, 1998, 2001; Poole, 2007), and it is also related to "which level is perceived for justice in organization by employees?" and "how organizational variables are affected by justice?" OJ is a way in which employees try to determine whether or not managers treat them fairly in an organization (Greenberg, 1990). OJ research is examined through the perceptions of employees in organizations, who make judgments about the actions of organizational leaders based on employees' perceptions (Folger & Martin, 1986; Folger, Rosenfield, & Robinson, 1983; Greenberg, 1990; Folger & Cropanzano, 1998, 2001). Furthermore, OJ encourages managers and employees within an organization to act in a fair and trustworthy manner (Ferrie, Kivimaki, Elovainio, & Vahtera, 2003).

Based on the distribution of organizational benefits, OJ perception has five dimensions (Cropanzano & Greenberg, 1997): *Distributive justice*; perceptions of equity are related to resource distribution. Distributive justice research has shown that distributive fairness judgments are ubiquitous and influential determinants of satisfaction with conflict resolution and allocation of resources (Lind & Tyler, 1988). *Procedural justice*; defined in terms of fair procedures: decisions are just those that result from fair procedures. *Interactional justice*; refers to the quality of the interpersonal treatment received by an individual, both before and after decisionmaking (Folger & Cropanzano, 1998; Eker, 2006; Poole 2007). It makes distinctions between two sub-parts: interpersonal sensitivity (the belief that fair treatment should be civil and respectful); and explanations or social accounts, which tell the recipient why something unfortunate or untoward occurred (Ho, 2001). *Relational justice*; focuses on the behavior of groups, and respect for social identities as constructed by individuals who are identified with certain groups. *Informing justice*; informing employees about the distribution of organizational benefits and declaring something that happens in an organization are the processes of informing them fairly and honestly (Cropanzano & Greenberg, 1997; Folger & Cropanzano, 1998).

According to Donovan, Drasgow, and Munson (1998), all OJ behaviors occur in organizations in two dimensions: relationships with managers and relationships among employees. Relationships with managers usually focus on how these behaviors are applied in the organization towards employees...how managers practice their policy and how these results are perceived fairly by employees..." and also relationships among employees focus on how these affect organizational processes and behaviours.

Justice is also socially constructed. Therefore, coherent, long-standing groups (such as employee groups) often develop shared conceptions of what constitutes justice (Bies, 1987; Lind & Tyler, 1988; Tyler & Lind, 1992). Social justice is generally concerned with the belief that society should be based on giving individuals and

groups fair treatment and a just share of the benefits of the society without discrimination by class, gender, experience, ethnicity or culture (Fua, 2007; Poole, 2007).

Culture, Geography and Justice

Researchers have started to study justice and social-cultural relations in organizations (e.g., Whiting, (1976); Folger and Cropanzano, (1998); Fischer & Smith (2004); Konovsky & Pugh (2004); Poole (2007); Kose (2007); Brenda (2007); and Gregory (2009)). Culture is a factor that affects the social interactions among people (Eker, 2006: 33). Markovsky (1985) claimed that cultural and geographical differences between West and East (Asia) are strong factors that cause differences in the perception of justice. According to Van Den Heuvel, Tellegen and Koomen (1992), Western societies can be characterized as individualistic: the person is seen as a situation-free distinct agent, relatively autonomous from contextual influences. On the contrary, many Eastern societies are collectivist with a more "holistic" view of the person: people are conceptualized in terms of their relations with the environment and their actions are primarily understood in terms of this relationship. Furthermore, Markovsky (1985) collected some data from Canada, South Korea, and Kenya and tried to explain cultural and geographical differences that affect justice perceptions. South Korea has a collective culture, while Canada has an individual culture; but Kenya's culture is newly developing and is somewhere in between these two cultures. Markovsky also determined that individualism and collectivism are important factors that affect people's perceptions about justice in society. In South Korea, group justice is more important than individual justice. However in Canada, individual rights and justice are more important.

Geographically, Turkey has seven regions: Marmara, Aegean, Mediterranean, Black Sea, Central Anatolia, East Anatolia and South East Anatolia. Although Turkey has seven regions, Titrek (2003) determined that according to success rates in comparison of University Entrance Exam (OSS) scores in 1998 and 1999, there are two or three parts in Turkey: east (East, Southeast, and east Black Sea parts), centre (west Black Sea, Central Anatolia, and east Mediterranean parts) and west (Marmara, Aegean and west Mediterranean parts). Culturally, the eastern part of Turkey has a more conservative, collective culture and more ideological beliefs than the west. In these exams, academic success rate is slowly increasing from east through centre and from centre to the west in Turkey. In addition, the latest poll results about politics have three colors: red western Turkey, yellow central and some parts of eastern Turkey, and green eastern and southeastern Turkey (www.hurriyet.com.tr, 2009). Moreover, in 2007, a general poll of politics gave a similar picture as a 2009 poll (www.wikipedia.org, 2009). Furthermore Titrek, Önder and Karşlı (2009) searched these seven regions in research that was related to pre-service teachers' perceptions of multi-cultural education and they also found cultural three regions in Turkey: east, centre and west.

Ideology and Justice

The main purpose of ideology is to offer change in society through a normative thought process. Ideologies are systems of abstract thought applied to public matters and thus make this concept central to politics (Weiss & Miller, 1987: 493). Minar (1961) describes "ideology" as follows: by the role that ideas play in the structure of an organization; in human-social interactions; and as the locus of social interactions. Moreover, Colquitt's (2007) study explored the extent to which two theoretically derived individual differences (equity sensitivity and ideology) moderated the effects of injustice on behavioral reactions. Results showed that ideology, not equity sensitivity, emerged as a significant moderator of several justice-outcome relationships. Hoy and Tarter (2004) also claim that one of the most important criteria for OJ is the principle of politics and social equality. Politics is the process by which groups of people make decisions based on ideological values and ideas. Political choice is a part of ideological behaviors in organizations. The term politics has been observed in all human group organizations like schools as well. It consists of "social relations involving authority or power" and refers to the regulation of a political unit, and to the methods and tactics used to formulate and apply policy. Politics are often divided into left and right. Based on political ideas, the employees make groups according to this division in organizations, such as schools. Research indicates that in organizational climates where political behaviors are fostered and rewarded, employees who choose not to "play the game" are more likely to leave than those who participate in politics (Harrell-Cook, Ferris, & Dulebohn, 1999).

In Turkey, being a union member or a townsman with school managers can affect justice the perceptions of teachers and other employees as political views do. Townsman are people who come from the same city or people who were born in the same city or place, and who also have good relations outside of profession life (www.tdksozluk.com, 2009). A union is an organization that employees construct to protect their rights in profession life (www.tdksozluk.com, 2009). Employees are organized in unions based on their political views. Based on the National School Manager Appointment Guide (2007), one of the most important criteria in appointing a school manager or assistant manager is the idea of a superintendent of a town or city elected from school manager candidates. This can be a very subjective criterion and also for this criterion, these superintendents are usually appointed by current government. That's why school managers can be affected by current political views and being a townsman with managers, they distribute some benefits and affect the decision-making process.

OJ and School

Lerner (1980) concludes that the need for justice is a remarkable human trait that may cause delusions of fairness; it consistently motivates people to work towards a better solution and influences employees' perceptions. Andrews, Witt, and Kaçmar (2003) stated that ideological behaviors may not be masking their feelings and attitudes about their disapproval of organizational politics. Managers similarly interpret these attitudes as initial withdrawal behaviors inevitably leading the employee to leave the organization. Vigoda (2000) claims that employees begin to

neglect their work and intend to leave the organization as a result of working in a political environment.

Ideology gathers employees as a group and makes them act according to the group's aims and values in organizations, such as schools (Eisenberger, Cotterel, & Marvel, 1987). Moreover, these groups have a strong commitment and react to obtaining their benefits from schools. Also Markovsky (1985) claimed that cultural differences are strong factors that make differences in justice perceptions based on political choices and ideological perceptions. That is why many researchers attempted to answer some questions that aim to measure the OJ level in schools. Because schools are mirrors and a part of society, it is not suitable to separate school from society in which it exists (O'Reilly & Verdugo, 1999:339). According to Türkoğlu (1983), if society and culture have some problems, school can also be affected by these environmental problems and cultural structure. But there has not been enough research showing how cultural and ideological differences affect the OJ perceptions of school employees. Furthermore, as a leader, school managers' evaluations can be important when they are distributing school outcomes and benefits. Oregon in the USA conducted a statewide cultural competence summit in 2004 and proposed having managerial licensure for teachers. It included some competences such subjects as leadership, ethics and socio-political context (Gregory, 2009).

Although there has been lots of research about socio-cultural variables; in Turkey, there has been very limited research about OJ, and no research about the effects of social-cultural variables, especially ideological variables, on OJ. While Aydın and Karaman-Kepenekçi (2008) were researching elementary school managers' opinions, Yılmaz and Taşdan (2009) researched primary school teachers' opinions in Ankara, and Cömert et al. (2009) researched high school teachers' perceptions. When the variables of these studies were observed, there were no cultural or ideological variables. These research variables included gender, seniority, school type, number of teachers in school, and field of study. Moreover, Yılmaz, and Taşdan (2009) suggested researching this subject in other types of schools, higher education institutions and vocational schools. Based on the literature, the purpose of this research is to determine whether or not socio-cultural and ideological variables affect OJ in Turkish schools. For this purpose, following questions were tested:

1. What are the organizational justice perceptions of school employees based on the variables of city and closeness of political views?
2. Do school employees' organizational justice perceptions differ based on closeness of political views to school managers and their city?
3. Does being a member of a union and city variables' change the perceptions of employees in Turkish schools on the topic of organizational justice?
4. Does being a townsman with a school manager and the city variables' change the perceptions of employees in Turkish schools on the topic of organizational justice?

Method

In this research, a survey method was used to determine OJ perceptions of school employees based on socio-cultural variables. The relational survey method was preferred to compare data.

Measurement

Donovan et al. (1998) developed the "Perceptions of Fair Interpersonal Treatment Scale" to assess employees' perceptions of the fairness of interpersonal treatment in their organization. For the validity of the scale, the LISREL 8 program was used and corrected factor analysis was applied. This scale, translated and adapted to Turkish by Wasti (2001), evaluated the reliability and validity of the scale in Turkish. Wasti (2001) also determined whether or not the scale had two factor structures, such as the derigueur factor structures of Donovan et al. (1998): relations with managers and relations among employees. In addition, the scale's Total Cronbach Alpha level was .93. Also, relationships with manager's sub-scale's alpha were .93 and it consisted of 14 items. Relations among employee's sub-scale's alpha were .81 and consisted of four items. The scales were structured with five Likert-type scales: never (1), rarely (2), neutral (3), usually (4), and always (5). For each sub-scale of the main scale, total scores were calculated, and these scores were used while analyzing the sub-scales. Half of the items were asked in negative forms to develop the reliability and then, while they were being analyzed, were re-coded and the data were analyzed with SPSS 11.50 program.

Data Collection and Analysis

This scale was used to evaluate OJ in schools with Wasti's permission. In the first part of the scale, the employees were asked about the variables of "politic view closeness to school manager, being a union member and being a townsman with school manager." For analysis, means and standart deviations were calculated, and to determine significant differences and main effects of socio-cultural variables, MANOVA analysis with Wilks' Lambda (Λ) was done, and all analyses were tested at $p < 0.05$. To find the source of significant differences, Tukey-b analysis was done, and family-wise errors and effect sizes were calculated (<http://web.uccs.edu/lbecker/Psy590/es.htm>, 2008).

The scale was administered to 120 teachers for testing validity and reliability of the scale in schools. Construct validity of the scale was examined by exploratory factor analysis (EFA). First sub-scale's reliability level is .87 and second sub-scale's reliability level is .72 and each sub-scale's reliability level is higher than .70. The results of factor analysis showed that items that are in the scale are explaining 66.6 % of Total Explained Variance, and all item's factor loadings are higher than .30. Also the first sub-scale's Explained Variance is .39.7 and the second sub-scale's Explained Variance is .26.9.

Participants

This scale was carried out on a total of 1016 employees including school managers (N=104), teachers (N=834), and other employees-officers (N=78). This research was also conducted on participants at primary schools (N=556), general high schools (N=236), and vocational high schools (N=224). Moreover, it was

conducted on school employees (198 from east, 401 from central, and 417 from west) in seven cities based on the number of employees in the school. This research was applied to two cities from the west of Turkey, two from the centre, and three from the east. From each part, according to population, one large city (population greater than 250.000) was selected on purpose. After that, from each large city, one part of the schools was selected randomly based on a cluster sample (from west, Istanbul, N=335; from central, Ankara, N=330; and from east, Malatya, N=71). Small cities were selected randomly for the research sample (from west, Bilecik, N= 82; from central, Aksaray, N=71; and from east, Ağrı, N=62, and Bingöl, N=65).

Results

In this section, analysis results are shown in tables and explained based on research questions.

Question 1: What are the organizational justice perceptions of school employees based on the variables of city and closeness of political views?

Table 1

Descriptive Analysis of City Variable's about OJ in Schools Based on the Closeness of Politic Views with School Managers.

		Cities	EAST CITIES			WEST CITIES		CENTRAL CITIES		Total
			Ağrı	Bingöl	Malatya	Bilecik	Istanbul	Aksaray	Ankara	
Relationships with School Managers	No answer	N	7	10	8	0	36	31	19	111
		Mean	2.58	2.73	2.71	0	3.57	2.91	3.58	3.19
		SD	0.315	0.405	0.187	0	0.557	0.316	0.579	0.596
	Yes	N	30	36	36	42	76	22	204	446
		Mean	2.90	2.85	2.80	4.17	3.89	2.92	4.06	3.71
		SD	0.336	0.324	0.316	0.600	0.651	0.251	0.441	0.708
No	N	25	19	27	40	223	18	107	459	
	Mean	2.71	2.77	2.68	3.31	2.99	2.90	3.76	3.15	
	SD	0.250	0.375	0.358	0.645	0.549	0.349	0.505	0.628	
Relationships among Employees	No answer	N	7	10	8	0	36	31	19	111
		Mean	2.46	2.77	2.81	0	4.05	2.85	4.00	3.40
		SD	0.393	0.342	0.372	0	0.753	0.314	0.269	0.838
	Yes	N	30	36	36	42	76	22	204	446
		Mean	2.85	2.86	2.73	4.33	4.11	2.88	4.43	3.92
		SD	0.357	0.476	0.360	0.77	0.767	0.228	0.542	0.897
No	N	25	19	27	40	223	18	107	459	
	Mean	2.70	2.84	2.63	3.78	3.60	2.78	4.02	3.53	
	SD	0.433	0.487	0.342	0.799	0.625	0.283	0.535	0.726	

As indicated in Table 1, cities in the west of Turkey (Ankara, Bilecik, and Istanbul) have higher means than those in the east of Turkey (Ağrı, Bingöl, and

Malatya). Not only in relationships with managers, but also in relationships among employees, the perceptions of employees in west and densely-populated cities were more positive than those of eastern cities about OJ behaviors. Furthermore, OJ perceptions of employees who have close political views to managers are more positive than of those who do not have close political views to managers according to total scores. In addition, 11% of school employees (111) did not answer to the variable of political view closeness with school manager.

Question 2. Do school employees' organizational justice perceptions differ based on the closeness of political views to school managers and their city?

Table 2

Closeness of Political Views to School Manager and the City Variable's MANOVA Analysis Results

Dimensions	Source	df	F	p (Tukey-b)	Partial Eta Squared	Observed Power (a)
Relationships with Managers	City	6	73.967	.000 (3,1,2,6-5-4-7)	.308	1.000
	Politic views	2	33.805	.000 (1,3-2)	.064	1.000
	City * politic view	6	9.741	.000	.097	1.000
	Error	997				
	Total	1016				
Relationships among Employees	City	6	111.113	.000 (3,1,2,6-5-4,7)	.401	1.000
	Politic views	2	13.261	.000 (1-3-2)	.026	.998
	City * politic view	6	2.529	.004	.027	.968
	Error	997				
	Total	1016				

R Squared = ,173 (Adjusted R Squared = ,166)

As indicated in Table 2, there is a significant difference between the relationships with managers ($F_{(6, 1009)} = 73.976$; $p < .000$), and relationships among employees ($F_{(6, 1009)} = 111.113$; $p < .000$; Wilks' Lambda (Λ) = 0,692) according to the city variable. Based on Tukey-b results, employees' justice perceptions about the city variable in Ağrı, Bingöl, Malatya and Aksaray, significantly differed from those in Ankara, Bilecik, and Istanbul in both dimensions.

As indicated in Table 2, there is a significant difference between the relationships with managers ($F_{(1, 1014)} = 33.805$; $p < .000$), and relationships among employees ($F_{(1, 1014)} = 13.261$; $p < .000$, Wilks' Lambda (Λ) = 0,826) about OJ perceptions of school

employees according to the closeness of political views. It was found that the primary effects of city and political view closeness were changing perceptions significantly in relationships with managers ($F_{(1, 1014)} = 9.741$; $p < .000$), and relationships among employees ($F_{(1, 1014)} = 2.529$; $p < .004$). It can be said that OJ of schools in both dimensions are more positive in the schools of cities in west than those of cities in eastern Turkey.

Question 3: Does being a member of a union and the city variable's change the perceptions of employees in Turkish schools on the topic of organizational justice?

Table 3

Being a Union Member and the City Variable's MANOVA Analysis Results

Dimensions		N	Mean	SD	Source	df	F	p (Tukey b)	Partial Eta Squared	Observed Power(a)
Relationships with Managers	Yes	394	3.30	0.67	City	6	103.223	.000	.382	1.000
					Union member	1	2.833	.001	.003	.390
					City * Union	6	1.031	.404	.006	.412
	No	622	3.46	0.68	Error	1000				
					Total	1016				
Relationships among Employees	Yes	394	3.25	1.293	City	6	76.992	.000	.935	1.000
					Union member	1	3.971	.010	.114	.820
					City * Union	6	.774	.626	.006	.366
	No	622	3.63	1.264	Error	1000				
					Total	1016				

a. R Squared = ,252 (Adjusted R Squared = ,249)

b. R Squared = ,299 (Adjusted R Squared = ,296)

As indicated in Table 3, OJ perceptions of employees who are not members of the union ($\bar{X}=3.46$) and ($\bar{X}=3.63$) were more positive than OJ perceptions of those who were union members ($\bar{X}=3.30$) and ($\bar{X}=3.25$). There are significant differences in relationships with managers ($F_{(1, 1014)} = 2.833$; $p < .001$) and in relationships among employees ($F_{(1, 1014)} = 3.971$; $p < .010$, Wilks' Lambda (Λ) = 0.980) concerning being a union member. However, it has been found that the primary effect of city and union membership variables do not affect relationships with managers ($F_{(6, 1009)} = 1.031$; $p < .404$), and relationships among employees ($F_{(6, 1009)} = 1.031$; $p < .404$). It can be said that

employees' school justice perceptions do not differ significantly from one city to another based on union membership.

Question 4: Does being a townsman with a school manager and the city variables change the perceptions of employees in Turkish schools on the topic of organizational justice?

Table 4

Being a Townsman with a School Manager and Member of the City Variable's MANOVA Analysis Results

Dimensions		N	Mean	SD	Source	df	F	p	Partial	Observed
								(Tukey b)	Eta Squared	
Relationships with Managers	Yes	166	3.11	0.703	City	6	41.861	.000	.204	1.000
					Townsman	1	-3,573	.000	.012	.934
					City townsman *	6	4.988	.000	.030	.993
	No	827	3.45	0.707	Error	981		(1,2,3-6-4,5,7)		
					Total	993				
Relationships among Employees	Yes	166	3.13	0.852	City	6	69.592	.000	.299	1.000
					Townsman	1	-3,338	.001	.002	.266
					City townsman *	6	4.326	.000	.026	.983
	No	827	3.79	0.805	Error	981		(1,2,3-6-4,5,7)		
					Total	993				

a. R Squared = ,424 (Adjusted R Squared = ,413)

b. R Squared = ,505 (Adjusted R Squared = ,495)

c. R Squared = ,478 (Adjusted R Squared = ,468)

As indicated in Table 4, OJ perceptions of employees who are not a townsman with the school managers ($\bar{X}=3.45$) and ($\bar{X}=3.79$) are more positive than OJ perceptions of those who are townsman with school managers ($\bar{X}=3.11$) and ($\bar{X}=3.13$). Besides, there are significant differences in relationships with managers ($F_{(1, 991)} = -3,573$; $p>.000$) and in relationships among employees ($F_{(1, 991)} = -3,338$; $p>.001$). Furthermore, it was found that the primary effect of the townsman and city variables on the relationships with managers ($F_{(6, 986)} = 4.988$; $p>.000$), and relationships between employees ($F_{(6, 986)} = 4.326$; $p>.000$; Wilks' Lambda (Λ) = 0,977) also showed significant differences. Moreover, based on the primary effect of being a townsman with a school manager and the city, in the west and densely populated cities, school employees' OJ behaviors were perceived to be more just than in the centre and eastern cities of Turkey.

Conclusion and Implications

Because of the missions of schools, they are organizations where OJ must be at its highest level. The main purpose of this study was to determine OJ perceptions of employees in Turkish schools concerning geography based on socio-cultural variables. According to the results, socio-cultural variables affect the OJ level of Turkish schools, and the features of Eastern culture are still effective on OJ perceptions of school employees. These research results are consistent with the findings of Wasti (2001), and Iscan and Naktiyok's (2004), whose studies were carried out in Istanbul (west of Turkey) and Erzurum (east of Turkey) respectively.

It was indicated that socio-cultural, especially ideological variables in the west of Turkey are more effective than those in centre and east. Strike, Haller and Soltis (1998) also believe that values and cultural judgments should be at the heart of the school managers' jobs to increase OJ and commitment. Moreover, Hoy and Tarter (2004) claim that if a school wants to prosper and succeed, trust is essential and is the keystone of OJ of school management. If the school managers are seen as trustworthy in their behaviors, they can be good role models for employees, especially for teachers. According to Demir (2008), school managers should influence teachers and other employees by modeling appropriate behaviors. Then, teachers will identify with role models who are perceived in a positive light.

Having a closeness of political views with school managers and being a union member are significant variables in both OJ dimensions. Although political closeness is a negative factor, it is an effective variable in relationships with school managers and among employees. On the contrary, being a townsman with school managers does not affect the organizational culture or relations. Considering ideological variables, school managers not only motivate organizational actions, but also provide the standards by which we tend to evaluate the defensibility and fairness of organizational change (Watson, 2003). Researchers in organizational studies are fortunate to have a number of perspectives from which organizational discourse and behavior can be investigated and evaluated. These perspectives have produced a number of key examples that address culture and ideology (Kunda, 1992).

Furthermore, in this research, one of the most important findings is related with fear culture as 11% of employees did not mark a closeness of political views with managers. According to Balçı (2003), school managers have a strong effect on school structure and character. Besides, the school manager is a critically important person to developing a school's social climate. Moreover, Dogan (2002) claimed that in the education system, of the many problems, one could be a culture of fear, which can occur because of managers' behavior. Furthermore, Güler (2004) claims that the Turkish Education System consists of relationships based on a culture of fear. These cultural situations affect all school climates and decision-making processes as well. According to Hoy and Tarter (2004:258), to develop school culture and to have good organizational behaviors, school managers have to construct behaviors based on trust and OJ.

Current research findings should be supported with qualitative research findings about the effects of socio-cultural, especially ideological, variables on OJ in schools. Moreover, positive OJ perceptions in schools can affect employees' performance and job quality (Cömert et al., 2008). Besides, Hoy and Tarter (2004) suggest that school managers should be fairer in the application of rules; teachers should be involved in school decisions and cultural activities of schools. That's why managers have to gain their colleagues' confidence, and they have to enhance the openness and authenticity of interpersonal relations to develop OJ in school culture (Hoffman, Sabo, Bliss, & Hoy, 1994). Moreover, managers must only be appointed based on equal rules and, furthermore, selecting a manager according to an exam and job performance can be objective criteria (Barut, 2007). In addition, when teachers trust their managers, they promote open interactions between teachers and school managers; they signal that the managers are dependable, honest, and competent in dealing with teachers (Gzeist & Hoy, 2003).

Based on these research results, the following suggestions can be offered as well: Formal rules and procedures have to be practiced by school managers while they distribute school benefits based on equity for all employees in schools instead of political views, being a townsman or union membership, in all geographic parts of Turkey. School managers have to be educated about how they can manage schools fairly. Researchers have to investigate why OJ behaviors are more unjust in Turkish schools of the east than in those of central and western Anatolia. That's why data have to be supported by especially qualitative research. Researchers have to investigate why a "fear culture" affects employees' behaviors in Turkish schools?

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Okullarda Görev Yapanların Sosyo-Kültürel Değişkenlere Göre Örgütsel Adalet Algısının Coğrafi Bölgeye İlişkin Değişimi

(Özet)

Problem Durumu: Adalet kavramı örgütlerde kaynakların dağıtımına ilişkin adillik algısı ile başladı. Örgütsel adalet, çalışanların görüşlerine göre, yöneticilerin davranışlarının ne kadar adil olup olmadığı algısıdır. Örgütsel adalet beş türde incelenmektedir: dağıtımsal, prosedürel, etkileşimli, ilişkilere dayalı ve bilgilendirici. Donovan, Drasgow ve Munson (1998) bu adalet algısının örgütte iki boyutta ortaya çıktığını öne sürmüşlerdir: Örgüt yöneticileri ile ilişkiler ve örgütte çalışanlar arası ilişkiler. Önceki araştırmalar daha çok örgütsel adalet algısını belirlemeye dönük çalışmalar olmasına karşın, son zamanlarda örgütsel adalet, kültürel değişkenlerle birlikte araştırılmaya başlanmıştır. Son dönem bazı araştırmalarda ve politik seçim sonuçlarında Türkiye'nin de kendi içerisinde iki ya da üç farklı kültürel yapıdan oluştuğu ve bunun coğrafi olarak açıklanabildiği görülmeye başlanmıştır. Nitekim okulların da toplumun bir aynası olduğu görüşüne dayanarak, Türkiye'nin mevcut sosyo-kültürel yapısının okul içi ilişkileri de etkileyip etkilemediğinin belirlenmesinin önemli hale gelmeye başladığı öne sürülebilir.

Türkiye'de demografik değişkenlerle araştırılmasına karşın, sosyo-kültürel değişkenlerin örgütsel adalete ilişkin etkileri ve bunların bölgeden bölgeye de okullardaki örgütsel adalet algısına etkisine ilişkin herhangi bir araştırmanın olmadığı görülmektedir. Türkiye'de sosyo-kültürel, özellikle de ideolojik değişkenlerin örgüt içi adalet algısını etkilediğine ilişkin genel bir toplumsal algı olduğu belirtilebilir.

Araştırmanın Amacı: Bu araştırma, Türkiye'deki ilköğretim ve ortaöğretim okullarında çalışanların (yönetici, öğretmen ve diğer çalışanlar-memur ve hizmetliler) sosyo-kültürel, özellikle de ideolojik değişkenlere göre örgütsel adalet düzeyine ilişkin algılarını ve bu algıların bölgeden bölgeye değişip değişmediğini belirlemektir. Bu temel amaç doğrultusunda şu sorulara yanıt aranmıştır:

1. Okul çalışanlarının "okul yöneticisine politik görüş yakınlığı ve şehir" değişkenlerine göre örgütsel adalet algısı nasıldır?
2. Okul çalışanlarının örgütsel adalet algısı "okul yöneticisine politik görüş yakınlığı ve şehir" değişkenlerine göre anlamlı olarak farklılaşmakta mıdır?
3. Okul çalışanlarının örgütsel adalet algısı "sendika üyesi olma ve şehir" değişkenlerine göre anlamlı olarak farklılaşmakta mıdır?
4. Okul çalışanlarının örgütsel adalet algısı "okul yöneticisi ile hemşehri olma ve şehir" değişkenine göre anlamlı olarak farklılaşmakta mıdır?

Örneklem ve Veri Analizi: Araştırmada tarama modellerinden ilişkiisel tarama modelinin karşılaştırmalı tarama modeli yolu kullanılmıştır. Araştırmanın örneklemini, Türkiye'deki üç kültürel bölgeden yansızlık kuralına dayalı olarak seçilen 1016 okul çalışanından oluşmaktadır (198'i doğu-Ağrı, Bingöl ve Malatya-, 401'u merkez-Ankara ve Aksaray- ve 417'si de batı-Bilecik ve İstanbul). Katılımcılar, okul yöneticisi (N=104), öğretmenler (N=834), ve diğer çalışanlardan -memur/hizmetliler- (N=78) oluşmakta; ilköğretim okulu (N=556), genel lise (N=236), ve meslek liselerinde (N=224) görev yapmaktadırlar. Bu araştırmada, Wasti (2001) Türkçe'ye çevirdiği ve adapte ettiği 'Örgütsel Adalet Ölçeği' veri toplama aracı olarak kullanıldı. Araştırma soruları aritmetik ortalama ve standart sapma değerlerinin yanısıra, Wilks' Lambda (Λ) sonuçlarını da içeren MANOVA analizi ile test edilmiştir.

Bulgular: Araştırmaya göre, Türkiye'deki okullarda sosyo-kültürel değişkenler, örgütsel adalet algısını hem yöneticilerle ilişkiler hem de çalışanlar arası ilişkiler boyutlarında etkilemektedir. Özellikle ideolojiye göre şekillenen politik görüş yakınlığı ve sendika üyesi olmanın her iki boyutta da etkili olduğu görülmektedir. Coğrafik bölge açısından ise, batı bölgelerinde ve büyük şehirlerdeki okullarda çalışanlar, merkez ve doğu bölgelerdeki okullarda çalışanlardan daha olumlu örgütsel adalet algısına sahip oldukları belirlenmiştir. Ayrıca okul yöneticisine politik görüş yakınlığı ve sendika üyesi olma etkili değişkenler iken, yönetici ile hemşehri olmanın ise etkili bir değişken olmaması, ideolojinin örgüt içi davranışta önemli bir sosyo-kültürel değişken olduğunun göstergesidir. Dahası politik görüş yakınlığı değişkenini 111 okul çalışanının işaretlememesi de dikkate değer bir başka bulgu olarak ifade edilebilir.

Tartışma ve Öneriler: Örgütsel adalet alanındaki araştırmacılar örgütsel davranışa birçok açıdan bakarken, örgütsel davranışı etkileyen özellikle iki anahtar değişkenin araştırılmasının gereğini ortaya çıkarttı: "*Kültür ve ideoloji*". Araştırma bulgularına göre, "*okul yöneticileri ile ilişkiler ve okulda çalışanlar arasındaki ilişkiler*" boyutlarında yönetiye politik görüş yakınlığı ve sendika üyesi olmanın etkili olduğu ve batıda özellikle politik görüş ve sendika üyesi olmanın örgütsel adalet algısını, merkez ve doğu bölgelere göre daha fazla etkilediği sonucuna varılmıştır. Ayrıca değerler ve kültürel değerlendirmelerin okulu yönetenler açısından önemli olduğu ve örgütsel adaletle birlikte örgüte bağlılığı ve performansı artırmada önemli oldukları sonucuna varılmıştır.

Okul çalışanlarından 111'inin, "*okul yöneticisine politik görüş yakınlığı*" değişkenini işaretlemekten kaçınması da korku kültürünün bir göstergesi olarak değerlendirilebilir. Okullarda örgütsel adaleti düzeyini arttırmak için örgüt içi demokrasi geliştirilmeli ve okullarda çalışanların korkmadan hakkını isteme olanağını sağlayacak bir sistem kurulmalıdır. Okul yöneticileri, okulda adalet algısını olumlu kılmak için güveni tesis etmeli ve kişilerarası ilişkilerde okul kültürünü geliştirmek için açıklık ve şeffaflık düzeyini arttırmalıdır. Ayrıca yönetici atama sürecinde ideolojiye dayalı

ölçütler yerine, sınav ve iş performansı gibi objektif ölçütler kullanılmalıdır. Ayrıca okullarda örgütsel adalete, sosyo-kültürel ve özellikle de ideolojik değişkenlerin etkisini ölçmeye dönük nitel araştırmalar yapılmalıdır. Okul yöneticisine politik görüş yakınlığı, hemşehrilik ve sendika üyeliği gibi değişkenler yerine okullarda örgütsel adaletin sağlanmasında formal kuralları okulda çalışanlar arasında eşitlik ilkesine dayalı olarak uygulanmalıdır.

Anahtar Kelimeler: Örgütsel adalet, okullar, çalışanlar, coğrafi bölge, ideoloji.

The Effectiveness of Instruction on Mand Model – One of the Milieu Teaching Techniques

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Abstract

Problem Statement: Speech and language therapists support and work with individuals who will provide and contribute to children's early language development. Milieu teaching should be included in the curriculum of speech and language pathology students to teach them how to endorse early language development.

Purpose of Study: This study investigated the effectiveness of an instructional program designed to teach mand-model—one of the milieu teaching techniques—and the effectiveness of that mand-model on teaching vocabulary items to children with delayed speech and language. Furthermore, the follow-up effects of this program also were examined eight and sixteen weeks after the termination of the program.

Methods: One of the single-subject research designs, multiple-probe model across subjects, was used to assess the effectiveness of the instructional program developed to teach mand-model, a technique in milieu teaching. The participants were two speech and language therapy graduate students and one teacher working with three children with developmental disabilities. Three children with whom these participants were working also attended the study. Full probe, probe, training, and follow-up sessions were conducted to assess the effectiveness of the instructional program designed to teach mand-model. All sessions were carried out in a one-to-one educational setting. Both interobserver and procedural reliability data

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were collected and the effectiveness of the instructional program developed to teach mand-model was determined through graphic analysis.

Findings and Results: The findings of the study revealed that the instructional program designed to teach mand-model was effective for all participants and that the newly-learned items were retained eight and sixteen weeks after termination of the program.

Conclusions and Recommendations: Practitioners in the field may consider using this training program when delivering instruction to teachers and student teachers. Further research could conduct an error analysis to identify whether participants make more errors in giving mand or providing model.

Keywords: Milieu teaching, mand-model technique, language delay, speech and language pathology

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Naturalistic approaches to early language intervention, such as milieu teaching, may have strong primary and generalized effects on children's language skills (Kaiser, Yoder, & Keetz, 1992). Milieu language teaching is a general model of early communication and language intervention. Milieu teaching refers to language and communication training procedures that are (a) brief and positive in nature, (b) carried out in the natural environment as opportunities for reaching functional communication occur, and (c) occasioned by student interest in the topic (Kaiser, 2000). Milieu language teaching consists of a variety of teaching techniques including incidental teaching (Hart & Risley, 1968), mand-model (Warren, McQuarter, & Rogers-Warren, 1984), and time delay (Halle, Marshall, & Spradlin, 1979). The three processes differ primarily in aspects of teacher behavior. This is because they are directed to different ends—each targets a separate facet of language use. The mand-model process targets teaching children to verbalize choice of topic. A necessary step in terms of progress in language acquisition is that, in appropriate conditions, a child substitutes verbal for nonverbal communication. Until the child does so, the environment cannot shape language as a mode of communication. Therefore, the teacher initiates interaction with the child and mands verbalization (Hart, 1985). These naturalistic language teaching procedures, used individually or in combination, have been determined to be effective methods for establishing spontaneous, initiated, or nonobligatory language in a variety of populations (Warren & Bambara, 1989; Kaiser, Ostrosky, & Alpert, 1993; Warren & Gazdag, 1990; Warren, et al., 1984). The current study selected mand-model as a prompting strategy. Mand modeling, which is easier to learn, also is more directive than time delay or incidental teaching. Furthermore, for the child with language problems, one

who needs specific and systematic teaching in verbalizing topics, the behavior may remain under the stimulus control of the adult's manding behavior.

The effectiveness of milieu teaching techniques in teaching language and communication skills to children with developmental delay (Warren & Bambara, 1989; Warren & Gazdag, 1990; Warren, Yoder, Gazdag, Yam, & Jones, 1993), individuals with autism (Kaiser, Hancock, & Nietfeld, 2000; Yoder & Stone, 2006; McGee & Daly, 2007), children who are low functioning (children with an MLU under 2.0) (Yoder, Kaiser, Goldstein, & Alpert, 1995), a child dually diagnosed with Down Syndrome and autism (Kroeger & Nelson, 2006), and children with delayed speech (Alpert & Kaiser, 1992; Kaiser & Hester, 1994) has been well documented. The aim of earlier studies was to increase and generalize pre-linguistic skills (Warren et al., 1984), semantic combinations (Warren & Bambara, 1989; Warren & Gazdag, 1990), and productive language and communication skills (Alpert & Kaiser, 1992; Kaiser & Hester, 1994).

Milieu teaching techniques are stated to be generally used by the practitioners (Iacono, 1999). The literature includes other studies investigating the efficacy of research in which parents, siblings, and teachers are taught how to apply milieu teaching techniques. There are many studies assessing the effectiveness of milieu teaching techniques administered by parents (Alpert & Kaiser, 1992; Hemmeter & Kaiser, 1994; Kaiser & Hester, 1994; Kaiser et al., 2000)

A review of the literature yields several studies where milieu teaching techniques are applied by teachers (Rogers-Warren & Warren, 1980; Warren et al., 1984). The study by Rogers-Warren and Warren (1980) revealed that mand-modeling and providing reinforcement were taught to teachers successfully. The results of this study showed a significant increase in children's expressive language skills. Warren et al. conducted a similar study, conducting two single case studies targeting communication skills in children with intellectual disabilities. In the first experiment, the intervention was found to be effective in teaching a preschooler to use prelinguistic requests (e.g., reaching for an object), comments (e.g., coordinated attention between an adult and object), and vocal imitation. In the second experiment, the procedures were found to be effective in increasing requests for communication and turn-taking by four other preschoolers. This study presented data suggesting such an effect on naive teachers and finding that a modified milieu teaching approach is an effective method for facilitating intentional, prelinguistic requesting in young children with mental retardation in their interactions with teachers. This study reported the effectiveness of milieu teaching techniques in generalization and maintenance of learned skills.

Since speech and language disorders are prevalent in early childhood and these disorders might influence overall development of children negatively, early diagnosis and intervention are crucial. Moreover, improving early childhood communication disorders may either terminate or mitigate subsequent academic failure and emotional problems (Wetherby & Prizant, 1992). Therefore, in order to support language development, language and communication skills should be taught to children with speech and language disorders (Yazar, 2003). In addition,

Güler and Dönmez (2007) suggested that adults, especially teachers, may consider language development stages and they may use the most suitable expressions while teaching pre-school children.

Recently, the role of speech and language therapists has evolved toward advisor and participant in in-class activities and away from being a practitioner. In addition, a natural setting is of vital importance for the generalization of language and communication skills. Also, Acat (2007) stressed that the teaching of where and how to use language skills to individuals is important. Therefore, speech and language therapists should know milieu teaching techniques in order to help families and teachers in their struggle to support their children and students' language and communication skills. If early language development affects overall development positively, then a professional definition of speech and language therapists should include supporting and working with individuals who will provide and contribute to the early language development of children. Milieu teaching should be included in the curriculum of speech and language pathology students as to how to endorse early language development.

There are a vast number of people with speech and language disorders in Turkey. The reason why the related service cannot be supplied efficiently has been attributed to the lack of trained personnel in the field. Due to the need, a graduate program of speech and language therapy was initiated in fall 2000-2001 under the management of The Institute of Health Sciences at Anadolu University. This program offers the one and the only formal academic study opportunity for students in Turkey. As a brand new program, it has a crucial role in training the necessary SLPs in Turkey. Therefore, milieu teaching should be included in the curriculum so as to teach the registered SLP students how to endorse early language development. The purpose of this study is two-fold: (a) to assess the effectiveness of an instructional program designed to teach mand-modeling to participants who are students in a speech and language therapy MA program, (b) and to assess the effectiveness of mand-modeling in enriching the vocabulary repertoire of student subjects.

Method

Participants

Two students studying in the speech and language therapy MA program at Anadolu University and practicing on children with delayed language at the Education, Research and Training Center for Speech and Language Disorders, and one teacher working with groups of children with delayed language at the same center participated in this study. All participants were female and their average age was 26 years (24 to 27 years) and all had similar background knowledge and experience regarding individuals with developmental disabilities. The teacher participant, Ayca, had five years of teaching experience and undergraduate degrees in special education. Similarly, Oznur, an SLP student, had undergraduate degrees in special education. Aylin, another SLP student, had undergraduate degrees in

psychological counseling and experience regarding individuals with developmental disabilities. None of the participants had any previous experience with the target children or training in milieu teaching techniques. During the study, each participant worked with one of the children who were referred to the center because of delayed language. The criteria to choose children are as follows: (a) to be able to imitate the model verbally, (b) to have no hearing problem according to audiometric tests, (c) to have no problem behavior impeding participation, (d) to have no neurological problem according to neurological examinations, and (e) to be of preschool age. The target children's general, cognitive and linguistic development levels were determined by Ankara Developmental Screening Inventory Test (AGTE). AGTE consists of 154 items and four sub-tests—cognitive and linguistic development, fine motor skills, gross motor skills, and social and self-care skills. The total score obtained from the sub-tests reflects general development. Cronbach's Alpha coefficients, calculated for general development between 0-11, 13-44, and 45-72 months, were high. Test and re-test reliability scores for the same age groups were .99, .98, and .88, respectively. Also, the subjects' MLUs (mean length of utterance) were in accordance with the average score computed for Turkish children (Ege, Acarlar, & Güleriyüz, 1998). The mean age prior to intervention was 49.7 months (range 36 to 62 months).

Target child 1. Ahmet understood most of what was said to him, but communicated with one-word utterances due to a very limited vocabulary. Furthermore, the results of AGTE showed that his general development was in the 20 percent delay range whereas his cognitive, linguistic, and fine motor development levels were in the 30 percent delay range. MLU result was 1.26.

Target child 2. Hasan's responses to questions regarding concepts showed that he did not know concepts such as big-small, number, and colors. He comprehended what was said to him, but had a vocabulary repertoire limited to very few words (1-2 words). Furthermore, the results of AGTE showed that he had a delay of more than 30 percent in all developmental aspects (general, cognitive, linguistic, fine and gross motor development are in the 30 percent delay range). MLU result was 1.34.

Target child 3. Tamer understood most of what was said to him and vocalized some sounds, but communicated through few words (1-2 words). Furthermore, AGTE results showed that he had a delay of 30 percent in general, fine motor, social, and self care areas whereas the delay was more than 30 percent for cognitive and linguistic development. MLU result was 1.32.

Settings

All of the full probes, probes, training, and follow-up sessions for this study were conducted at one of the clinical rooms within the Education, Research and Training Center for Speech and Language Disorders (DILKOM) in Anadolu University. All sessions were carried out in a one-to-one educational setting where the participant and the target child took part in a given activity following the steps within the mand-model procedure.

Materials and Instruments

This study used the theoretical grounds of mand modeling, notes regarding the implementation process, and a test (assessment instrument) developed to evaluate how much knowledge participants had about mand modeling. Other materials used are Sony Digital Handycam DCR TRV 320E, 8mm videotapes, record sheets/forms, and a pencil. In addition, toys relating to target words that were designed to collect data during full probe sessions were used.

Experimental Design

A multiple probe design was used to investigate the effectiveness of a program developed to train teachers on conducting mand model training. This model required the researcher collect baseline data for each participant simultaneously. The baseline phase was discontinued and a training session was introduced for Participant 1 right after obtaining stable data during baseline. After Participant 1 reached a stable data by meeting the criterion, simultaneous full probe sessions with all participants began. Following the first probe session, a training session commenced for Participant 2 providing that he had reached a stable data. This procedure was continued until all three participants met the criterion (100 percent).

This study involved two independent variables. The first independent variable is the mand-model training program. The second one is the mand modeling technique used to teach target words to subjects. Also, this study had two dependent variables—(a) the percentage of correct responses that participants had to go through, and (b) the percentage of target word production by subjects.

The mand-model procedure involves the teacher or caregiver modeling and/or manding (requesting) a response from the child. In modeling, sometimes known as child-cued modeling (Alpert & Kaiser, 1992), the teacher or caregiver observes the focus of the child's interest (e.g., a toy train), and models the correct verbalization (e.g., "that's a choo choo train"). If the child makes the correct verbal response (e.g., "choo choo train"), the teacher or caregiver then praises the child and provides the object of interest. Ten words were identified from this process (bus, tractor, lorry, boat, truck, plane, car, train, jeep, and helicopter). Children were required to produce target words orally. The names of vehicles and words included in their schools' curricula and related traffic units were chosen for training. A screening session was conducted to determine words. For this purpose, the names of vehicles in those units were listed. Then, each student was asked to point to the vehicle whose name the teacher said. Finally, the subjects had to name the pointed vehicles. A list was formed of target words that were present in subjects' receptive vocabulary, but were not used in their expressive vocabulary. This study used the actual materials relating to target words. In the current study, two types of target responses for the children were identified: *Right Response* (child produces the target word following the participant's direction or child produces the target word spontaneously without any participant's direction) and *Wrong/Erroneous Response* (child produces a word that's different from the target word, or the target word is not comprehensible due to misarticulation).

Experimental Procedure

The examination of the effectiveness of the program designed to teach how to implement mand modeling contained four phases—full probe sessions, probe sessions, training sessions, and follow-up sessions. All experimental sessions were conducted in a one-to-one teaching format. The codings for the phases are below.

Full probe sessions. Full probe sessions were held to collect baseline data regarding each participant. Full probe sessions were conducted prior to teaching target skills and continued until obtaining stable data for at least three consecutive sessions. Furthermore, after meeting criterion 100 percent accurately for each participant following two training sessions, a simultaneous full probe session for each subject was conducted. Participants were asked to interact with their students as they would normally. Although participants were informed that the purpose of the study was to teach language skills to students, no other instruction related to mand model procedure was provided to participants during baseline and full probe sessions. Participants were not informed about the setting or the game they would play during full probe session designed to collect baseline data. Participants were asked to hold free play activities for subjects following the direction “Play games with the child.” Participants were given no feedback concerning the technique used during these sessions.

Probe sessions. The probe sessions, or play sessions, were administered exactly like the full probe sessions. The probe sessions were conducted for each participant following two training sessions. Data gathered in the probe sessions comprises the data of this study’s implementation phase. The probe sessions continued until all participants reached 100 percent accuracy about the steps of mand modeling in at least three consecutive probe sessions.

Training sessions. Training sessions had two phases. The first phase involved sessions during which a lecture on mand-modeling was given to all participants, a sample implementation video was shown, details were discussed, and finally a role play was acted out. The second phase involved play settings where participants interacted with target children. All training sessions were conducted in a one-on-one teaching arrangement.

Phase I initial training. The initial training phase consisted of four conditions (lecturing, sample video show, discussion, and role playing). During lecture conditions, the first author lectured on the mand modeling procedure including information about the theoretical grounds of mand modeling, the steps of mand modeling, the process of implementation, and case studies using mand modeling. During the sample video show, a videotaped simulation of the correct implementation of mand modeling procedure was shown to participants. The researcher stopped the video at certain intervals and directed questions such as “what is the next step?” or “is it correct to do that for this step?” Following a wrong response or no response within one minute, participants were given an oral explanation and the correct response by the researcher. The researcher answered questions directed by participants. When the participants gave two wrong responses

to the questions, the researcher turned back to the first condition of the first phase and lectured about the correct implementation of the mand-modeling procedure again. During the discussion, the researcher asked participants to exemplify environmental arrangements and the steps of mand-modeling for a communicative aim determined by them. Participants were given 15 minutes to prepare examples. All questions directed by participants were elaborated upon and nothing about mand modeling was left unclear. The second phase was restored providing that participants were not able to prepare an instructional program directed to communicative aims they determined within 15 mins. During the role play, the researcher asked the participants to act out instructional implementation of mand modeling according to what they had been taught. The researcher acted as a student and participants fulfilled the role of a teacher. The researcher stopped the role play if any step of mand modeling was incomplete or a mistake had been made and asked the participant to figure out what was wrong. If the participant was not able to respond accordingly and could not find out what the problem was, the researcher explained what the mistake was and asked the participant to repeat that step. A test developed to assess what participants knew about mand modeling was delivered at the end of this phase. The test contained 20 questions in the forms of multiple choice, sentence completion, and fill-in-the-blanks. Participants' scores were assessed according to the key prepared by the researcher beforehand. This phase was discontinued when participants met the criterion of 90 percent success. If any of the participants failed to meet the required criterion, the researcher and participants discussed the answers. Afterward, a different test of the same knowledge was delivered. This process went on until all participants met 90 percent success criterion. All three participants met the 90 percent success criterion at the first test.

Phase II implementation of mand model procedures. The second phase of training was held in a play setting where it was easy for participants to interact with target children. Play sessions were conducted twice a week and continued until all participants reached 100 percent accuracy about the steps of mand modeling. All these sessions were carried out in a classroom and each lasted for 20 minutes. The first 10 minutes of sessions were dedicated to answering questions and solving problems regarding the steps of mand modeling. In the sessions, participants and the researcher met individually to answer questions and solve problems about the steps of mand modeling. After the first 10 minutes of sessions were discontinued, the target child was brought into the session. The last 10 minutes, on the other hand, were allocated to playing games through the mand modeling technique. Play settings were arranged in a way that facilitated production of each target word. Participants asked questions like "what is this", "tell me what you want," "what do you want," and "what do you want to play with" when a subject directed his attention; and participants said "Yes" or "that's a yellow car" following a right response, and the target child was left to play for a few minutes. Following a wrong or no response, participants modeled the right response and asked the target child to repeat. The target child was given what she or he wanted and left to play for a few minutes after producing the right response. This flow of action continued for each target word.

During play sessions, some game contexts (vehicles going across a bridge, shopping, etc.) were created to make the sessions more fun.

Follow-up sessions. The follow-up sessions were conducted eight and sixteen weeks after the criterion was met. The follow-up sessions were conducted in the same manner as the full probe sessions. These sessions were set up for each participant individually.

Data Collection

Data regarding the behaviors and reliability of participants were collected to assess the effectiveness of the instructional program designed for this study. All sessions were videotaped. Afterward, the video records were watched and participants' behaviors were recorded by the researcher. A plus (+) and a minus (-) were recorded on control checklist of the steps of mand modeling for either the completion or incompleteness/missing of each step, respectively (See Table 1). Then, the number of steps that participants fulfilled accurately was calculated and divided by the total number of steps and multiplied by 100. This led to the percentage of right behavior displayed by each participant. Percentages were graphed. During the baseline data collection and training sessions, the researcher checked whether the target children produced the target words. Video records were transcribed and the number of target words that each child produced correctly was divided by the total number of target words and multiplied by 100. Then, the correct production of target words before and after training by each student was depicted on a bar graph.

Table 1

Anticipated Participants' Responses for Mand-Model Procedure

1. Participants direct the child's attention by providing a variety of attractive materials children want to play with (Participants use environmental arrangement strategies, i.e., inadequate materials, sabotage, silly situations).
 2. Participant mands "Tell me what this is" or "Tell me what you want" when a child approaches material.
 3. Participant praises the child for responding appropriately to the mand and gives the child the material.
 4. Participant provides a model for the child to imitate if the child does not respond or gives an incorrect or incomplete response.
 5. Participant reinforces the child for his/her correct response immediately.
-

Reliability

Reliability data was collected for independent (procedural) and dependent (interobserver agreement) variables by a trained observer for at least 20 percent of the total number of experimental sessions. These sessions were selected randomly. The observer was a speech language therapist graduate student that had been informed about the observation process. Inter-observer reliability was calculated by using a point-by-point method with a formula of the number of agreements multiplied by 100 (Tawney & Gast, 1984). As seen in Table 2, the mean percentage of inter-observer agreement for all participants during full probe sessions was 98.4 percent (92 percent-100 percent); was 96.6 percent (94 percent-100 percent) during probe sessions; and 100 percent for follow up sessions.

Table 2

Inter-Observer Agreement Reliability Data for Each Participant

Participants	Full Probe Session	Probe Session	Follow up Session
Aylin	98% (94 to 100)	97% (94 to 100)	100%
Oznur	100%	96%	100%
Ayca	97.3% (92 to 100)	97% (94 to 100)	100%

Procedural reliability was calculated by dividing the number of participant behaviors observed by the number of participant behaviors planned and multiplied by 100 (Billingsley, White, & Munson, 1980). Procedural reliability data were collected during at least 20 percent of the experimental sessions. These sessions were selected randomly. As shown in Table 3, procedural reliability measures resulted in an overall percentage of 97.6 percent (92 percent to 100 percent) during full probe sessions; 96.6 percent (92 percent to 100 percent) during probe sessions; and 100 percent during follow up sessions for all participants.

Table 3

Procedural Reliability Data for Each Participant

Participants	Full Probe Session	Probe Session	Follow up Session
Aylin	97% (94 to 100)	97% (94 to 100)	100%
Oznur	100%	96% (92 to 100)	100%
Ayca	96% (92 to 100)	97% (94 to 100)	100%

Data Analysis

The data were graphed and these graphs were analyzed visually. Axis 'y' (vertical) shows the percentages of right responses by the participants and axis 'x' (horizontal) shows the number of sessions. A visual analysis of graphs lets us see changes, if any, between the baseline phase and the implementation phase.

Findings and Results

The results are discussed in terms of (a) the effects of the intervention on participants' use of mand model procedure and (b) an increased use of target words by the target children. Figure 1 shows that percentage of correct participants' responses across the probe and training conditions. Full probe session is abbreviated to FP; probe session is shortened to P, and follow-up session is shortened to F. As seen in Figure 1, the mean scores of performance by participants during the baseline were generally low ($M = 0\%$). However, all participants showed progress following training. The mean scores of performance by participants during probe sessions were generally high ($M = 95\%$; range of individual means, 93 percent to 97 percent). The mean values of performance by participants during the final full probe sessions were high as well ($M = 100\%$). They were also generally high during follow-up sessions ($M = 100\%$).

Figure 2 shows the percentages of total target word use across pre-test, post-test, and follow-up conditions. Each target child learned his language targets. The means of the children's target word use on pre-test were generally very low ($M = 3.3\%$; range of individual means, 0 percent to 10 percent). All three children showed an increase in the percentage of total use of target words after training. Post-test percentages were generally high ($M = 73.3\%$; range of individual means, 60 percent to 90 percent). Follow-up percentages were also generally high ($M = 81.6\%$; range of individual means, 60 percent to 90 percent).

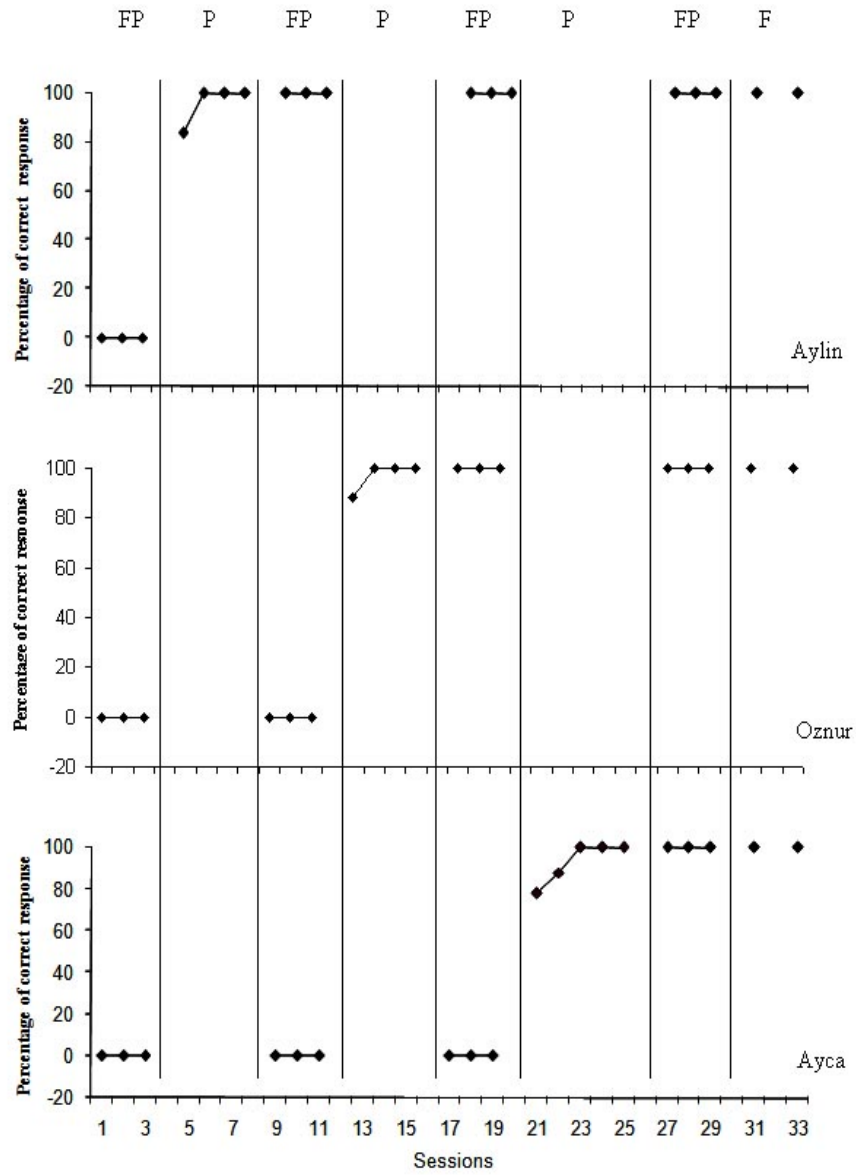


Figure 1. Percentage of correct participants' responses across the full probe, probe, and follow-up conditions

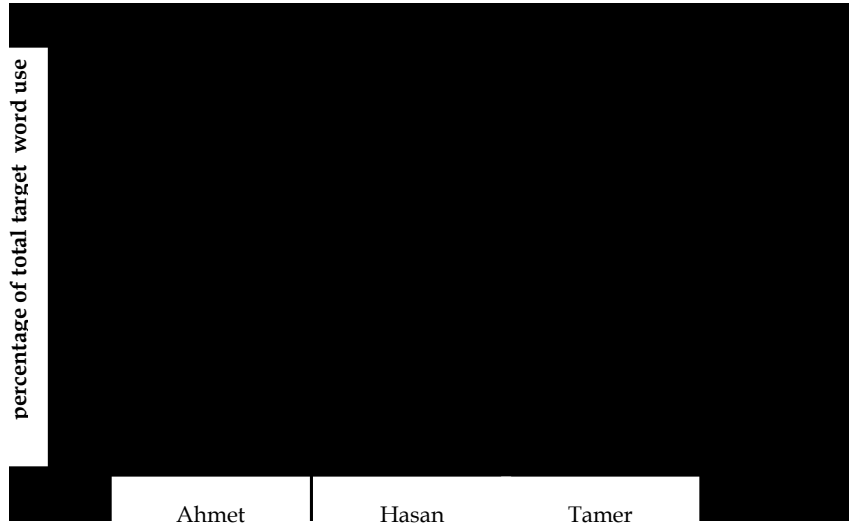


Figure 2. Target children's percentage of total target word usage

Conclusions and Recommendations

Data indicate that the training program is effective in training participants to conduct mand-model procedure in their classrooms. It also shows that participants displayed 0 percent correct responses before introducing the mand-model procedures whereas they showed 100 percent correct responses after introducing mand-model procedures via group seminar, individual meetings, video demonstrations, and providing performance feedback. Therefore, it can be stated that the training program developed to teach mand model is effective and participants needed to have training in order to be eligible to conduct mand model in their classrooms. Also, the results suggest that participants acquired the basic components of mand model procedures by extensive training; therefore, these results are consistent with the findings of some studies (Alpert & Kaiser, 1992; Kaiser & Hester, 1994; Hancock & Kaiser, 1996; Hemmeter & Kaiser, 1994, Warren et al., 1984). Therefore, professionals and peers in the field may consider using this training program as a source when delivering instruction to teachers and student teachers.

Moreover, the children learned the target words and they began using target words spontaneously. All children showed an increase in the percentage of total use of target words from baseline to after the training (percentage of total use of target words, 3.3 percent to 73.3 percent). The follow-up percentages of children were also generally high ($M= 81.6\%$). Although all participants implemented mand modelling efficiently, the success levels of subjects varied. Individual differences may account

for varying levels of success. The results of the current study were consistent with data showing an increase in productive language and communication skills in children (Warren & Bambara, 1989; Warren & Gazdag, 1990; Warren et al., 1993; Kaiser et al., 2000; Yoder & Stone, 2006; McGee & Daly, 2007; Yoder et al., 1995; Kroeger & Nelson, 2006; Alpert & Kaiser, 1992; Kaiser & Hester, 1994). In the current study, play sessions were designed for participants and children to collect the implementation data. Warren et al., in milieu teaching, suggested that play provides the context in which specific teaching and environmental strategies are embedded. In this study, environmental strategies were used.

Although the findings of the study are very encouraging, its limitations should not be ignored. Due to time limitations, it was not possible to check whether subjects used target words with different people or in different settings. Another limitation was that the same target words were used for all children. In other words, generalization of this study's data has not been collected yet.

In conclusion, practitioners should spend time learning new techniques and instructional strategies during their educational programs. Further research would be to conduct an error analysis to identify whether the participants make more errors in giving mand or providing model. Also, future researchers can analyze whether errors are more frequent for giving mand or for providing model. By achieving this further analysis regarding the possible error types during the mand model procedure, a stronger and powerful training package would be recommended in the area.

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Doğal Dil Öğretim Tekniklerinden Tepki İsteme Modelinin Öğretilmesinin Etkililiği

(Özet)

Problem Durumu: Dil ve konuşma sorunlarının son derece yaygın olmasından ve erken dönem dil ve iletişim sorunlarının genel gelişimi olumsuz olarak etkileyeceğinden, erken tanılama ve eğitim son derece önemlidir. Dolayısıyla, dil ve konuşma sorunları olan çocukların dil gelişimlerine destek olabilmek için, dil ve iletişim becerilerinin öğretilmesi gerekmektedir. Dil ve iletişim becerilerin öğretiminde farklı yaklaşımlardan yararlanılmaktadır. Bunlardan biri de, doğal yaklaşımdır. Doğal yaklaşım, tesadüfi-öğretim (incidental teaching), tepki isteme modeli (mand-model) ve bekleme süreli (time delay) gibi öğretim tekniklerinden oluşmaktadır. Son yıllarda, dil ve konuşma terapistlerinin rolü doğrudan uygulamacı olmadan, danışmanlığa ve sınıf içinde yer alan tekniklerde katılımcı rolüne doğru bir değişiklik göstermektedir. Ayrıca, dil ve iletişim becerilerinin genellenebilmesi için terapilerin doğal ortamlarda gerçekleştirilmesi gereği vurgulanmaktadır. Dolayısıyla, konuşma terapistlerinin gerek ailelere gerekse öğretmenlere, çocukların dil ve iletişim becerilerini desteklemede gerekli olan yardımcı sağlayabilmeleri için doğal dil öğretim teknikleri bilmelerinin ve uygulamalarının önemi göz ardı edilemez. Erken dil gelişim öğrencilerin genel gelişimini olumlu etkileyeceği göz önünde bulundurulursa, bu desteği sağlayacak bireylerle çalışmak ve desteklemek dil ve konuşma terapistlerinin görevleri arasında yer almaktadır.

Araştırmanın Amacı: Bu araştırmanın amacı, dil ve konuşma terapistliği yüksek lisans programına kayıtlı iki öğrenciye ve gelişim geriliği olan çocuklarla çalışan bir öğretmene, doğal dil öğretim tekniklerinden biri olan tepki isteme modelini öğretmek için hazırlanan öğretim programının etkililiğini belirlemektir. Ayrıca, doğal dil öğretim tekniklerinden tepki isteme modelinin hedef öğrencilerin sözcük dağarcığını artırmadaki etkisini belirleme hedeflenmiştir. Aynı zamanda, bu programın uygulama sona erdikten sekiz ve onaltı hafta sonraki izleme etkisi incelenmiştir.

Araştırmanın Yöntemi: Araştırmada, doğal dil öğretim tekniklerinden tepki isteme modelini öğretmek için hazırlanan programın etkililiğini belirlemek üzere tek denekli araştırma modellerinden yoklama evreli denekler arası çoklu yoklama modeli kullanılmıştır. Araştırma, Anadolu Üniversitesi Dil ve Konuşma Bozuklukları Eğitim, Araştırma ve Uygulama Merkezi (DİLKOM)'nde uygulamalarını sürdüren iki yüksek lisans öğrencisi ve aynı merkezde gecikmiş dil geriliği olan öğrencilerin grup eğitimini sürdüren bir öğretmen ile yürütülmüştür. Ayrıca, bu katılımcıların öğretim yaptıkları gecikmiş dil geriliği olan üç öğrenci de araştırmada yer almıştır. Bu çalışmada doğal dil öğretim tekniklerinden tepki isteme modelinin kuramsal temelleri ve uygulama sürecine yönelik hazırlanmış bilgi notları ve katılımcıların bu tekniğe ilişkin bilgisini değerlendirmek amacıyla hazırlanmış test (değerlendirme aracı) kullanılmıştır.

Bu araştırmanın iki bağımlı, iki de bağımsız değişkeni vardır. Bağımlı değişkenler, katılımcıların tepki isteme modelinin gerçekleştirmeleri gereken basamakların yüzdesi ve öğrencilerin hedeflen sözcükleri üretim yüzdeleridir. Öğrencilerin sözel olarak üretmeleri için hedeflenen sözcükler, otobüs, kamyon, tır, araba, jip, traktör, kayık, uçak, tren ve helikopterdir. Bağımsız değişkenler ise, deneklere doğal öğretim tekniklerinden tepki isteme modelini uygulamasını öğretmek amacı ile hazırlanmış öğretim program ve hedef öğrencilere hedeflenen sözcükleri öğretmek için kullanılan tepki isteme modelidir.

Tepki isteme modelinin uygulanmasını öğretmek için hazırlanan programın etkililiğini inceleyen bu araştırma, toplu yoklama oturumları ve öğretim programının uygulandığı öğretim oturumları olarak iki evreden oluşmuştur. Toplu yoklama oturumları, deneklerden başlama düzeyi verisi toplamak amacıyla öğretim oturumlarına başlamadan önce ve her bir denek ile her iki öğretim oturumu sonunda % 100 ölçüt karşılandıktan sonra tüm deneklerle eş zamanlı olarak gerçekleştirilmiştir. "Çocukla oynayın" yönergesi verilerek serbest oyun etkinliğini gerçekleştirmeleri istenmiştir. Oturumların tümü bire bir öğretim düzenlemesi biçiminde gerçekleştirilmiştir.

Öğretim oturumları da iki evreden oluşmaktadır. Birinci evrede tüm deneklerin yer aldığı tepki isteme modeli ile ilgili konu anlatımının, örnek öğretim videosunun izlenmesinin, anlatılan bilgilerin tartışılmasının ve canlandırmanın yer aldığı öğretim oturumları düzenlenmiştir. Bu evrenin sonunda, deneklerin tepki isteme modeli ile ilgili bilgilerini

değerlendirmek amacı ile hazırlanan test verilmiştir. İkinci evrede ise deneklerin çocuklarla etkileşim sağlayabilecekleri oyun oturumları gerçekleştirilmiştir. Oyun oturumları, öğretim oturumları tamamlandıktan sonra haftada iki kez düzenlenmiş ve katılımcılar tepki isteme modelinde yer alan basamakları % 100 doğru olarak gerçekleştirene kadar sürdürülmüştür.

Araştırmada geliştirilen öğretim programının etkililiğini sınamak üzere katılımcı davranışlarına ilişkin veriler elde edilmiştir. Güvenirlik için de, hem gözlemciler arası güvenirlik hem de uygulama güvenirliliği verileri toplanmıştır. Tüm katılımcılar için gözlemciler arası güvenirlik ortalaması, toplu yoklama oturumları için %98.4 (%92-%100), yoklama oturumları için %96.6 (%94-%100) ve izleme oturumları için %100 olduğu belirlenmiştir. Katılımcılar için uygulama güvenirliliği ortalaması, toplu yoklama oturumları için %97.6 (%92-%100), yoklama oturumları için %96.6 (%92-%100) ve izleme oturumları için %100 olduğu görülmüştür. Hazırlanan programın etkililiği grafiksel analiz kullanılarak belirlenmiştir.

Araştırmanın Bulguları: Araştırma bulguları, katılımcıların doğru tepki yüzdesi ortalamasının başlama düzeyi için %0 olduğu tespit edilmiştir. Uygulanan eğitim programı sonrasında katılımcıların doğru tepki yüzdesi ortalamalarının yoklama oturumları için %95 (%93-%97) ve izleme oturumları için de %100 olduğu görülmüştür. Ayrıca, katılımcıların programı uyguladıkları çocukların hedef sözcük kullanım yüzdelerinin ortalaması, öntestte %3.3 (%0-%10), sontestte %73.3 (%60-%90) ve izleme oturumlarında %81.6 (%60-%90) olarak belirlenmiştir.

Araştırmanın Sonuçları ve Önerileri: Tepki isteme modelinin öğretimine yönelik programın çalışmaya katılan tüm katılımcılarda etkili olduğu ve her katılımcı, yöntemin uygulama basamaklarını %100 doğrulukta uyguladığı saptanmıştır. Bu çalışmada hedef öğrenciler belirlenen hedef sözcükleri öğrenmişler ve bu sözcüklerle ilgili spontan üretimleri artmıştır. Öğretim sona erdikten sekiz ve onaltı hafta sonra da çocuklarda öğrenilenlerin kalıcılığının korunduğu görülmüştür. tepki isteme ve model olma sürecinde uygulamacıların hata tiplerini belirlemek üzere hata analizlerini içeren ileri araştırmaların desenlenebileceği düşünülmüştür.

Anahtar Sözcükler: Doğal dil öğretim teknikleri, tepki isteme modeli, gecikmiş dil, dil ve konuşma bozuklukları

Us and Others: A study on Prospective Classroom Teachers' Discriminatory Attitudes

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Abstract

Problem Statement: Today, it can be said that all kinds of discrimination are becoming increasingly widespread. Considering the fact that all the institutions in a society are inextricably intertwined, it is very important to study the concept of "discrimination" from the point of view of education. First of all, there is a need for a descriptive study to show discriminatory attitudes and their relationship to some socio-demographic characteristics of students, who are attending education facilities to become future classroom teachers. Only after identifying their attitudes, will it be possible to make suggestions as to what can be done in those facilities and then recommendations can be put into practice. Keeping these ideas in mind, the present study attempts to identify discriminatory attitudes of students attending classroom teaching departments, in some of the Education Facilities in Turkey.

Purpose of the study: This study aims to reveal relationships between prospective classroom teachers' discriminatory attitudes, and some socio-demographic variables.

Method: The sample of the study consists of 840 first- and fourth-year students, attending Classroom Teaching Departments in some colleges of education, in Turkey. Within this framework, the study utilizes a descriptive survey method. The study is said to be a cross-sectional sampling, in terms of the comparison of first and fourth grade students.

Two types of data collection tools were used: A Discrimination Attitudes Scale (DAS), consisting of four sections, and A Student Personal Profile Form.

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Findings and Results: The findings show that female students had lower discriminatory attitudes, when compared with male students. Additionally, similarities existed between the first and fourth year students' discriminatory attitudes, although these attitudes tended to decrease towards the last (i.e., fourth) year. It was also observed that the education level of the mother was influential in the attitudes, and that discriminatory attitudes tended to decline from villages to cities.

Conclusions and Recommendations: In conclusion, the lack of differences in the discriminatory attitudes of the first and fourth year students, in the expected direction, suggests the need to discuss to what extent we are successful in educating contemporary elementary teachers. With regard to contributing to peace at home and in the world, it is essential to take into consideration the discrimination issue, during the process of selection, placement and assessment, of elementary teachers. There is a need for further study in the area of evaluation of teacher training programs, within the hidden curriculum framework.

Keywords: Prospective Classroom Teachers, Classroom Teacher Training, Discrimination

Today, it can be said that all kinds of discrimination are becoming increasingly widespread. In a study conducted in one hundred developed and underdeveloped countries, Forsythe et al. (2000, cited from Morrison and Jütting, 2005), found a high level of discrimination in Muslim and Hindu societies, in terms of schooling rate and opportunities allowing women to participate in economic life. This finding draws attention to the prevalence of discrimination in other countries, as well. Considerable gaps still exist between women and men, regarding access and control of resources, economic opportunities, and expressing oneself in the arena of power and politics. Women still earn one-third of what men earn in the same occupation, and they make up two-thirds of eight hundred seventy-six million illiterate people. Women's schooling and higher education rate in most countries is low, in comparison to men's (Rivera- Batiz, 1992; Iyigun & Owen, 1999, Ginn & Arber, 2001).

The understanding of "us and others" may result in an increase in hostility, among various religions, sects and nations of the world. It can be said that all sorts of discrimination are globalising, and along with the phenomenon of globalisation, violence has a tendency to become a part of daily life in both underdeveloped and developing countries. When the definitions of "discrimination", which arises from the understanding of "us and others," are analysed, it can be seen that the concept has been defined in similar ways in different dictionaries. The term "discrimination" is defined by Oxford (2000) as "(against/ in favour of somebody) treating a person or group differently (usu. worse) than others: wide spread racial/sexual discrimination." According to American Heritage (1994), it means "to make a clear distinction; differentiate. Schermerhorn, Hunt and Osborn (1988), describe discrimination in regard to sociological aspects, as denial of equality, based on the

characteristics of individuals such as age and gender. Discrimination in terms of social psychology is defined as the transformation of rigid opinions and negative emotional reactions to unfair violence, including acts (Aronson, Wilson & Akeit, 1997).

With regard to terms of employment in the public or private sector, an employer finds expression in discriminating on the basis of such characteristics as race, gender, nationality, age, disability and religion. Discrimination may result in different reactions to an individual or a group, because of their age, race, color, nationality, ethnic background; pregnancy, marital status, freedom, religious belief or sexual preference and other personal characteristics (2006, Human Rights and Equal Opportunity Commission). When focused on definitions of discrimination, it is seen that definitions converge in “prejudice, being against someone based on differences or giving privilege to someone”. In another definition made by Blank (2004; p39), discrimination is treatment on the basis of inadequately justified factors, other than race, that disadvantages a racial group (differential effect). It can be seen that all the definitions given so far, share the following: prejudice, because of differences, being against somebody, or granting privileges.

In spite of substantial improvements in the areas of human rights and democracy in the world, and in Turkey, it is possible to say that almost all kinds of discrimination exist in all societies, and can appear in different forms. For example, a survey carried out by GALLUP, gives us important clues with regard to how prejudiced U.S. citizens are towards Muslims. According to the survey, four out of ten U.S. citizens think a separate identity card should be given to Muslims, and fifty percent of Americans, who had not established any social relationship with Muslims, did not want to have Muslim neighbours (Saad, 2006). In another study conducted in Turkey, it was found that high school and university students had high discriminatory attitudes against Jews and Armenians (Gümüş & Gömleksiz 1999). The same study showed that religious and nationalist tendencies were also quite high among those students. In another extensive study, high school students were found to be deeply prejudiced against foreigners of various (ethnic, religious, political, national) groups and women (Turkish Social Sciences Association, 2005). In another study carried out in Kyrgyzstan, the level of discrimination against foreigners was observed to be very high (Gömleksiz & Gümüş, 2002).

There are many other studies which deal with the topic of discrimination. For example, in the USA, black college students were turned away from a familiar chain restaurant by white employees, who told them that the restaurant was closed. However, white students entering after that interaction, were seated and served. Another restaurant chain has been repeatedly cited for requiring black adolescents to pre-pay for their orders, and subjecting them to extremely long waits not experienced by white customers (*Los Angeles Times*, 1993a, 1993b, cited from Wakefield & Hudley, 2005). The U.S. Census Bureau and Educational Research Service (Educational Research Service, 1995, U.S. Census Bureau, 1990, cited from Wakefield and Hudley, 2005), declare that in America, classes are formed according to race, economical income and ethnic differences, and that these classes are rigidly segregated from one another.

Some of the studies conducted on young people in Turkey, give us some important clues about discrimination also. In a study on Adana, which can be considered an important metropolis, it was observed that high school and university students manifested very high discriminatory attitudes and aggression; had a tendency to obey authorities without questioning the reasons; and looked down on and excluded those who were not "one of them" (Gümüş & Gömleksiz, 1999). In the same study, it was also observed that as religious and nationalist tendencies increased, in a similar manner the students' antidemocratic tendencies increased. In another extensive study, high school students were found to be significantly prejudiced against foreign or local (ethnic, religious, political, national) groups and women (Turkish Social Sciences Association, 2005). Similar tendencies were also revealed in another study carried out by Istanbul Vakfi Sosyal Arastirmalar Merkezi (1998). When Turkey is evaluated in terms of the discrimination women face, it is possible to say that male-dominant ideology has a clear effect on the cultural life, in comparison to Western countries (Karakuş, 2006). When we examine the study which was conducted by Deveci, Yılmaz and Karadağ (2008), we can see the crucial need for peace education in curriculums. Pre-service teachers, who participated in the study, state that peace education is significant, since it encourages values, such as social harmony, tolerance, global thinking, and individual development. The participants have offered the following suggestions: Teaching strategies and methods should be employed that emphasize peace education, and in-service education seminars for teachers, should be incorporated, that develop peace education/peace awareness. Furthermore, pre-service teachers report that peace education is indicative of an environment in which students can easily express their opinions. Peace education offers opportunities for sincere relationships between teachers and students, and encourages differences to be adopted and internalized.

According to the Global Gender Gap (GG) report, Turkey ranks eighth among 128 countries, where women are treated badly (Hausmann, Tyson & Zahidi, 2007). Again, considering the fact that all the institutions in a society are inextricably intertwined, it is very important to study the concept of "discrimination", from the point of view of education. When doing so, a dramatic increase in teachers' discriminatory and authoritarian behaviors is observed, and we see that anti-democratic attitudes and behaviors have increased. From the 1970s to the present, studies conducted by Ertürk (1970), Tezcan (1981) Gözütok (1993, 1994), Feder (1993), Hyman and Perone (1996), Levi (2000), Mahiroğlu and Buluç (2003), Gümüş, Tümkaya and Dönmezer (2004), Kang, (2002), Hytten (2006) and Gordon (2006), have all shown that there has been an increase in teachers' anti-democratic behaviors, and that authoritarian and discriminative attitude values have been considerably high. The anti-democratic tendencies observed in teachers, necessitate a greater awareness in fostering teacher education. Arnstine (1995), claims that schools are serving to sovereign social institutions, that they are hierarchic, authoritarian, elitist, competitive, racist, sexist and homophobic places, and that teachers do not possess the skill of teaching democracy in a democratic manner. In contrast, Küçükahmet (1994), draws our attention to the role of teachers, which is to provide a good model for their students, and indicates that "there are more than one thousand studies

which show that students are affected by their teachers' attitudes, behaviors, attention, needs, values, and personal characteristics." Banks (2001), maintains that, in order for teachers to educate students to become citizens who are prominent in society, they themselves first of all, should respect national and international values, different identities and cultures. Hahn (2005), also emphasizes that students learn about human rights, their own cultural values, "other's" cultural values and to respect the "other" in class, at school, and in the society they live in, and for this reason, teachers should have a point of view which is flexible and respects differences. A great number of studies have been carried out on the importance of the education of teachers, in coping with racism and anti-democratic behaviors (Osler, Rathenov & Starkey, 1996; Holden & Clough, 1998; cited from Osler & Starkey, 2001).

When all these studies are taken into consideration, it is clear that antidemocratic and discriminative attitudes and behaviors of teachers may lead to attitudes and behaviors which may result in violence in students, or that they can strengthen the existing attitudes and behaviors. If the value systems in a school can be formed as a lifestyle, by taking democracy and human rights as a basis, it may be possible to make important contributions in assisting students to gain democratic attitudes and behaviors with the help of a hidden curriculum. This can only be achieved with teachers and administrators who can embrace democratic principles, and put them into practice in life, who are not authoritarians, and who do not have anti-democratic and discriminative attitudes themselves. At this point, it can be said that the most important responsibility rests with Education Facilities. If Education Facilities can become places where democracy thrives, teachers who are educated in such institutions, can also be influenced positively by those qualities.

If discriminatory attitudes and behaviors are thought to be the most important indicators of violence, it can be said that there is a need for a descriptive study to show the discriminatory attitudes of students who are attending Education Facilities to become future teachers. Only after identifying their attitudes, will it be possible to make suggestions as to what can be done in those facilities, and then recommendations can be put into practice. Keeping these ideas in mind, the present study attempts to identify discriminatory attitudes of students attending elementary teaching departments, in nearly all of the Education Facilities in Turkey.

Method

Research Design

This study aims to determine the relationship between discriminatory attitudes of Elementary Teaching Department students and some variables (gender, grade level, level of father's education, and level of mother's education). Within this framework, the study utilizes a descriptive survey method. The study is said to be a cross-sectional research sample, in terms of the comparison of first and fourth-grade students.

Participants: This study consisted of 840 students from the College of Education, majoring in elementary education - classroom teaching program - at ten public

facilities of education. Thirty-seven percent of the participants were male, and sixty percent female; three percent did not indicate their gender. Fifty-six percent of the participants were freshmen, and forty-four percent were seniors. Students' ages ranged from sixteen to twenty-nine ($M = 20.1$, $SD = 1.9$). The sample is intensified in the seventeen to twenty-five age intervals. There is one student aged twenty-nine, and five students aged sixteen. Ten different universities, representing different regions in Turkey, were selected at random. Both city universities (five) and rural-area universities (five) were included, to represent a more diverse group. All of these schools were public institutions. Following government mandates, the students studying in the elementary education departments in Turkey, are subjected to the same curriculum, with the exception of a few elective courses. Measurement tools were sent by mail, along with instructions to the deans of the College of Education, for each campus. Before mailing the questionnaires, the deans were informed about the administration procedure by phone. The questionnaires were administered to the students by their instructors, during class time.

Research Instruments

In the study, two data collection tools were primarily employed, namely, the Discrimination Attitude Scale (DAS), and A Personal Profile Form.

Discrimination Attitudes Scale (DAS): In this research, Discriminatory Attitudes Scale (DAS) developed by Gömleksiz, Poyrazli, and Akar-Vural (2008), were used for measuring prospective elementary teachers' discriminatory attitudes. A five-point Likert Scale requires respondents to indicate their degree of agreement or disagreement with the given statements. The response categories include: strongly agree (5 points); agree (4 points); somewhat agree (3 points); disagree (2 points); and strongly disagree (1 point). When calculating the score, negative responses were reversed. The higher the score obtained from the scales, the more the discriminatory attitudes were accepted. Twenty-one itemed DAS consists of four sub-scales, which are: 7 itemed Discrimination against same-sexuals sub-scale (Cronbach's $\alpha = .88$); 7 itemed Discrimination against women sub-scale (Cronbach's $\alpha = .87$); 4 itemed Discrimination based on race-ethnicity and religion subscale (Cronbach's $\alpha = .61$); and 3 itemed Discrimination against foreigners sub-scale (Cronbach's $\alpha = .51$). Validity and reliability studies of DAS were carried out through explanatory and confirmatory factor analyses, by the researchers (see Table 1). These twenty-one items were subjected to a confirmatory factor analysis. Use of both factor analysis methods on the same sample is an approved method of scale development (Jöreskog & Sörbom, 1993, p. 22-27; Thompson, 2005, p. 110-114). LISREL 8.30 was used to confirm four-factor structure of the scale. Fit indices such as chi-square, goodness of fit index (GFI), adjusted goodness of fit index (AGFI), comparative fit index (CFI), normed fit index (NFI), and root mean square error of approximation (RMSEA) were examined (Hair, et al., 1998). The LISREL results supported the 4-factor model.

Chi-square (0.24) and root mean square error of approximation (RMSAE= 0.061) were acceptable. GFI (0.921), AGFI (0.901), CFI (0.924), and NFI (0.912) were also acceptable (Bentler, 1990). All of these results indicate that the items that were

created to measure “discriminatory attitudes” belong together (Bentler & Bonett, 1980).

Table 1

Factor Loadings, Item and Subscale Correlations, Comparison of High and Low scoring Quartiles, Item-Total Correlations, Means, and Standard Deviations of Items in Turkish Discriminatory Attitudes Scale

Subscales and Items	Factor Loadings				Item-Subscale r_{is}^b	Upper-Lower Groups t -value t^a	Anti-image r_{it}^b	M	SD
Discrimination Against Samesexuals (Cronbach's alpha = .88)									
I don't like samesexuals to be around me	.81	.23	.17	.06	.86	43.67*	.91	3.23	1.28
I would be disturbed if a samesexual instructor taught me	.77	.18	.16	.03	.80	40.17*	.91	3.10	1.44
I wouldn't get disturbed if I worked with a samesexual person in my workplace	.77	.17	.04	.11	.78	31.22*	.91	3.07	1.34
The increase in the number of samesexuals among university students concerns me in terms of our social values	.71	.17	.21	.09	.76	28.46*	.93	3.65	1.20
I find samesexuals morally inadequate	.68	.25	.17	.03	.75	30.1*	.93	3.30	1.28
No matter what happens, the sexual orientation of individuals should be respected	.67	.20	.12	.04	.72	24.71*	.95	2.47	1.20

(continued on next page)

Subscales and Items	Factor Loadings				Item-Subscale r_{is}^b	Upper-Lower Groups t -value t^a	Anti-image r_{it}^b	M	SD
Being a transsexual does not keep somebody from being a good citizen	.59	.25	.02	-.01	.65	21.68*	.94	2.71	1.25
Discrimination Against Women (Cronbach's alpha = .87)									
The head of the family is the man	.27	.78	.12	.08	.84	42.13*	.90	2.81	1.36
Women have inadequate skills to fulfill what leadership requires	.13	.72	.15	.05	.73	27.34*		2.40	1.23
Men inherently possess superior qualities	.22	.69	.17	.05	.75	30.3*	.94	2.48	1.31
The most important responsibility of a woman is to be a good wife	.28	.68	.04	.06	.75	32.26*	.93	3.12	1.33
Providing financial support for family is a man's responsibility	.24	.67	.07	.04	.73	27.92*	.93	2.48	1.22
Women are the honor of men	.42	.67	.12	-.02	.80	38.98*	.92	3.34	1.43
If it is necessary, women can be beaten	.08	.65	.12	.02	.63	18.55*	.93	1.69	1.03

Note.-The criteria were eigenvalues larger than 1.00 factor loadings greater than .40. Total percent variance explained is 56%. ^aComparison of the mean scores of upper and lower

quartiles on the Discriminatory Attitudes Scale. ^bItem-subscale correlation r_{is} ; item-total correlation r_{it} .

* $p < .05$.

A Personal Profile Form: This 23-itemed questionnaire was developed by the researchers to collect information on students' gender, the name of the university they were attending, their age, their class standing, and other socio-demographic characteristics.

Data Analyses

In the study percentages, arithmetic means, weighted averages, and MANOVA were utilized. Weighted average of a subscale was calculated with division of subscales' average to item number of subscale.

Findings and Results

In this section, the effects of each variable (i.e. students' gender, level of the classroom in which they were registered, mother's and father's education level), on students' discriminatory attitudes were tested both individually and collectively. MANOVA test revealed that, among the socio-demographic variables covered, only gender and mother's education level were found to be a significant factor that affected students' discriminatory attitudes. Gender [$\Lambda = 0.927$, $F(1, 840) = 13.526$, $p < 0.001$], mother's education level [$\Lambda = 0.947$, $F(6, 840) = 1.553$, $p < 0.001$]

Table 2

Means and Standard Deviations for Gender, Grades, Father's Education Level, and Mother's Education Level

	Scales									
	Discrimination against Samesexuals			Discrimination against Women		Discrimination based on Race-Ethnicity and Religion		Discrimination against Foreigners		
	<i>N</i>	\bar{X}	<i>S</i>	\bar{X}	<i>S</i>	\bar{X}	<i>S</i>	\bar{X}	<i>S</i>	
Gender										
Male	314	3.34	.97	3.25	.84	2.33	.78	2.70	.84	
Female	508	2.91	.97	2.20	.79	2.26	.82	2.64	.72	
Grade										
One	468	3.09	.97	2.65	.97	2.28	.80	2.63	.76	
Four	372	3.06	1.00	2.57	.94	2.32	.80	2.73	.77	
Father's Education Level										
Illiterate	16	3.12	.89	3.23	.92	1.98	.88	2.56	.82	

Literate	30	3.15	1.05	2.80	.84	2.32	.87	2.34	.73
(continued on next page)									
Primary school	280	3.09	.92	2.74	.94	2.34	.78	2.69	.80
Secondary school	101	3.26	.97	2.79	.98	2.33	.80	2.70	.74
High school	181	3.10	.97	2.57	.89	2.32	.83	2.66	.70
Vocational school	32	3.25	1.08	2.60	.95	2.18	.69	2.82	.66
University	186	2.88	1.05	2.29	.98	2.21	.79	2.66	.79
Mother's Education Level									
Illiterate	103	3,16	,90	3,00	,94	2,28	,80	2,56	,83
Literate	53	3,13	,99	2,92	,91	2,34	,90	2,59	,74
Primary school	412	3,10	,96	2,66	,95	2,34	,79	2,72	,73
Secondary school	82	3,30	1,02	2,67	,85	2,30	,83	2,86	,79
High school	98	2,99	1,02	2,24	,89	2,25	,75	2,59	,76
Vocational school	29	2,71	1,07	2,33	,90	2,12	,73	2,48	,83
University	54	2,67	1,06	2,00	,87	2,04	,85	2,65	,77

Gender and Mother's Education Level

When the effects of gender and mother's education level on discriminatory attitudes are tested, it is seen that gender variable affects discrimination against women (*df*: 1-820 *F*: 38.55) and against same-sexuals differ? significantly. Additionally, MANOVA test revealed that the difference was in favor of girls. In a similar manner, it is also seen that the mother's education level affects the discrimination against same-sexuals significantly (*df*: 6-824 *F*: 3.20). Table 3 shows that gender and mother's education level collectively affect discrimination against foreigners significantly.

Table 3
The Effects of Gender and Mother Education Level on Prospective Classroom Teachers' Discriminatory Attitudes (MANOVA)

Source	Dependent Variable	df	F	η^2	p
Gender	Discrimination against samesexuals	1	18.070	.026	.000*
	Discrimination against women	1	48.430	.066	.000*
	Discrimination based on race/ethnicity-religion	1	1.969	.003	.161
	Discrimination against foreigners	1	.334	.000	.563
Mother's Education Level	Discrimination against samesexuals	6	3.116	.026	.005*
	Discrimination against women	6	.600	.005	.730
	Discrimination based on race/ethnicity-religion	6	.865	.007	.520
	Discrimination against foreigners	6	1.954	.017	.070
Gender* Mother's Education Level	Discrimination against samesexuals	6	1.034	.009	.402
	Discrimination against women	6	.448	.004	.846
	Discrimination based on race/ethnicity-religion	6	.613	.005	.720
	Discrimination against foreigners	6	2.524	.022	.020*

*p value set at .01

Conclusions and Recommendations

As far as gender is concerned, it is seen that the attitude means of female students are lower than those of male students in this research. These findings suggest that female students have more democratic attitudes than male students. Nevertheless, it can be said that the family structure of the female students may have led to these findings. Although it has not been shown in a table, it was found that the education level of female students' parents was higher than that of male students. It was also found that, as the parents' education level increases, the discriminatory attitudes of the university students tend to decrease (Gümüş & Gömleksiz, 1999).

By and large, except for the Foreigner Discrimination, the findings indicate that discriminatory attitudes tend to decline as the level of father-mother education increases. These findings show similarities to the findings from a study carried out by Aksu (2005), to identify gender discrimination perceptions of elementary teaching candidates. Aksu (2005), identified that, as the mother-father education level increases, gender discrimination attitudes show a parallel decrease. In the present study, it is striking to see that the mother's education level can play a more influential role than the father's education level in decreasing gender discrimination. As the level of the mother's education increases, in a systematic manner, the level of same-sexual, woman and discrimination based on race-ethnicity and religion decreases. This finding gives us pertinent information as to the necessity of educating women in decreasing discrimination. According to a study carried out by Papanastasiou and Koutselini (2004), it is stated that the formation of children's democratic attitudes is more important than the mother's education level, the father's education level, and the number of books and newspapers read at home. When the findings are taken into consideration as a whole, female discrimination can be said to be the most important discrimination type, although the same-sexual discrimination mean scores are higher. From the point of view of the variables studied, it is seen that female discrimination is the most influential one, as it leads to the biggest difference. The fact that women are discriminated against, both in Turkey and in almost all of the countries in the world, signifies that more influential measures should be taken in order to decrease this type of discrimination. Within the framework of the findings, it can be claimed that, along with the decrease in female discrimination, all kinds of discrimination will also decrease. Specifically, the mother's education level as a significant variable in discriminatory attitudes may play an important role in the establishment and preservation of world peace.

Some other significant findings emerging from the study are:

- Male students tend to have strong discrimination attitudes towards women and same-sexuals
- Female students have lower discrimination attitudes when compared with male students

In conclusion, the lack of differences in the discriminatory attitudes of the first and fourth-year students, in the expected direction, suggests the need to discuss to

what extent we are successful in educating contemporary classroom teachers. Without a doubt, this situation is perceived as a problem throughout the world. A study carried out by Christensen and Massey (1989), in Australia, on 751 teacher candidates, evaluated teacher candidates as not far from the traditional gender roles and male dominant attitude. Consequently, the study emphasized that the teacher training system is not adequately removed from the traditional gender roles, and discrimination against women. In his studies, Aksoy (2007), analyzed the opinions of teacher candidates in three universities in Ankara, on open or implied discrimination, and as a result, suggested that an implied program (conferences, panels, regular activities) as well as an open program should be implemented, in order to cope with discrimination and provide equality. Hinojosa and Moras (2009), carried out a study in America on preschool, primary and secondary education teachers, concluding that teachers tend to make ethnic discriminations, and suggested emphasizing the terms of multiculturalism and equality in teacher training programs. With regard to contributing to peace at home and in the world, it is crucial to consider the discrimination issue during the process of selection, placement and assessment of elementary classroom teachers. There is a need for further studies in the area of evaluation of teacher training programs, within the hidden curriculum framework.

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Biz ve Ötekiler: Sınıf Öğretmeni Adaylarının Ayrımcı Tutumları Üzerine Bir Araştırma

(Özet)

Problem Cümlesi: Dünyada ve ülkemizde, insan hakları ve demokrasi konusunda birçok gelişmeler olmasına karşın şiddetin, toplumsal yaşamda her zamankinden daha fazla yer tuttuğu da büyük bir gerçek olarak karşımızda durmaktadır. Son günlerde tüm Dünyada Din ve milliyetçiliğin giderek artış gösterdiği, irili ufaklı birçok savaşın sürdüğü, etnik-dini çatışmaların gözle görülür bir biçimde arttığı ve tüm bu sorunların insanlığın ortak gündeminde ilk sıraya oturduğu dikkati çekmektedir. Küreselleşmeyle birlikte, ülkeler arasında sınırların nispeten kalkması, barış ve demokrasinin yeryüzünün tüm coğrafyalarında yaygınlaşması beklenirken, kendisinden olmayana ("öteki"ne) karşı tepkilerin inanılmaz ölçüde arttığı da görülmektedir. Bu nedenle de, küreselleşme olgusuyla birlikte şiddetin de adeta küreselleştiği ileri sürülebilir.

Kuşkusuz, şiddetin bu denli artmasında birçok etken olmakla birlikte, şiddetin en önemli kaynaklarından birinin, küreselleşmeyle birlikte artan "ayrımcılık" olduğu söylenebilir. Bugün, toplumların karşı karşıya oldukları en önemli sorunlardan birisidir "ayrımcılık". Toplumsal dönüşümün sağlanmasında, demokratik ve özgürlükçü toplumların

yaratılabilmesinde; sosyal sınıflar ve kültürler arasında adalet ve kaynaşmayı sağlamada bireylerin diğerlerinin, etnik kimliklerine, cinsiyetine, toplumsal sınıflarına ilişkin önyargılardan uzak durabilmeleri ve birbirlerini "öteki"leştirmeyen bir bakış açısına sahip olabilmeleri oldukça önemlidir. Bu amaçla da özellikle çocukların ilköğretim hatta okul öncesi dönemden itibaren farklılıkları tanınması, farklılıklara saygı duyabilmesi ve önyargılardan uzak düşünebilmesi için sınıf ve okul ortamında barış ve demokrasiyi yerleştirmek zorunludur. Okuldaki değerler sistemi, bir yaşama biçimi olarak demokrasi ve insan hakları temelinde biçimlendirilebilirse, öğretmenler doğru rol modellerini oluşturabilirse, açık ve örtük eğitim programları doğru biçimde işe koşulabilirse ancak öğrencilere demokratik tutum ve davranışların kazandırılması sağlanabilir. Burada en önemli koşullardan birisi model olabilen öğretmenlerin yetiştirilmesidir. Alanyazında öğrencilerin öğretmenlerinin tutumlarından, davranışlarından, ilgilerinden, gereksinimlerinden, değerlerinden ve kişilik özelliklerinden etkilendiğini gösterir binden fazla çalışma bulunmaktadır. Öyleyse, demokratik ilkeleri benimsemiş, bu ilkeleri yaşama uygulayabilen, ayrımcı tutum ve davranışlardan uzak öğretmenlerin sistem içinde etkin biçimde rol alması önemlidir. Burada en önemli görev de öğretmen yetiştiren eğitim fakültelerine düşmektedir. Fakülteler, demokratik değerlere dayalı öğretmen yetiştirme programlarını işe koşabilirse yetiştireceği öğretmenlerin niteliklerini de olumlu yönde etkileyebilir. Tüm bu gerekçelerle gerçekleştirilen bu araştırma, Türkiye'de sınıf öğretmeni adaylarının hizmet öncesi profillerini ortaya koyabilmek adına oldukça önemlidir.

Araştırmanın Amacı: Bu çalışmanın amacı, sınıf öğretmeni adaylarının ayrımcı tutumları ve bu tutumlar ile bazı sosyo demografik değişkenler (cinsiyet, sınıf, anne eğitim düzeyi, baba eğitim düzeyi) arasındaki ilişkileri ortaya koymaktır.

Yöntem: Sınıf öğretmenliği bölümü öğrencilerinin otoriter ve ayrımcılık tutumları ve bu tutumlar ile bazı değişkenler (cinsiyet, sınıf, anne eğitim düzeyi, baba eğitim düzeyi) arasındaki ilişkileri ortaya koymaya çalışan bu araştırma, tarama modelinde betimsel bir araştırma niteliğini taşımaktadır. Diğer taraftan çalışma, sınıf öğretmenliği bölümünde okuyan 1. ve 4. sınıf öğrencilerini karşılaştırması bakımından da kesitsel bir araştırma niteliği de taşımaktadır. Tarama modelleri, geçmişte ya da halen varolan bir durumu varolduğu şekliyle betimlemeyi amaçlayan araştırma yaklaşımlarıdır. Bu çalışmayla da, öğretmen adaylarının anketin uygulandığı andaki tutumları ve sosyo-demografik durumları ortaya konmaya çalışılmıştır. Araştırmanın örneklemini Dokuz Eylül, Adnan Menderes, Ondokuz Mayıs, Ankara, Anadolu, Çukurova, Selçuk Üniversitelerinin Eğitim Fakülteleri ile Marmara Üniversitesi Atatürk Eğitim Fakültesi, Atatürk Üniversitesi Kazım Karabekir Eğitim Fakültesi Sınıf Öğretmenliği Bölümlerinin birinci ve dördüncü sınıflarında okuyan 840 öğrenci oluşturmuştur. Öğrencilerin 314'ü erkek, 508'i kızdır. On sekiz

öğrenci cinsiyetini belirtmemiştir. Ayrıca, öğrencilerin 468'i birinci, 372'si ise dördüncü sınıfta okumaktadır. Araştırmada iki veri toplama aracı kullanılmıştır. Bunlardan birisi dört alt boyuttan oluşan Ayrımcılık Ölçeği'dir. Ölçek, kadın ayrımcılığı, eşcinsel ayrımcılığı, ırk-etnisite ve din ayrımcılığı ile yabancı ayrımcılığı alt boyutlarından oluşmaktadır. Ölçeğin geçerlik ve güvenilirlik çalışmaları araştırmacılar tarafından yapılmıştır. Bir diğer veri toplama aracı ise, araştırmacılar tarafından düzenlenen "Kişisel Bilgi Formu"dur. Tüm ölçme araçları, fakülte yöneticilerinde alınan izinler doğrultusunda, posta yoluyla gönderilmiş ve anketler, ilgili fakültelerde uygulandıktan sonra posta yoluyla geri alınmıştır. Elde edilen verilerin analizinde ise MANOVA tekniği kullanılmıştır.

Bulgular ve Yorum: Araştırma bulguları, kız öğrencilerin erkek öğrencilerden daha düşük ayrımcı tutumlara sahip olduğunu göstermektedir. Öğretmen adaylarının ayrımcı tutumları arasında sınıf düzeyi (1 ve 4. sınıf) açısından benzerlikler görüldüğü dikkati çekmektedir. Diğer taraftan, öğretmen adaylarının ayrımcı tutumları açısından incelendiğinde anne eğitim düzeyinin etkisi gözlenmektedir.

Sonuç ve Öneriler: Sonuç olarak, araştırma bulguları sınıf öğretmenliği bölümlerinde verilen eğitimin, öğrencilerin ayrımcılık tutumları üzerinde önemli ölçüde etkili olmadığı biçiminde değerlendirilebilir. Oysa bir öğretmenin, her türlü ayrımcılığın giderek arttığı günümüzde, ayrımcılık konusunda çok daha duyarlı olması beklenmektedir. Bu nedenle de, şiddetin önemli göstergelerinden biri olan ayrımcılıkla ilgili olarak öğretmen adaylarının, öğrenim süresi içinde, açık ve örtük programlar yoluyla bilinçlendirilmelerinin büyük önem taşıdığı söylenebilir. Araştırma bulguları, anne eğitim düzeyi yükseldikçe ayrımcı tutumların düşme eğilimi gösterdiğini ortaya koymaktadır. Bu bulgu ülkemizde kadın eğitimi konusuna ayrı bir önem verilmesi, bu konuda resmi ve sivil girişimlerin artması ve ortak çaba göstermesi gerektiğini ortaya koymaktadır. Özetle, eğitim fakültelerinin hiçbir ayrımcılığın yer bulmadığı, öğretim elemanı ve öğrencilerin düşüncelerini özgürce açıklayabildiği; kısaca demokrasinin yaşanabildiği yerler olması gerekmektedir. Ancak böyle bir ortamda, öğretmen adaylarının ayrımcılık tutumlarında düşme eğilimi oluşabilir.

Anahtar Sözcükler: Sınıf Öğretmeni Adayı, Sınıf Öğretmeni Yetiştirme, Ayrımcılık.

A Think-Aloud Study: Cognitive and Metacognitive Reading Strategies of ELT Department Students

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Abstract

Problem Statement: The main purpose of reading instruction is to foster strategic readers who are capable of using cognitive reading strategies flexibly and controlling their comprehension. Since cognitive and metacognitive reading strategies play a pivotal role in reading comprehension, there is a need for studies focusing on strategy use by EFL learners from contexts other than mainstream ESL. There is little research that uses think-aloud and/or retrospective protocols to investigate strategy use by learners of English in Turkish universities.

Purpose of Study: This study employs think-aloud and retrospective protocols to gather verbal report data on cognitive and metacognitive reading strategy use by the students enrolled in an English Language Teaching (ELT hereafter) department in Turkey.

Methods: This study relies on the think-aloud and retrospective protocols of 6 proficient (PR hereafter) and 6 less proficient readers (LPR hereafter), who were chosen as participants according to their mid-term (20%) and final reading exam scores (40%) in the Advanced Reading and Writing course and their paper-based *Reading Comprehension* TOEFL scores (40%). First, the participants were asked to read and paraphrase an expository and a narrative text in the think-aloud session. Second, in the retrospective session, they were asked to share how they comprehended the two texts, what comprehension problems they encountered and how they solved them. Data analysis aimed to reveal both cognitive and metacognitive reading strategy types and also the frequencies of their use, as included in the verbal protocols.

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Findings and Results: The PRs used cognitive and metacognitive reading strategies more frequently than the LPRs in both text types, and both groups mainly used the same strategy types. The findings also revealed that the LPRs especially referred to cohesive ties, mainly while guessing the meaning of unknown vocabulary items or making connections within the text. Therefore, 'using cohesive ties' and 'awareness of cohesive ties' were taken as cognitive and metacognitive reading strategy types, respectively.

Conclusions and Recommendations: The limited variety in reading strategy use may stem from the similar literacy and foreign language education in the EFL context in Turkey, which is teacher-centered, structural and behavioristic. Bearing this in mind, learners should be explicitly trained in what cognitive reading strategies are and how they are used at different times, and this awareness will in turn help learners monitor and evaluate their comprehension.

Keywords: English as a foreign language; cognitive reading strategies; metacognitive reading strategies; think-aloud; retrospection

The main goal of reading instruction is to enable learners to become more strategic or expert readers who go beyond knowing the strategies (Brown, Pressley, Van Meter & Schuder, 1996; Pressley, 2000). They also need to know how to use different strategies at different times, monitor their production, evaluate their comprehension and choose the appropriate strategy for better comprehension, which refers to metacognitive awareness, metacognition of reading strategies or comprehension monitoring strategies (Baker & Brown, 1984; Chamot & O'Malley, 1987; Garner, 1987; Grabe & Stoller, 2002; O'Malley & Chamot, 1990). While cognitive strategies bring about academic success, thus helping learners increase their self-confidence (Chamot & O'Malley, 1996), metacognitive strategies give learners control over their own learning process; therefore, they may become more successful readers by regulating their comprehension and using appropriate strategies where necessary, rather than depending on the teacher.

When the studies on reading in L1 and in L2 are compared, it is evident that far more research has been conducted on reading in L1 contexts (especially in English as an L1) than in L2 contexts (Grabe & Stoller, 2002). "Reading is best understood by looking at the research on the skilled L1 reader since that is the end point of expertise that an L2 reader is aiming towards" (Grabe, 2000, p. 227). In the previous literature, it is pointed out that readers use a large number of comprehension strategies before, during and after reading. However, proficient reading is more than a mere use of individual strategies; it necessitates a constant combination of multiple cognitive processes (Williams, 2002).

Much of the research on L1 reading reveals that good readers are better at monitoring their comprehension than poor readers, are more aware of the strategies they use than poor readers, and use strategies more flexibly and efficiently than their

low-achieving peers (Duke & Pearson, 2002; Pressley, 2002b; Pressley & Afflerbach, 1995). Findings from the Sheorey and Mokhtari (2001) study indicated a clear preference for cognitive strategies, followed by metacognitive and support strategies in both US and ESL students' reported use of strategies. Also, both ESL and US students with high reading ability showed a higher reported usage of cognitive and metacognitive reading strategies than lower-reading-ability students in the respective groups.

Think-aloud protocol is an effective and commonly used tool to elicit data on cognitive and metacognitive strategy use by readers as it provides a rich source of information about comprehension processes (Afflerbach, 2000; Garner, 1987; Pressley & Afflerbach, 1995). "A verbal report or think aloud protocol is produced when a reader verbalizes his or her thought processes while completing a given task" (Anderson, 1991, p. 460). Previous research on L2 reading presents various findings which were reached through think-aloud and/or retrospective protocols. Anderson (1991) studied individual differences in strategy use to emphasize that the participants who reported more strategies scored higher in their comprehension scores. Anderson noted that the participants tended to use similar strategy types across ability levels and across tasks, and no single set of reading strategies could account for the success in comprehension. Similarly, Cohen and Upton (2007) aimed to describe reading and test-taking strategies used by the participants while completing the reading sections of the new TOEFL. The results indicate that examinees are required to use academic reading skills to have both local and general understanding of the texts in the new TOEFL reading section.

In Yau's (2005) study, the skilled reader and the less skilled reader differed in the strategies they used, the former preferred inference, summarization and synthesis while the latter preferred omission, substitution, paraphrasing and repetition. In a similar study, Janssen, Braaksma and Rijlaarsdam (2006) examined how good and weak students of literature interacted with literary texts of different genres and found that good students appeared to be more varied in their strategy use than weak students. In another study, Jimenez, Garcia and Pearson (1996) collected data to underscore that less successful Latina/o students used fewer strategies, were less successful in solving comprehension problems and tended to use similar strategy types across text types and languages.

Yang (2002, 2006) used think-aloud and retrospective protocols to investigate learners' strategy use. The results of the analyses of the 2002 study revealed that even the LPRs had some competence in comprehension monitoring because they were also able to achieve the correct meaning of some new vocabulary items. An important difference between the two groups was that while the PRs monitored their on-going reading process, the LPRs were more focused on the lexical level of reading. In a further study, Yang (2006) used the think-aloud and retrospective protocols of college students to investigate the relationship between reading strategies and comprehension monitoring strategies employed by 10 PRs and 10 LPRs. The researcher's analyses of the two readers' (one PR and one LPR) think-

aloud and retrospective protocols revealed that there were overlaps and similarities between readers' reading strategies and comprehension monitoring strategies.

Since cognitive and metacognitive reading strategies play a pivotal role in learners' efforts to become strategic readers, there is a need for studies focusing on the strategy use of EFL learners from different contexts other than the mainstream ESL contexts. In Turkey, there is little research that has used think aloud and/or retrospective protocols in strategy use (e.g., Akyel & Erçetin, 2009; Özek & Civelek, 2006; Seferoğlu & Uzakgören, 2004). Akyel and Erçetin (2009) investigated strategies used by advanced learners of English while reading a hypermedia text. The think-aloud protocols of 10 senior undergraduate students enrolled in an ELT department in a Turkish university indicated that their processing strategies in hypermedia reading were not different from those used in printed texts. Seferoğlu and Uzakgören (2004) used a survey questionnaire and think-aloud protocols to investigate listening strategies used by students enrolled in a Preparatory School program of a Turkish university. They emphasized that students should be guided and trained in strategies. In another study, Özek and Civelek (2006) focused on reading strategies used by freshmen and senior undergraduate students of an ELT department and conducted a questionnaire with 185 participants and think-aloud protocols with 23 participants as their data collection tools. Their findings emphasize some significant differences among cognitive reading strategies with regard to students' gender, age, proficiency in reading, school, and duration of learning English. Some other studies on reading strategy use were carried out through inventories (e.g., Salatacı & Akyel, 2002; Sarıçoban, 2002).

In Turkey, students pass the University Entrance Exam (UEE), which is mandatory to study at such departments as ELT. The UEE basically tests attendees' proficiency in reading comprehension and grammar, excluding speaking, listening and writing skills. The accepted students to an ELT department are expected to have similar reading proficiency levels. However, the freshmen enrolled in an ELT department of a Turkish university with diverse achievement levels in their fall semester Advanced Reading and Writing course urged the researcher, who was the instructor, to conduct this study. Also, as emphasized earlier, there are few studies in Turkey based on qualitative data through think-aloud and/or retrospective protocols. Therefore, this study aims at answering the following research questions:

1. What cognitive reading strategies do the PRs and the LPRs use with expository and narrative texts?
2. What metacognitive reading strategies do the PRs and the LPRs use with expository and narrative texts?

Method

Research Design

This study employed think-aloud and retrospective protocols to gather verbal report data on cognitive and metacognitive reading strategy use by the students enrolled in an ELT department in Turkey. Therefore, it has an explanatory qualitative design relying on the verbal protocols of the participants. Data analysis aims to reveal both cognitive and metacognitive reading strategy types and their use frequencies.

Participants

To assign the participants, the researcher used their scores from three different sources: (i) their mid-term reading exam scores (20%), final reading exam scores (40%) and (iii) their paper-based *Reading Comprehension* TOEFL scores (40%). The top 10% of the students (scoring between 80 and 97 out of 100 in total) were assigned as PRs, and the lowest 10% of the students (scoring 48-63 out of 100 in total) were assigned as LPRs. Convenient sampling was used since the researcher was their instructor, and their test scores shaped the two groups of readers. The average scores of the PRs and the LPRs were 92 and 71, respectively. The students with mid-level reading proficiency were excluded from the study. Although all freshmen enrolled in the program volunteered, 12 students were invited to participate in the study after school hours, and they were on average 19.5 years old.

Instruments

This study was based on qualitative data obtained through think-aloud and retrospective protocols. Two types of texts, an expository and a narrative, were used in the procedures because expository and narrative texts differ in that the former include more unfamiliar vocabulary, factual information, concepts and fewer ideas related to the here-and-now, and they may follow multiple structures, whereas the latter depict events, actions or situations and they mostly follow one structural pattern (Hall, Sabey & McClellan, 2005). The reason for including an expository text as well was that students of all ages, from elementary school to college, have difficulty comprehending informational texts (Gambrell, Block & Pressley, 2002).

The passages were chosen after consulting the other instructors of the ELT department and they were a little beyond the participants' current reading levels because trouble-free reading is not believed to stimulate comprehension strategy use. After the texts were agreed upon, they were pilot-tested with a student other than the participants, and no major problems with the procedures were detected. In pilot testing, both texts and tasks were observed to enhance both comprehension and verbal data.

As in the Janssen et al. (2006) study, each text was separated into segments of one or more paragraphs and copied on a Power Point slide to ease verbal data production. Before the think-aloud session, the participants were provided with a practice text on the American flag from the *Longman Complete Course for the TOEFL Test*. Then, the participants were asked to read the expository text *When the Boss is a*

Bully taken from *Psychology Today* and then the narrative text *The Bear - Wheat at Sixty-Two* by Frank Norris.

Procedures for Data Collection

Drawing on Green's (1998), Ericsson and Simon's (1987) and Cohen's (1987) theoretical frameworks on think-aloud protocols, verbal reports and retrospective protocols, data collection was designed to elicit process (think-aloud protocols) and post-process (retrospective protocols) data on the strategy use (strategy types and their frequencies) of the participants. The researcher informed the participants that all their reports would be audio-taped and assured them that the data would only be used for research purposes.

First, think-aloud protocol procedures were introduced to the participants individually. The participants were asked to think aloud and tell the researcher whatever passed through their minds while reading the texts. Next, the participants had a practice activity and received necessary clarifications without being cued for certain types of response. In the think-aloud session, the task they were asked to perform was paraphrase the texts in their own words. Paraphrasing turned into translating at some points, and the participants were allowed to use both their L1 and L2 in their think-aloud and retrospective protocols. The purpose of their task with these two texts was reading for general understanding, and all their verbal reports revealed a process of meaning making.

During the think-aloud session, the participants read the expository and the narrative text, respectively, segment by segment from a computer screen, and the reading was self-controlled, that is, the participants were free to read the segments back and forth by using the mouse. Since the segments were presented in power point slides on the screen in front of them, they read and talked aloud without losing their focus. When the participants fell silent for a long period, they were prompted (e.g., Just say out loud what goes on in your mind, or Do not hesitate to express yourself, there is nothing wrong with it). The participants were allowed to use as much time as they needed because full vocalization of the heeded information (thoughts) takes longer than silent production of the same (Ericsson & Simon, 1987).

Finally, after the think-aloud session was completed, the retrospective one started. The participants were asked to remember the thoughts they had while comprehending the texts. In order to prompt them to better report their comprehension processes retrospectively, the researcher underscored the importance of sharing their experiences of how they comprehended the sentences in the texts, what comprehension problems they encountered, what was easy/difficult for them and how they overcame the difficulties while reading and paraphrasing.

During the retrospective session, the participants were observed to need more prompting than in the think-aloud session. Retrospective data elicitation required more interaction between the researcher and the participants. This might have stemmed from the fact that paraphrasing was not a new activity for the participants, but reflecting on their comprehension processes, their difficulties and remedies immediately after reading a text was an unfamiliar experience for them. Therefore,

providing some instructions at the very beginning of retrospection was not sufficient enough so the researcher felt the urge to provide more prompts to elicit retrospective data. The whole session, including training, lasted 80-100 minutes for each participant.

Data Analysis

Before the data analysis, the researcher perused the previous literature (Allington, 2001; Anderson, 1991; Block, 2004; Chamot & O'Malley, 1996; Cohen & Upton, 2007; Grabe & Stoller, 2002; Janzen & Stoller, 1998; Jimenez et al., 1996; Palinscar & Brown, 1984; Pressley & Afflerbach, 1995; Sheorey & Mokhtari, 2001; Yang, 2002, 2006) on both cognitive and metacognitive reading strategy types used by L2 learners. Next, the participants' think-aloud and retrospective protocols were transcribed verbatim to identify the strategy categories (see Table 1 and Table 2). Following that, the researcher coded the protocol transcriptions accordingly. The strategies included in the study for further scrutiny were confined to those included in the verbal reports. After the researcher transcribed and coded all the statements in the transcriptions, 25% of the participant statements from both think-aloud and retrospective protocols were coded by a second coder, a colleague, who received training on strategy types to achieve a high inter-rater reliability (.94). A few disagreements suggested some further specifications in some cognitive and metacognitive reading strategy types.

The close inspection of the participants' verbal reports in think-aloud and retrospective protocols indicated an additional category: cohesion. Halliday and Hasan's (1976) main concern, cohesion, is a linguistic property contributing to coherence. Their taxonomy of cohesive ties includes *reference*, *substitution*, *ellipsis*, *conjunction* and *lexical cohesion*, and cohesion creates coherence or texture, as they call it. The participants' frequent use of cohesive ties in their efforts to achieve comprehension led the researcher to classify 'using cohesive ties' and 'guessing meaning' (see Table 1) as separate cognitive reading strategies. The former makes use of structural relations whereas the latter focuses more on semantic relations; however, both were used by the participants mainly to guess the meaning of unfamiliar words. With a similar intention, another classification was made between 'awareness of cohesive ties' and 'forming a tentative hypothesis' (see Table 2) as metacognitive strategy types with which the participants expressed their awareness of how they comprehended the texts.

Although 10 cognitive reading strategies were identified, the metacognitive ones were confined to 5 types. As in Anderson's (1991) study, some participants were more verbose than others in their verbal reports; and thus, they were able to include more strategy types in their verbal reports. Also, it was observed that the participants in this study used their L1 more than English in both think-aloud and retrospective protocols. Similarly, in Akyel and Erçetin's (2009) study, the participants who were also advanced learners of English attending an ELT department seemed to have preferred paraphrasing in the L1 to paraphrasing in English.

Findings and Results

Cognitive Reading Strategy Use

The PRs in this study displayed more frequent cognitive reading strategy use than the LPRs for both text types (229 versus 141, see Table 1) (Afflerbach, 2002; Anderson, 1991; Duke & Pearson, 2002; Pressley, 2002a; Pressley, 2002b; Janssen et al., 2006; Zhang, 2000). However, the two groups did not differ in the strategy types chosen. This corroborates the findings of Anderson's (1991) study, in which the participants used similar reading strategy types across ability levels and tasks. Contrary to the findings of Yau's (2005) and Janssen et al.'s (2006) studies, both reader groups in this study used the same strategy types. Both groups preferred certain strategy types, mostly 'guessing meaning' (145) and 'suspending a problem' (40) for both text types. The least frequently preferred strategy types were 'summarizing' (16) and 'self correcting' (12). Here are some examples from the transcriptions of the participants' think-aloud reports for these strategy types, and the excerpts are given with their sources in the first parentheses and the strategy type in the second:

I don't know the word 'rage', but it could be anger or a sense of insecurity because bosses treat the workers terribly, do harm to the companies. (LPR1) (guessing meaning)

'66' might be the price of wheat but it does not say dollar or euro with it...Anyway, I can handle it later on. (LPR3) (suspending a problem)

In sum, bullies are bosses who humiliate you, get angry if you do anything wrong or make you feel depressed. (PR3) (summarizing)

At first, I thought '66' was a kind of quantity, it referred to 66 kilos of wheat or something like that but now I see that it refers to its price rather than its weight. (LPR4) (self correcting)

The findings revealed that 'guessing meaning' and 'questioning' were the most frequently used cognitive reading strategies by the PRs for both text types while for the LPRs, 'guessing meaning', 'using cohesive ties' and 'suspending a problem' were the most frequently used ones. The PRs were observed to be more willing to comprehend the text than the LPRs, which corroborates the findings from the Jimenez et al. study (1996). Also, the PRs reread difficult parts or formed questions for an unknown item while the LPRs had a tendency to use cohesive ties or suspend their guesses for words or sentences when exposed to a difficult piece in the texts.

Table 1
Cognitive Reading Strategy Use Frequencies

Text type	Proficiency level	Using cohesive ties	Guessing meaning	Prediction	Clarifying	Suspending a problem	Questioning	Using prior knowledge	Summarizing	Self-correcting	Rereading
Expository	PR	3	33	4	6	3	13	1	4	1	13
	LPR	8	21	1	2	0	2	1	1	0	10
Narrative	PR	6	54	9	7	19	30	0	6	8	9
	LPR	11	37	4	2	18	6	4	5	3	5

During the protocol analysis of the present study, it was observed that the readers, especially the LPRs, referred to some cohesive ties; mainly reference, conjunction and lexical cohesion, while forming logical relations between propositions in order to aid their reading comprehension. The participants seemed to make use of cohesive ties mainly during their guessing processes to infer the meaning of an unknown vocabulary item and to make connections within the text. The following are some excerpts for the use of cohesive ties taken from the transcriptions of the participants' think-aloud reports:

It says 'they', it must refer to the bullies in the previous sentence, or bullies and bosses are the same. (LPR2) (reference)

'Sheer exploitation' must have a negative meaning parallel to 'verbal abuse' because there is an 'and' between them. (LPR5) (conjunction)

I think 'Pittsburg stogie' is a kind of cigar or cigarette because the verb is 'smoke' here and 'Pittsburg' must be the name of the brand. (LPR3) (lexical cohesion)

Metacognitive Reading Strategy Use

The total use of metacognitive reading strategies by the PRs was higher than that by the LPRs in both texts (213 versus 169) (see Table 2), and this difference is consistent with the previous research (Baker, 2002; Block, 1992; Salatacı & Akyel, 2002; Sheorey & Mokhtari, 2001; Zhang, 2001). The more frequently preferred metacognitive strategy types were 'forming a tentative hypothesis' (142) and

'monitoring' (101), and the least frequently used type was 'ignoring and reading on' (49) by both groups in both texts. The following excerpts are from the transcriptions of the participants' retrospective reports to exemplify the metacognitive strategies mentioned, with the researcher's prompts provided:

Here I did not understand what war story meant at first. I thought it should be like the ones between countries. But after reading the whole text now I can say that it is not a simple way or the war we know. (R: What do you mean?) I think it refers to all fights between people to have more. (LPR3) (forming a tentative hypothesis)

(R: What caused the biggest problem in this sentence?) There was a lot of unknown vocabulary here but I was able to guess some of them. Since it is not a scientific text but a story, it was easy to guess for me...It is full of descriptions. (LPR6) (monitoring)

In this very first sentence there were a lot of new words. For instance, I don't know 'tug' or 'whiffletree' but I skipped them and they did not appear in the following text again. (PR5) (ignoring and reading on)

Table 2

Metacognitive Reading Strategy Use Frequencies

Text type	Proficiency level	Awareness of cohesive ties	Forming a tentative hypothesis	Ignoring and reading on	Monitoring	Rereading current sentences
Expository	PR	4	44	13	21	14
	LPR	18	21	11	24	6
Narrative	PR	8	44	19	29	17
	LPR	13	33	6	27	10

Contrary to the findings of Yang's (2002) study, the LPRs in this study were as active as the PRs in both texts while monitoring their performances. The two groups in the present study differed in the frequencies of their strategy use but when it came to monitoring their performances, they scored similarly. The main reason for this might have been the fact that the biggest problem for both groups was unfamiliar vocabulary, as in the Jimenez et al. (1996) study, and they repeatedly referred to unknown vocabulary as a hindrance to their comprehension in their verbal reports. Besides, in addition to retrospective protocols, several instances of monitoring

activities were observed in think-aloud protocols of some PRs and LPRs, as in Yang's (2006) study.

When asked about their guesses in the retrospective session, the LPRs tended to refer to some grammar words, such as conjunctions and reference items, rather than the context, or they complained and ignored the vocabulary items as being beyond their level. This suggests that the LPRs pay more attention to surface structure when they have difficulty comprehending deeper-level semantic relations (Block, 1992). The following are some excerpts coded under the 'awareness of cohesive ties' category:

There is a connection problem here. It says 'there is tremendous pressure to improve profits. No question, that pressure is felt all the way up and down the management line'. No question means no problem but there is a problem here so it seemed contradictory to me. (LPR6) (conjunction)

'Buckboard' is everywhere in the text but I could not understand its meaning at the beginning. As it says 'got into the buckboard' I understood what a buckboard is. (LPR2) (lexical cohesion)

The LPRs were observed to refer to cohesive ties more frequently than their proficient peers in retrospective protocols for both text types. The difference seems to be distinctively bigger for the expository text. When compared to the narrative text, the expository text does not include as many semantic relations leading to coherence as the narrative one. Therefore, grammar words seemed to gain more importance while the participants expressed how they interpreted the unknown words or phrases.

Conclusions and Recommendations

The primary finding is that although the PRs display more frequent cognitive and metacognitive reading strategy use than the LPRs for both text types, both groups use mainly the same strategy types; 10 cognitive and 5 metacognitive reading strategy types in total. Besides, when compared to the cognitive strategy use frequencies, lower metacognitive strategy use frequencies are observed in both text types. It most likely stems from the fact that "... many steps of the cognitive process will not be recalled at the end of the task and will be omitted from the retrospective reports" (Ericsson & Simon, 1987, pp. 41- 42).

This limited variety in reading strategy use may stem from the fact that the participants of the study have received similar literacy and foreign language education, which, in the EFL context in Turkey, is commonly teacher-centered, structural and behavioristic. Recently, there has been a reform movement in education by Ministry of National Education to integrate the constructivist movement and the communicative approach into ELT in primary and secondary education in Turkey (Kırkgöz, 2007), which could in time lead to more practice in strategy use. Also, with this new practice, the problem of raising teachers of English

who value learner autonomy in the language classroom could be eliminated (Yıldırım, 2008).

As for text type, the participants use cognitive and metacognitive reading strategy types more frequently with the narrative text than they do with the expository text, but this might be attributed to the differing lengths (617 versus 335 words, respectively). Another reason for the difference might be that students of all ages have difficulty comprehending informational texts (Gambrell et al., 2002). Therefore, when compared to the expository texts, narrative ones are easier to follow and allow for more strategy use.

Although not defined as a cognitive or metacognitive reading strategy type, cohesion is found scattered in bits and pieces in some previous strategy lists. In Anderson's (1991) list, for instance, 'using context clues to interpret a word or phrase' exists as a strategy type. Cohen and Upton's (2007) reading strategies coding rubric also includes a strategy type referring to the use of conjunctions. In this study, several uses of cohesive ties were observed, especially in the LPRs' think-aloud and retrospective protocols. Such observations suggest that taking 'using cohesive ties' as a cognitive and 'awareness of cohesive ties' as a metacognitive reading strategy type would not be at odds with reality. When readers, especially the LPRs, fail to construct meaning from the context, they try to aid comprehension with the help of cohesive ties within texts. Similarly, they refer to cohesive ties when asked to explain how they interpret texts.

The findings from this study pertain to cognitive and metacognitive reading strategy use by the PRs and the LPRs from an ELT department. It is essential that future teachers possess more frequent and varied cognitive and metacognitive reading strategy use in order to be both PRs and well-trained teachers. In their study with ELT department students in Turkey, Özek and Civelek (2006) underscore the significance of doing a great deal of reading in their comparisons of the 1st and 4th year students' reading strategy use. As Grabe (2000) emphasizes, there is one good way of achieving fluent reading: reading a lot. Another factor that will contribute to more varied reading strategy use is explicit instruction. To put it pithily, if learners are explicitly trained on what cognitive reading strategies are and how they are used at different times, this awareness will in turn help learners monitor and evaluate their comprehension (Baker & Brown, 1984; Chamot & O'Malley, 1987; Garner, 1987; Grabe & Stoller, 2002; O'Malley & Chamot, 1990).

There are certain limitations to this study. First, it is based on a small scale in terms of the number of participants and text types, and a larger sample might result differently. Second, some strategy uses by the participants might not have been observed due to the fact that some participants were not as verbose as the others. Third, it cannot be denied that some strategies appearing in the verbal data might have been coded into categories more or less than necessary. Fourth, the participants' literacy education and how they read challenging texts in L1 might have had an intervening effect on their strategy uses of limited variety. Finally, in this study, think-aloud and retrospective protocols were used as tools in collecting product data.

However, what is more and more emphasized in the recent models of literacy education is process orientation. Kern (2000) reminds us that “reading and writing are always *socially-embedded* activities involving relationships, shared assumptions, and conventions as well as *individual*, personal acts involving imagination, creativity, and emotions” (italics original, p. 111). Therefore, a sociocultural perspective should be given equal importance with linguistic and cognitive ones in such studies so that they may better reflect the multiple facets of literacy.

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Bir Sesli Düşünme Çalışması: İngiliz Dili Eğitimi Bölümü Öğrencilerinin Bilişsel ve Üst-Bilişsel Okuma Stratejileri

(Özet)

Problem Durumu: Okuduğunu anlama, farklı ortamlarda yazılı metinlerden anlam çıkarma sürecidir. Yazılı metinler kaynak bakımından ders kitaplarından bilgisayar ekranlarına kadar çeşitlilik gösterir. Okurların hangi bilişsel okuma stratejileri kullandıklarına ve bu kullanımlarının farkındalığına yönelik birçok araştırma öncelikli olarak İngilizcenin anadili olarak kullanıldığı ortamlarda yapılmıştır. Bu tip çalışmalara İngilizcenin ikinci/yabancı dil olarak öğretildiği ülkelerde de ihtiyaç duyulmaktadır. Okurların okuma sırasında aklından geçen zihinsel işlemleri ortaya çıkarmaya yarayan Sesli Düşünme Protokolleri (SDP) ve Geçmiş Anma Protokolleri'nin (GAP) veri toplama araçları olarak kullanımı gözlenmeye başlamıştır. Ancak bu bağlamda, Türkiye'de yabancı dil olarak İngilizce ortamında gerçekleştirilen çalışma sayısı yok denecek kadar azdır. Bu çalışmalarda veri toplama aracı olarak çoğu zaman envanter ve anketler kullanılmıştır.

Araştırmanın Amacı: Bu araştırma, bir Türk üniversitesinin İngiliz Dili Eğitimi birinci sınıf lisans düzeyi öğrencilerinin İleri Okuma ve Yazma dersinde gösterdikleri okuduğunu anlama başarı düzeylerindeki farklılığın gözlenmesi üzerine tasarlanmıştır. Buna dayanarak, bu araştırmanın amacı SDP ve GAP veri toplama yoluyla başarılı ve daha az başarılı öğrencilerin kullandıkları bilişsel ve üst-bilişsel okuma stratejilerinin türlerini ve kullanım sıklıklarını bilgi verici ve yazınsal metin türleri açısından belirlemek ve tartışmaktır.

Araştırmanın Yöntemi: Araştırma SDP ve GAP veri toplama araçlarını kullanarak betimleyici bir sonuca ulaşmayı amaçlamaktadır. Katılımcı olarak, İngiliz Dili Eğitimi birinci sınıf lisans düzeyi öğrencilerinden İleri Okuma ve Yazma dersi vize sınavı (%20), final sınavı (%40) ve TOEFL

okuma sınavı (%40) notları kullanılarak 6 başarılı ve 6 daha az başarılı olmak üzere toplam 12 gönüllü öğrenci belirlenmiştir. İlk olarak, bu öğrencilerden her iki metin türünü (bilgi verici ve yazınsal) okumaları ve okuma sırasında sesli düşünerek okuma süreçlerini zihinlerinden geçtiği gibi anlatmaları istenmiştir. Daha sonra, öğrenciler az önce okudukları metinleri nasıl anladıklarını ve karşılaştıkları okuduğunu anlama sorunlarını nasıl çözdüklerini geçmiş anımsama yoluyla anlatmışlardır. Bu süreç hazırlık metni ile yapılan alıştırmaya dahil her bir katılımcı öğrenci için 80-100 dakika sürmüştür. Öğrencilerin sözel raporları ses kaydına alınmış ve veri analizinden önce bu kayıtların dökümü yapılmıştır. Veri analizinde; SDP verileri bilişsel, GAP verileri ise üst-bilişsel okuma stratejilerinin saptanması amacıyla kullanılmıştır. Böylece kullanılan stratejilerin türleri ve sıklıkları iki metin türü için belirlenmiştir.

Araştırmanın Bulguları: Bu çalışmanın katılımcıları olan 12 öğrencinin SDP ve GAP verilerinin analizi başarılı ve daha az başarılı öğrenciler arasında strateji kullanımı açısından önemli farklar ortaya koymamaktadır. Katılımcıların kullandıkları bilişsel (10 adet) ve üst-bilişsel (5 adet) stratejiler çeşitlilik açısından sınırlılık göstermektedir. Araştırmanın sonuçları başarılı okurların bilgi verici ve yazınsal metin türlerinde daha az başarılı okurlara göre daha fazla sayıda bilişsel ve üst-bilişsel strateji kullandıklarını ortaya koymuştur. Ancak her iki grup tarafından kullanılan strateji türleri arasında önemli bir farklılık gözlenmemiştir. Bu anlamda tek fark sadece kullanma sıklığındadır. Her iki grupta yer alan katılımcılar en çok 'anlamı tahmin etme' ve 'sorunu erteleme' stratejilerini kullanmışlardır. En az kullandıkları bilişsel okuma stratejileri ise 'özetleme' ve 'öz-düzeltilme' stratejileridir. Üst-bilişsel okuma stratejileri arasında ise 'geçici bir varsayım oluşturma' ve 'izleme' en sık kullanılan stratejiler iken en az kullanılan strateji tipi olarak 'yok sayıp okumayı sürdürmek' belirlenmiştir. Strateji alanyazınında strateji türü olarak pek yer verilmeyen bağlaşıklık öğelerinin kullanımına bu çalışmanın katılımcıları tarafından sıkça başvurulduğu gözlenmiştir. Bu yüzden 'bağlaşıklık öğelerini kullanma' bir bilişsel strateji olarak, 'bağlaşıklık öğeleri farkındalığı' ise bir üst-bilişsel strateji olarak betimleyici analize eklenmiştir. Bu bağlamda, daha az başarılı katılımcıların her iki metin türünde de 'bağlaşıklık öğelerini kullanma' ve 'bağlaşıklık öğeleri farkındalığı' stratejilerini kullandıkları belirlenmiştir.

Araştırmanın Sonuçları ve Önerileri: Araştırmanın katılımcılarının sınırlı çeşitlikte strateji kullandıkları gözlenmiştir. Bunun nedeni olarak öğrencilerin benzer anadili ve yabancı dil eğitimlerinin etkisi olabilir. Bu öğrencilerin çoğu öğretmen merkezli, yapısal ve davranışçı bir gelenekle dil eğitimi almış olduklarından strateji eğitimi deneyimleri yoktur. Katılımcı öğrenciler genel anlamda hem bilgi verici hem de yazınsal metinde benzer türde stratejiler kullanmışlardır. Yazınsal metinde kullanılan bilişsel strateji sayısının fazla olması bu metnin bilgi verici metne göre uzun olmasına bağlanabilir. Daha az başarılı katılımcıların

metni anlamak için başarılı katılımcılara göre daha fazla bağlaşıklık öğelerine başvurmaları ve bunun da farkında olmaları yapısal öğelerin daha az başarılı okurlar için önemini göstermektedir.

Okuma stratejileri açısından yeterli donanıma sahip İngilizce öğretmenleri mesleki yaşantılarında bireysel farklılıkları gözetin, strateji kullanmayı öğreten ve öğrenci merkezli sınıfları oluşturan başarılı okurlar ve öğretmenler olabilirler. Bu araştırmanın katılımcı sayısı bir sınırlılık olarak görülebilir. Bundan başka, bazı katılımcıların diğerlerine göre daha konuşkan oldukları ve bazılarının da yeterince konuşmadıkları gerçeği bu tür çalışmalar için bir sınırlılık teşkil eder. İleride yapılacak araştırmaların daha geniş bir süreci incelemesi farklı bulguların ortaya çıkmasına yardımcı olacaktır.

Anahtar Sözcükler: Yabancı dil olarak İngilizce; bilişsel okuma stratejileri; üst-bilişsel okuma stratejileri; sesli düşünme; geçmişini anma

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