

# The Adaptation of Academic Motivation Scale to Turkish

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## Abstract

The current study evaluated the psychometric evidence of Turkish form of the Academic Motivation Scale. The scale was based on the tenets of self-determination theory. It was designed to assess an individual's academic motivation if intrinsically or extrinsically driven with 28 questions. University form of the scale was translated into Turkish through appropriate methodological procedures. 390 university students completed the forms. Outcome variables also included the measures of test anxiety and communal mastery. Hypotheses testing and exploratory factor analyses methods were used. Confirmatory factor analyses confirmed the seven-factor structure. Cronbach's alpha and item-total correlation coefficients were also calculated. The Turkish version of the scale has satisfactory levels of validity and reliability. Reanalyzing the measurement properties of the scale is recommended.

## Key Words

Academic Motivation Scale, Adaptation, Reliability, Validity.

Motivational problems are very widely seen in education. One of the greatest frustrations mentioned by many teachers is that their students are often not motivated to learn. Every educator needs to be concerned about the concept of motivation. As the cognitive domains are the most important objectives of education (Ertürk, 1979), every teacher wants to achieve cognitive objectives in the classroom. A child that is academically motivated wants to learn, likes learning-related activities and im-

proves academically (Cunningham, 2003; Keçeli-Kaysılı, 2008). In order to study issues of academic motivation there has been increasing need for a standardized, validated and reliable measure of academic motivation. This study presents findings from the adaptation of The Academic Motivation Scale (AMS) (Vallerand et al., 1992, 1993) from English to Turkish.

Different kinds of motivation are defined in the literature [see: Türk Dil Kurumu [TDK], 2011]. Pintrich and Schunk (2002, p. 5) defined motivation as "the process whereby goal-directed activity is instigated and sustained". Woolfolk (2004, p. 350) defined "an internal state that arouses, directs, and maintains behavior". Thorkildsen, Nicholls, Bates, Brankis, and DeBolt (2002, p. xi) defined "an internal force that activates, guides, and maintains behavior over time" and asserted that motivation comprises of some multidimensional systems that guide individuals' willingness to approach or to avoid particular tasks. From these varied of definitions, motivation has been conceptualized with regard to inner forces, enduring traits, behavioral

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responses to stimuli and sets of beliefs and affects (Evans, 2000). Practically, motivation is also known as academic engagement and is identified as the most influential of all the factors that affect student performance (Francis et al., 2004). Moreover, it is suggested that motivation is the only factor that directly impacts academic achievement; all other factors affect achievement through their effect on motivation. Academic achievement related motivation involves a rather complicated set of issues (Stipek, 2002, p. 12) described as “The cognitive, emotional, and behavioral indicators of students’ investment in and attachment to education” (Tucker, Zayco, & Herman, 2002, p. 477). Many factors influence the development and use of motivation strategies of students (Ellis & Worthington, 1994; Matuga, 2009; McCaslin & Hickey, 2001; Pintrich & De Groot, 1990; Renchler, 1992; Scheuermann, 2000; Winne, 2001; Zimmerman, 1990, 1994, 2001). One such factor is the student’s perception of themselves as being intrinsically or extrinsically motivated to engage in learning activities within educational environments (Barron & Harackiewicz, 2001; Elliot & Thrash, 2001). Another factor is the student’s perceived self-efficacy, which is defined as people’s beliefs about their capabilities. Self-efficacy determines how people feel, think, motivate themselves and behave. Such beliefs produce these diverse effects through four major processes. They include cognitive, motivational, affective and selection processes (Bandura, 1994, 1997). Aksan and Koçyiğit (2011) studied a group of Turkish students found that self-efficacy levels of students were very low. From this result, it can be implied that the students also have problems of academic motivation. In another study, Turkish teachers and school counselors reported that low academic performance, motivational problems and test anxiety are very common in today’s classrooms (Uzbaş, 2009). Such findings demonstrate a need to examine students’ motivational problems. Valid and reliable Turkish instruments are needed to determine students’ academic motivation levels. The Turkish form of the AMS may be used to study on the academic motivation problems of Turkish students.

The AMS is a self-report scale developed on the tenets of self-determination theory (Deci & Ryan, 1985). In this theory, humans are assumed to be active, growth-oriented organisms that have an innate desire for stimulation and learning from birth, which is either supported or discouraged within their social environment (Deci & Ryan, 1985, 2000). There is a dialectical relationship between people, as innately active organisms, and the social

environment. Within social environments, people attempt to satisfy three innate or fundamental psychological needs; competence, autonomy and relatedness (Ryan & Deci, 2000). At the end of the interaction between these needs and the environment, three specific types of motivation are differentiated. Firstly, intrinsic motivation- the drive to pursue an activity simply for the pleasure or satisfaction derived from it, secondly, extrinsic motivation- pursuing an activity out of a sense of obligation, or as a means to an end and thirdly, amotivation- the absence of intent or drive to pursue an activity due to one’s failure to establish contingencies between the activity and their behavior (Deci & Ryan, 1985, 2000). Additionally, Deci and Ryan (1985) distinguished four types of extrinsic motivation: external regulation, introjected regulation, identified regulation and integrated regulation. These four types of extrinsic motivation show differences in the degree of self-determination that the individual associates with the behavior. More internalized or more integrated behaviors produce a greater sense of self-determination. Later, based on one of the propositions that intrinsic motivation may be driven by specific, differentiated factors (Deci, 1975), three types of intrinsic motivation were added to this original theory by Vallerand et al. (1992). Firstly, to know; the desire to perform an activity for the enjoyment one receives while learning new things. Secondly, to accomplish; the desire to perform an activity for the satisfaction one receives from accomplishing or creating new things. Thirdly, to experience stimulation; the desire to perform an activity for the experience one receives while experiencing sensory stimulation which may reflect either intellectual or physical sensations (Vallerand et al., 1992). Researchers have suggested that more intrinsically motivated individuals have better psychological well-being and derive more satisfaction from a number of life’s activities. Moreover, they employ deeper-level processing strategies and perform better academically (Grolnick & Ryan, 1989; Miserandino, 1996; Ryan & Deci, 2000). These kinds of results emphasize the importance of research on the consequences of intrinsically and extrinsically motivated behavior. Hence, to measure academic motivation, there has been a requirement for functional measurement tools to distinguish intrinsic and extrinsic motivation. However, there have been very limited well-known, structured and standardized instruments available either originally developed in Turkish or adapted to Turkish from a different language. Test adaptation from one culture to another is preferable to developing a new

test, as adaptation of an existing tool saves time, facilitates comparative studies of cultural groups, and facilitates standardized assessment (Hambleton, Merenda, & Spielberger, 2005). One of the education-related motivation instruments adapted to Turkish is The Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich, Smith, Garcia, & McKeachie, 1991). The MSLQ was adapted to Turkish by Karadeniz, Büyüköztürk, Akgün, Çakmak, and Demirel (2008). The MSLQ is an 81 item self-report questionnaire designed to assess university students' motivational orientations and their use of different learning strategies. The motivation section includes 31 items and 6 subscales; the learning strategy section includes 50 items and 9 subscales. These subscales can be used single or in combination depending on the researchers' purpose.

In addition to motivation, test anxiety has also been adduced as a factor in poor educational performance. Many students feel anxious or nervous when taking tests at school. Test anxiety involves a combination of physiological over-arousal, nervousness, worry and apprehension about test performance, and often interferes with normal learning and lowers test performance (Spielberger, 1979). Test anxiety varies individually in duration and intensity. The level of test anxiety can be assessed by instruments. One of the very widely used inventories is The Test Anxiety Inventory (TAI; Spielberger, 1980). It has a particular application to the assessment and treatment of test anxiety in student populations. In this study, the Turkish form of TAI is used for the assessment of test anxiety.

As mentioned previously, according to self-determination theory, social environment has an important role in motivation; "social contexts either stifle or promote intrinsic motivation" (Deci & Ryan; 2000, p. 262). Motivation may be mediated by individual differences in social competence. As a form of social competence, communal mastery is defined as the belief that one is capable of successful goal attainment by virtue of being closely interconnected with others (Hobfoll, Jackson, Hobfoll, Pierce, & Young, 2002; Hobfoll, Schroder, Wells, & Malek, 2002). Hobfoll and colleagues developed a scale to assess communal mastery; this study uses the Turkish form of this scale, together with the Turkish forms of the TAI and AMS.

### Purpose

The purpose of this study is to adapt AMS (Vallerand et al., 1992, 1993) into Turkish by examining the findings of trilateral equivalence, reliability and validity analyses.

## Method

### Participants and Procedure

This study included 390 university students. Study group consisted of two separate groups; 88 undergraduates for the transliterational equivalence study and 302 undergraduates for the reliability and validity study. All group consisted of seniors. For the transliterational equivalence study participants were administered two different test batteries. Tests were approximately two weeks apart, with the English form first and the Turkish form second, and conducted in group settings on two occasions. Participation was arranged voluntarily, with informed consent in the classroom environment. Students were recruited without regard to gender. Instructions were read aloud by trained proctors before students began responding. Sufficient time was provided for all students to complete each instrument. Average age was 23 (range 20-30 years) and 73% of the participants were male and 27% were female.

### Measures

A nine-item questionnaire was used to collect demographic data. In addition to Turkish forms of the scales, the original English forms of AMS and communal mastery scale (CMS) were used. Additionally, Turkish forms of TAI were also used together with these scales. Totally, Turkish test sets consisted of three scales and one questionnaire.

**Academic Motivation Scale (AMS):** The AMS (Vallerand et al., 1992, 1993) consists of 28 items and seven subscales. The scale has a French version as well (Vallerand, Blais, Brière, & Pelletier, 1989). Based on self-determination theory, the scale is divided into seven subscales, reflecting one subscale of amotivation, three subscales of intrinsic motivation and three subscales of extrinsic motivation. Seven subscales named in Turkish: Intrinsic Motivation to Know (IMTK): İçsel Motivasyon Bilme (İMBİ); Intrinsic Motivation to Accomplish (IMTA): İçsel Motivasyon Başarma (İMBA); Intrinsic Motivation to Experience Stimulation (IMES): İçsel Motivasyon Hareket (İMH); Extrinsic Motivation External Regulation (EMER): Dışsal Motivasyon Düzen (DMD); Extrinsic Motivation Introjected Regulation (EMIN): Dışsal Motivasyon Kendini İspat (DMKİ); Extrinsic Motivation Identified Regulation (EMID): Dışsal Motivasyon Tanınma (DMT) and Amotivation (AMOT): Motivasyonsuzluk (MS). The items are rated on a seven-point scale, ranging from 1 (does not correspond at

all) to 7 (corresponds exactly). Each subscale consists of four items; thus, subscale scores can range from four to twenty-eight. A high score on a subscale indicates high endorsement of that particular aspect of academic motivation.

**Test Anxiety Inventory (TAI);** Turkish form of TAI (Spielberger, 1979) was developed by Öner (1990). The Turkish name of TAI is Sınav Tutumu Envanteri (STE). The scale consists of 20 items or statements. Respondents indicate how frequently they experience specific anxiety symptoms in an examination situation on a four-point scale ranging from 1 (not at all) to 4 (very much so). The STE provides three scores; a total score, a worry subscore and an emotionality subscore. Eight of the items measure the worry component and twelve measure the emotionality component. The total score consist of both subscales. In this study Cronbach's alpha was 0.93 for total scores, 0.85 for worry and 0.89 for emotionality subscores.

**Communal Mastery Scale (CMS):** Communal mastery assessed via the CMS (Hobfoll, Schröder et al., 2002) which was developed from two commonly employed measures of mastery (Pearlin, Lieberman, Menaghan, & Mullan, 1981) and self-efficacy (Schwarzer, 1993). CMS was adapted to Turkish and used in related studies (Karagüven, 2005). The scale consists of 10 items. Responses were based on a four-point scale from 1 (strongly disagree) to 4 (strongly agree). Students were asked to indicate the degree to which they agreed with the statements, for example, "With the help of those close to me I have more control over my life" or "I can meet my goals by helping others meet theirs". Cronbach's alpha was 0.69 in this study.

## Results

For the transliteral equivalence, original forms were administered to 88 seniors from the English Language department of Marmara University at the beginning of the study. Alpha was 0.87 for this group. Secondly, items were translated into Turkish by a team of English linguistic experts. After translation, back-translation was conducted by a native English speaker. Expert opinion was also obtained for the Turkish items. The Turkish form of the AMS is referred to as AMÖ. Turkish forms were administered to the same group within two weeks and the correlation values for total scores and subscores ranged from 0.47 ( $p \leq .01$ ) to 0.77 ( $p \leq .01$ ) for total score and subscores. Additionally, correlations were ranging from 0.29 ( $p \leq .05$ ) to 0.68

( $p \leq .01$ ) between English and Turkish items. From these results, it can be said that the Turkish and English forms of the scale were related and similar to each other.

## Validity

For criterion-related validity, to examine the construct validity of the AMÖ, the related construct of STE (Öner 1990; Spielberger, 1979) and ÇDÖ (Hobfoll, Schröder et al., 2002) were administered to 88 participants along with the AMÖ. The correlations were statistically significant, especially between AMÖ and ÇDÖ, and ranged from 0.11 ( $p \leq .05$ ) to 0.23 ( $p \leq .01$ ) for subscales. Only three subscales of AMÖ (DMKI, DMD and MS) were significantly correlated with two subscales (worry and emotionality) and total scores of STE. The correlation values ranged from 0.29 ( $p \leq .05$ ) to 0.39 ( $p \leq .01$ ) for MS and from 0.12 ( $p \leq .05$ ) to 0.21 ( $p \leq .01$ ) for DMKI and DMD. High and statistically significant correlations suggest that the constructs are relevant to each other. Significant relationships with other scales provided evidence for the concurrent validity of the scale.

Hypotheses testing method was used for the distinctive validity. T-test results showed statically significant differences in the AMÖ's five subtests between students who were satisfied with their school and those students who were not; IMTK ( $t = -3.90$ ,  $sd = 5.07$ ,  $p < .001$ ), IMTA ( $t = -4.50$ ,  $sd = 4.60$ ,  $p < .001$ ), IMES ( $t = -1.91$ ,  $sd = 4.85$ ,  $p < .05$ ), EMID ( $t = -6.98$ ,  $sd = 5.08$ ,  $p < .001$ ), MS ( $t = -6.73$ ,  $sd = 6.83$ ,  $p < .001$ ). The mean scores of the same subscales showed significant differences between students who preferred the school by himself/herself and those who did not; IMTK ( $t = -2.04$ ,  $sd = 5.39$ ,  $p < .05$ ), IMTA ( $t = -2.37$ ,  $sd = 4.60$ ,  $p < .01$ ), IMES ( $t = -2.08$ ,  $sd = 4.76$ ,  $p < .05$ ), EMID ( $t = -4.32$ ,  $sd = 5.22$ ,  $p < .001$ ), MS ( $t = -3.56$ ,  $sd = 6.71$ ,  $p < .001$ ). Analyses of variance (ANOVA) results showed that academic achievement levels differed significantly for six subscales; IMTK ( $F_{(3,290)} = 5.527$ ,  $p < .001$ ), IMTA ( $F_{(3,290)} = 6.718$ ,  $p < .000$ ), IMES ( $F_{(3,290)} = 2.598$ ,  $p < .05$ ), EMID ( $F_{(3,290)} = 4.526$ ,  $p < .004$ ), EMIN ( $F_{(3,290)} = 3.467$ ,  $p < .01$ ), MS ( $F_{(3,290)} = 9.009$ ,  $p < .000$ ).

The explanatory factor analysis (EFA) method was used to test the construct validity. At the beginning of factor analysis KMO and Bartlett's test was conducted. KMO and Bartlett's test showed whether the sample size was sufficiently large to ensure analysis. The results showed that the sample size was enough (.883,  $p \leq .001$ ) to analyze and that

subtests were related to each other (Tonta, 2008). Principal component analysis was conducted for extraction. Varimax rotation with Kaiser Normalization extracted the factors from the items. According to results for factor loading of items in the preliminary factor rotated component matrix; 1 (-2.552E-02), 14 (-3.801E-02) and 25 (-4.639E-02) were greater than 0.40 in more than one factor. Therefore, items 1, 14 and 25 were eliminated in the second factor analysis (Büyükköztürk, 2002). Following the second analysis; five factors were extracted with eigenvalues greater than 1.00, accounting for 58.06% of the total variance. Factor 1 explained 15.58% of the variance and contained nine items; 2, 4, 9, 16, 13, 23, 6, 18, 11. These items were related to the intrinsic motivation subscales therefore, this factor was entitled “intrinsic motivation”. Factor 2 explained 12.16% of the variance and comprised four items; 26, 19, 5, 12. This factor was entitled “amotivation”. Factor 3 explained 11.23% of the variance and contained five items; 28, 21, 7, 27, 20. This factor was entitled “introjected regulation and to accomplish”. Factor 4 explained 10.37% of the variance and consisting of three items; 8, 22, 15. This factor was entitled “external regulation”. Factor 5 explained 8.7% of the variance and consisted of four items; 17, 24, 10, 3. This factor was entitled “identified regulation”. Because of the higher total variance (58.06%), the scale could also have only one general factor.

After the explanatory factor analysis, factorial structure of AMÖ was examined in LISREL (Trial version 8.80) via confirmatory factor analysis (CFA) method by using maximum likelihood estimation (Jöreskog & Sörbom, 1993, 1996; Marsh & Hocevar, 1988). CFA is a special form of factor analysis that is used to test whether measures of a construct are consistent with a researcher's understanding of the nature of that construct or factor (see. Anderson & Gerbing, 1984; Bentler, 1990; Cole, 1987; Hu & Bentler, 1999; Marsh, Balla, & McDonald, 1988). Goodness of fit statistics were determined for a model with 7 factors in the original scale giving;  $\chi^2(df=329, p=.000)=1017.74$ ,  $\chi^2/df=3.094$ , CFI (Comparative Fit Index)=.94, NFI (Normed Fit Index)=.91, NNFI (Non-Normed Fit Index)=.93, GFI (Goodness-of-Fit Index)=.84, AGFI (Adjusted Goodness-of-Fit Index)=.81, IFI (Incremental Fit Index)=.94, RMR (Root Mean-Square Residual)=.18, SRMR (Standardized Root Mean-Square Residual)=.65, RMSEA (Root Mean Square Error of Approximation)=.73, 90% RMSEA =.068-.079. These values show that the tested model produced a satisfactory goodness of fit.

## Reliability

Internal consistency coefficient and standard error of measurement techniques were used to test the reliability of the Turkish version of the AMS. Cronbach's Alpha, mean, standard deviation and item-total correlation coefficients values were calculated for internal consistency. Cronbach's Alpha of the AMÖ was 0.67 compared with 0.87 for the English version. In the end of the item-total correlation, the correlation values ranged from 0.22 to 0.64 for total scores, and from 0.30 to 0.73 for subscores. Except for MS, there were statistically significant and positive correlations, from 0.79 ( $p \leq .01$ ) to 0.27 ( $p \leq .01$ ) between all subtests. MS (amotivation) showed insignificant and negative correlations, from -.002 to -.380 ( $p \leq .01$ ) with all subtests. Standard error of measurement was also used for reliability analyses and ranged between 0.40 and 2.93 points. Thus, an individual's subscore may differ as much as between a half point and three points.

## Conclusion

Adaptation studies are topics of major interest for educational research because they provide opportunities to collect reliable and valid data for new studies. The concept of motivation has been one of the most essential components of education. There has been a growing need for reliable and valid Turkish-language instruments to study motivational problems in education. This study examined the adaptation findings of the Turkish form of AMS (Vallerand et al., 1992, 1993) which is based on Deci and Ryan's self-determination theory. Firstly, the original English forms of AMS and CMS were administered to a group of English Language students: alpha values were 0.87 and 0.69 for this sample indicating that the items included in the original forms were understandable for Turkish university students. Secondly, after the translation and back-translation processes a Turkish version of AMS was produced and termed “Akademik Motivasyon Ölçeği-AMÖ”. Thirdly, to test for transliterational equivalence, Turkish forms of the scale were given to the same groups of university students within two weeks. The correlation values showed that the Turkish and English forms of the scale were similar to each other. Fourthly, to examine the construct validity of the AMÖ, the related constructs of STE and ÇDÖ were administered to participants along with the AMÖ. Significant correlations suggesting that the constructs are relevant to each other. Significant relationships, especially with ÇDÖ, provided evidence for the concurrent validity of the scale. Fifthly, hypotheses testing method was used to examine the distinctive valid-



ity. According to T-test and analyses of variance, mean scores of subtest of AMO showed significant differences for some variables such as; satisfaction from school, to prefer school by himself or herself, and most importantly, academic achievement. These were distinctive factors for the mean scores of subtests. Sixthly, KMO and Bartlett's test's results showed that the sample size was sufficiently large for factor analysis, and that subtests were related to each other. Seventhly, three items were eliminated in the second explanatory factor analyses. Results showed that the AMÖ has 25 items and 5 factors. The scale could also have only one general factor. Eighthly, the factorial structure of AMÖ was examined via confirmatory factor analysis method. The seven factors model tested for AMÖ showed a satisfactory goodness of fit. Ninthly, Cronbach's alpha measures, means, standard deviations and item-total correlation coefficients were calculated for internal consistency. Cronbach's alpha values of the AMÖ's subscores were between 0.67 and 0.87 and between 0.83 and 0.86 for the English version (Vallerand et al., 1993). Internal consistency of the original English AMS was examined in various previous studies and alpha values were reported between 0.70, 0.77 (Cokley, 2000; Cokley, Bernard, Cunningham, & Motoike, 2001) and 0.90 (Fairchild, Horst, Finney & Barron, 2005). Alpha values of AMÖ in the present study were very close to those of AMS. Item-total correlation values ranged from 0.22 to 0.64 for total scores and from 0.30 to 0.73 for subscores. Except MS, there were statistically significant and positive correlations between all subtests. As expected, the MS (amotivation) was not correlated, or was negatively correlated, with other subtests. Lastly, according to the standard error of measurement technique result; a subscore may change between a half point and three points. Consequently, the scale was adapted to Turkish with adequate reliability and validity values indicating that the AMÖ could be used in related research by Turkish researchers.

This study had several strengths and limitations. Its strengths include the large sample size in addition to use of standardized measures. The weaknesses were typical of many published studies in that many items included in the questionnaire on motivation and communal mastery were objective situations or actions. Conversely, the test anxiety scale was largely comprised of subjective ratings of subjective experiences. This may be a reason for the lowest correlations between STE and AMÖ. Replication with different subjects in other contexts is needed and suggested, in order to provide further evidence for the reliability and validity of the AMÖ.

## References/Kaynakça

- Aksan, M. ve Koçyiğit, M. (2011). *Amasya Rehberlik ve Araştırma Merkezi Müdürlüğü 2009-2010 eğitim-öğretim yılı başarısızlık nedenleri anketi ortaöğretim ve ilköğretim formu değerlendirme raporu*. [http://okulweb.meb.gov.tr/05/01/117498/haberduyuru/rehberlik/bna\\_degerlendirme.doc](http://okulweb.meb.gov.tr/05/01/117498/haberduyuru/rehberlik/bna_degerlendirme.doc) adresinden 9 Şubat 2011 tarihinde edinilmiştir.
- Anderson, J. C., & Gerbing D.W. (1984). The effect of sampling error on convergence, improper solutions, and goodness-of-fit indices for maximum likelihood confirmatory factor analysis. *Psychometrika*, 49, 155-173.
- Bandura, A. (1994). Self-efficacy. In V. S. Ramachandran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). New York: Academic Press.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Barron, K. E., & Harackiewicz, J. M. (2001). Achievement goals and optimal motivation: Testing multiple goal models. *Journal of Personality and Social Psychology*, 80 (5), 706-722.
- Bentler, P. M. (1990). Comparative fit indexes in structural equation models. *Psychological Bulletin*, 107, 238-246.
- Büyükoztürk, Ş. (2002). *Sosyal bilimler için veri analizi el kitabı*. Ankara: Pegem-A Yayıncılık.
- Cokley, K. O. (2000). Examining the validity of the academic motivation scale by comparing scale construction to self-determination theory. *Psychological Reports*, 86, 560-564.
- Cokley, K. O., Bernard, N., Cunningham, D., & Motoike, J. (2001). A psychometric investigation of the academic motivation scale using a United States sample. *Measurement and Evaluation in Counseling and Development*, 34, 109-119.
- Cole, D. A. (1987). Utility of confirmatory factor analysis in test validation research. *Journal of Consulting and Clinical Psychology*, 55, 1019-1031.
- Cunningham, G. K. (2003). *Can education schools be saved?* Retrieved February 19, 2009, from [http://www.vestibular.uerj.br/vest2004/files/2004ef\\_d1\\_ing.pdf](http://www.vestibular.uerj.br/vest2004/files/2004ef_d1_ing.pdf)
- Deci, E. L. (1975). *Intrinsic motivation*. New York: Plenum.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227-268.
- Elliot, A. J., & Thrash, T. M. (2001). Achievement goals and the hierarchical model of achievement motivation. *Educational Psychology Review*, 13 (2), 139-156.
- Ellis, E. S., & Worthington, L. A. (1994). *Research synthesis on effective teaching principles and the design of quality tools for educators* (Technical Report No. 5). Eugene: University of Oregon, National Center to Improve the Tools of Educators (ERIC Document Reproduction Service No. ED386853)
- Ertürk, S. (1979). *Eğitimde program geliştirme*. Ankara: Me-teksan.
- Evans, L. (2000). The effects of educational change on morale, job satisfaction and motivation. *Journal of Educational Change*, 1, 173-192.

- Fairchild, A. J., Horst, S. J., Finney, S. J., & Barron, K. E. (2005). Evaluating new and existing validity evidence for the academic motivation scale. *Contemporary Educational Psychology, 30* (3), 331-338.
- Francis, A., Goheer, A., Haver-Dieter, R., Kaplan, A. D., Kerstetter, K., Kirk, A. L. et al. (2004). Promoting academic achievement and motivation: a discussion & contemporary issues based approach. Retrieved November 9, 2009, from [http://www.wepapers.com/Papers/57793/Promoting\\_Academic\\_Achievement\\_and\\_Motivation-\\_A\\_Discussion\\_%26\\_Contemporary\\_Issues\\_Based\\_Approach](http://www.wepapers.com/Papers/57793/Promoting_Academic_Achievement_and_Motivation-_A_Discussion_%26_Contemporary_Issues_Based_Approach)
- Grolnick, W. S., & Ryan, R. M. (1989). Parent styles associated with children's self-regulation and competence in school. *Journal of Educational Psychology, 81*, 143-154.
- Hambleton, R. K., Merenda, P. F., & Spielberger, C. D. (2005). *Adapting educational and psychological tests for cross-cultural assessment*. Mahwah, New Jersey: Lawrence Erlbaum.
- Hobfoll, S. E., Jackson, A., Hobfoll, I., Pierce, C. A., & Young, S. (2002). The impact of communal-mastery versus self mastery on emotional outcomes during stressful conditions: A prospective study of native American women. *American Journal of Community Psychology, 30*, 853-871.
- Hobfoll, S. E., Schröder, K. E. E., Wells, M., & Malek, M. (2002). Communal versus individualistic construction of sense of mastery in facing life challenges. *Journal of Social and Clinical Psychology, 21*, 362-399.
- Hu, L. T., & Bentler, P. M. (1999). Cut-off criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1-55.
- Jöreskog, K. G., & Sörbom, D. (1993). *LISREL 8.80: Structural equation modeling with the SIMPLIS command language*. Hillsdale, New Jersey: Lawrence Erlbaum.
- Jöreskog, K. G., & Sörbom, D. (1996). *Lisrel VI: Analysis of linear structural relationships by maximum likelihood, instrumental variables, and least squares methods*. Mooresville, IN: Scientific Software.
- Karadeniz, Ş., Büyüköztürk, Ş., Akgün, Ö. E., Çakmak, E. K. ve Demirel, F. (2008). Turkish adaptation study of motivated strategies for learning questionnaire for 12-18 years old children: Results of confirmatory factor analysis. *The Turkish Online Journal of Educational Technology, 7* (4), 1303-6521.
- Karagüven, M. H. (2005, July). *Academic motivation and communal mastery of technical high school students*. Paper presented at the 25<sup>th</sup> International STAR Conference, Stress and Anxiety Research Society, Germany.
- Keçeli-Kaysılı, B. (2008). Akademik başarının artırılmasında aile katılımı. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi, Özel Eğitim Dergisi, 9* (1), 69-83.
- Marsh, H. W., & Hocevar, D. (1988). A new more powerful approach to multitrait-multimethod analyses: Application of second-order confirmatory factor analysis. *Journal of Applied Psychology, 73*, 107-117.
- Marsh, H. W., Balla, J. R., & McDonald, R. P. (1988). Goodness-of-fit indexes in confirmatory factor analysis: The effect of sample size. *Psychological Bulletin, 103*, 391-410.
- Matuga, J. M. (2009). Self-regulation, goal orientation, and academic achievement of secondary students in online university courses. *Educational Technology & Society, 12* (3), 4-11.
- McCaslin, M., & Hickey, D. T. (2001). Self-regulated learning and academic achievement: A Vygotskian view. In B. J. Zimmerman & D. H. Schunk (Eds.), *Self-regulated learning and academic achievement: Theoretical perspectives* (pp. 227-252). Mahwah, NJ: Erlbaum.
- Miserandino, M. (1996). Children who do well in school: Individual differences in perceived competence and autonomy in above average children. *Journal of Educational Psychology, 88*, 203-214.
- Öner N. (1990). *Sınav kaygısı envanteri elkitabı*, Yayın no:1, İstanbul: YÖRET.
- Pearlin, L. I., Lieberman, M. A., Menaghan, E. G., & Mullan, J. T. (1981). The stress process. *Journal of Health and Social Behavior, 22*, 337-356.
- Pintrich, P. R., & De Groot E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology, 82* (1), 33-40.
- Pintrich, P. R., & Schunk, D. H. (2002). *Motivation in education: Theory, research, and applications* (2nd ed.). New Jersey: Prentice Hall.
- Pintrich, P. R., Smith, D. A. F., Garcia, T., & McKeachie, W. J. (1991). *A manual for the use of the motivated strategies for learning*. The University of Michigan (ERIC Document Reproduction Service No: ED338122).
- Renchler, R. (1992). *Student motivation, school culture, and academic achievement*. ERIC/CEM Trends and Issues Series, Number 7, USA.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55* (1), 68- 78.
- Scheuermann, B. (2000). Curricular and instructional recommendations for creating safe, effective, and nurturing school environments for all students. In L. M. Bullock & R. A. Gabel (Eds.), *Positive academic and behavioral supports: creating safe, effective, and nurturing schools for all students*. Norfolk, VA: Council for Children with Behavioral Disorders (ERIC Document Reproduction Service No: ED457628)
- Schwarzer, R. (1993). *Measurement of perceived self-efficacy: Psychometric scales for cross-cultural research*. Berlin: Freie Universität Berlin, Institut für Psychologie.
- Spielberger, C. D. (1979). *Understanding stress and anxiety*. New York: Harper.
- Spielberger, C. D. (1980). *Preliminary professional manual for the test anxiety inventory*. C. A.; Consulting Psychologist Press.
- Stipek, D. J. (2002). *Motivation to learn: Integrating theory and practice* (4th ed.). Boston; Allyn & Bacon.
- Thorkildsen, T. A., Nicholls, J. G., Bates, A., Brankis, N., & De-Bolt, T. (2002). *Motivation and the struggle to learn: responding to fractured experiences*. Boston, Massachusetts: Allyn and bacon.
- Tonta, Y. (2008). *Faktör Analizi*. [yunus.hacettepe.edu.tr/~tonta/courses/spring2008/bby208](http://yunus.hacettepe.edu.tr/~tonta/courses/spring2008/bby208) adresinden 29 Nisan 2011 tarihinde edinilmiştir.
- Tucker, C. M., Zayco, R. A., & Herman, K. C. (2002). Teacher child variables as predictors of academic engagement among low-income African American children. *Psychology in the School, 39* (4), 477-488.

Türk Dil Kurumu (TDK). (2011). *Genel Türkçe sözlük*. <http://tdkterim.gov.tr/bts/> adresinden 19 Ocak 2011 tarihinde edinilmiştir.

Uzbaş, A. (2009). Okul psikolojik danışmanlarının okulda saldırganlık ve şiddete yönelik görüşlerinin değerlendirilmesi. *Mehmet Akif Ersoy Üniversitesi, Eğitim Fakültesi Dergisi*, 18, 90-110.

Vallerand, R. J., Blais, M. R., Brière, N. M., & Pelletier, L. G. (1989). Construction et validation de l'Échelle de Motivation en Éducation (EME). *Revue Canadienne Des Sciences Du Comportement*, 21, 323-349.

Vallerand, R. J., Pelletier, L. G., Blais, M. R., Brière, N. M., Senécal, C., & Vallières, E. F. (1992). The academic motivation scale: a measure of intrinsic, extrinsic, and amotivation in education. *Educational and Psychological Measurement*, 52, 1003-1017.

Vallerand, R. J., Pelletier, L. G., Blais, M. R., Brière, N. M., Senécal, C., & Vallières, E. F. (1993). On the assessment of intrinsic, extrinsic and amotivation in education: Evidence on the concurrent and construct validity of the academic motivation scale. *Educational and Psychological Measurement*, 53, 159-172.

Winne, P. H. (2001). Self-regulated learning viewed from models of information processing. In B. J. Zimmerman & D. H. Schunk (Eds.), *Self-regulated learning and academic achievement: Theoretical perspectives* (pp. 153-190). New Jersey: Erlbaum.

Woolfolk, A. E. (2004). *Educational psychology* (9th ed.). New York: Pearson.

Zimmerman, B. J. (1990). Self-regulated learning and academic achievement: An overview. *Educational Psychologist*, 25 (1), 3-17.

Zimmerman, B. J. (1994). Dimensions of academic self-regulation: A conceptual framework for education. In D. H. Schunk & B. J. Zimmerman (Eds.), *Self-regulation of learning and performance: Issues and educational applications* (pp. 3-19). New Jersey: Erlbaum.

Zimmerman, B. J. (2001). Theories of self-regulated learning and academic achievement: An overview and analysis. In B. J. Zimmerman & D. H. Schunk (Eds.), *Self-regulated learning and academic achievement: Theoretical perspectives* (pp. 1-38). New Jersey: Erlbaum.