Educational Sciences: Theory & Practice - 13(4) • 2187-2194

www.edam.com.tr/estp
DOI: 10.12738/estp.2013.4.1870

Developing a Scale for Learner Autonomy Support*

Aytunga OĞUZ[a]
Dumlupınar University

Abstract

The aim of the present study is to develop a scale to determine how necessary the primary and secondary school teachers view the learner autonomy support behaviours and how much they perform these behaviours. The study group was composed of 324 primary and secondary school teachers. The process of developing the scale involved a literature scan, taking student opinions through essays, creating an item pool, taking expert opinions, a pretesting study as well as studies on determining the structural validity and reliability. The results of explanatory factor analysis showed that the scale had a structure of one dimension with three factors and also confirmatory factor analyses confirmed the these three factor structure of the scale. These factors were called Feeling And Thinking Support (7 items), Learning Process Support (5 items) and Evaluation Process(4 items). It was seen that the factor weights of the scale items varied between 0.536 and 0.728 for necessity; 0.596-0.753 for execution. According to t-test results differences between each item's means of upper 27% and lower 27% points were significant. The Cronbach alpha reliability coefficient is α=0.89 for necessity, α=0.92 for execution. These results indicate that the Learner Autonomy Support Scale has sufficient validity and reliability.

Key Words

Autonomy Support, Confirmatory Factor Analysis, Constructivist Learning, Learner Autonomy, Scale Development, Self-determination Theory.

In today's world, the designation of learner-centered, constructivist learning environments that enable learners to learn meaningfully based on their own existing knowledge and through their own efforts has gained significance as opposed to traditional learning environments based on knowledge transfer by teachers. According to constructivist approach, learners create their own knowledge by actively participating in learning process. This approach that emphasizes learning rather than teaching also gives importance to learner autonomy and supports student participation in learning (Wang, 2011). In constructivist learning environments, teacher and students' roles and their interactions differ from traditional approach. Teacher, in constructivist learning process, needs to carry out roles such as facilitating learning, providing options for students, assisting students to give their own decisions and solve their problems by themselves (Yaşar, 1998), supporting the responsibility for learning and planning authentic tasks (Koç, 2006).

Constructivist approach gives learners opportunities to ask their own questions, to create their own concepts and learning strategies based on existing knowledge (Fosnot, 1996). Learners in constructivist approach have control and responsibility over their learning process. In other words, they carry out roles of autonomous learners. Teacher in this process needs to accept learner autonomy and entrepreneurship and also needs to support learners in this aspect (Bay,

* This study is the extended version of the paper presented in the 2nd National Congress on Curriculum and Instruction in Bolu, Turkey on 27-29 September 2012.

a **Aytunga OĞUZ, Ph.D.**, is currently an associate professor of Educational Sciences, Curriculum and Instruction. Her research interests include teacher education, teaching and learning methods and approaches. *Correspondence:* Assoc. Prof. Aytunga OĞUZ, Dumlupınar University, Faculty of Education, Department of Educational Sciences, Curriculum and Instruction, Kütahya, Turkey. Email: aytunga.oguz@dpu.edu.tr Phone: +90 274 265 2031/4595.

Kaya, & Gündoğdu, 2010; Brooks & Brooks, 1993; Şahin, 2004; Yager, 1991). Teachers are supposed to create a learning environment that enables students to make independent decisions and become productive. According to constructivist approach, one of the significant goals of education is to promote learner autonomy (Castle, 2004; Öztürk, 2011).

According to self-determination theory, autonomy is one of three basic universal psychological needs that needs to be satisfied for individuals' spiritual health and well-being (Andersen, 2000; Coleman, 2000; Ryan & Deci, 2000). The need for autonomy is related to individuals' feeling of being able to make decisions about his or her actions rather than the feeling of obligation to perform certain behaviors or feeling of being under control (Gagne & Deci, 2005; Ingledew, Markland, & Sheppard, 2004; Kart & Güldü, 2008; Kowal & Fortier, 1999). This theory emphasizes that the terms "autonomy" and "independence" are used in different meanings. When a person acts "willingly" and "totally approves" these actions, he or she is autonomous. A person's autonomy depends on the degree he or she takes on responsibility of his or her actions (Ryan & Deci, 2000). Independence, on the other hand, is not dependent on others' assistance or support and is the opposite of dependent. In the opposite of autonomy, however, actions of an individual are controlled by "foreign" forces or the person is forced to act contrary to his or her values (Chirkov, Ryan, Kim, & Kaplan, 2003). What is meant by students' taking responsibility on learning is to partially or totally control various processes such as deciding on the learning goals that are traditionally overtaken by teachers, choosing teaching methods and evaluating the process (Wang, 2011). This depends on development of learners' autonomous learning behaviors.

Edward Deci and Richard Ryan are the prominent representatives of self-determination theory who conducted preliminary research on autonomous learning behaviors. The theory claims that performing autonomous learning behaviors necessitate individuals to feel that they can choose, make their own decisions and takes responsibility over their behaviors (Çankaya, 2009; Deci & Ryan, 1985). Opinions by Jean-Jacques Rousseau, John Dewey, William Kilpatrick, Ivan Illich and Carl Roger contributed to emergence and development of autonomous learning concept that focuses on learner-centeredness, humanism and constructivism (Bayat, 2007). Piaget and Vygotsky who are pioneers of constructivist approach pointed out to autonomous learning by emphasizing that individuals could construct their own knowledge as a result of experiences with the environment. According to Piaget, an autonomous individual can make his or her own decisions and by evaluating the negative results of his or her decisions, he or she can make better decisions in the future (Castle, 2004). If a student can make decisions over when to initiate, stop, continue or re-initiate his or her behaviors that means that he or she can perform autonomous behaviors (Connel, 1990 as cited in Stefanou, Perencevich, DiCintio, & Turner, 2004).

Development of autonomous behaviors is dependent on opportunities given to individuals over the course of experiences and on behaviors of other people he or she is in interaction with. Training of students in a way that he or she can takes on the responsibility of his or her own learning process can be ensured in learning environments where various variables that affect learning are enriched through students' opinions and where autonomy is accepted as a classroom culture. This situation necessitates teacher to be autonomous and to reflect his or her own knowledge, skills and experiences related to the subject on students (Ergür, 2010; Öztürk, 2011). It is expressed that passive learning behaviors are not innate and that since educational systems cannot provide appropriate educational conditions, students' autonomous learning development is impaired (Holden & Usuki, 1999 as cited in Sert, 2007). Based on this, students must be given autonomous learning opportunities. Students in autonomous learning process learn to determine his needs, to make decisions about his learning and also learn self-evaluation. The actualization of such a process and students' execute of autonomous learner characteristics depend on learning to learn and provision of appropriate conditions (Aydoğdu, 2009). Therefore, it is important that teachers provide autonomy support to students in learning environments.

Autonomy support necessitates consideration of students' opinions by teachers, helping them to express their own feelings and provision of necessary knowledge and opportunities so that he can make his own choices and decreasing pressure and requests to a minimum level (Deci & Ryan, 1985). That teacher helps and encourages student to realize his goals, pursues and develops his interests or understands the contribution of his own behaviors in realization of personal goals and interests is seen as autonomy support (Assor, Kaplan, & Roth, 2002). Teachers that provide autonomy support can encourage students by providing necessary knowledge so that they can solve a problem by following their own strategies (Black & Deci, 2000).

Autonomy support by teacher in learning environment could bring some benefits. Autonomy support received by individuals from their environments is known to positively affect satisfaction of their basic psychological needs which in turn influence positively their subjective well-being (Çankaya, 2009). Students, in classroom environments where autonomy support is provided, feel more competent and develop a higher level self-esteem, their interests increase, they comprehend better, become more creative, nurture more positive feelings, and their physical and psychological well-being become better (Deci & Ryan, 1987). Autonomy support increases students' internal motivation (Deci, Schwartz, Sheinman, & Ryan, 1981) and creates a more self-regulative learning (Sierens, Vansteenkiste, Goossens, Soenens, & Dochy, 2009). Autonomy support to be provided by teachers in learning environments could help students develop autonomous learner behaviors.

In that sense, there are various roles teachers should undertake. Teachers who support autonomy could determine students' needs, interests and preferences and could support them. They can also create opportunities for students to help them feel autonomous in class (Reeve, Deci, & Ryan, 2004). Teachers could encourage provision of assistance and knowledge to support autonomy by asking students to evaluate themselves, plan their own activities and reflect about themselves as learners (Sierens et al., 2009). Teachers who provide autonomy support are considered to increase students' internal motivation, listen to students more frequently, allocate more time so that they could work independently and ask more questions about what students would like to do (Reeve, Bolt, & Cai, 1999). Teachers need to provide help and support to students so that they could determine their own interests, goals and values and gives them opportunities to choose their learning tasks. They also should try to understand students' feelings and thoughts by allowing them to criticize and which in turn promotes independent thinking (Assor, Kaplan, & Roth, 2002). Teachers who advocate learner autonomy are expected not to guide students or keep them under control; rather, they are expected to help students make their own decisions and follow their own learning styles during learning process. In other words, teachers could perform various supportive behaviors in class to develop autonomy of students (Bozack, Vega, Mccaslin & Good, 2008; Ramos, 2006; Reeve, 2006; Reeve, Deci et al., 2004; Stefanou et al. (2004) indicated that autonomy support teachers can be carried out in three ways; organizational, procedural and cognitive autonomy support in class.

When studies on learner autonomy in literature are analyzed, it could be seen that there is an emphasis on designation of learning environments to support learner autonomy and effects of teacher behaviors on support for learner autonomy (Black & Deci, 2000; Bozack et al., 2008; Stefanou et al., 2004; Tessier, Sarrazin, & Ntoumanis, 2008; Thaliah & Hashim, 2008) and students and teachers' perceptions regarding autonomy support (Bieg, Backes, & Mittag, 2011; Hagger et al., 2007; Núñez, León, Grijalvo, & Albo, 2012). In Turkey, it could be observed that most studies on autonomy support are on foreign language (English) teaching (Altunay & Bayat, 2009; Aydoğdu, 2009; Balçıkanlı, 2008; Bayat, 2007; Güven & Sünbül, 2007; Sert, 2006, 2007; Üstünoğlu, 2009) and that there are a limited number of studies in educational sciences and teacher education (Aydın, 2008; Bay et al., 2010; Çankaya, 2009; Keskin & Yıldırım, 2008; Sünbül, Dülger, Bozoğlan, & Güven, 2008; Yıldırım, 2005). Some studies revealed that teachers do not provide sufficient autonomy support for students. For example, Sünbül, Kesici, and Bozgeyikli (2003) analyzed the level of motivation given by teachers and they found out that, instead of supporting student autonomy, teachers provide moderate level control support for students. It was also revealed that primary school teachers' autonomy support are at moderate level (Güvenç, 2011) and science and technology teachers' autonomy support are at low level (Güvenç & Güvenç, 2011). It was found out in another study that though university students see themselves competent, they do not take on learning responsibility and, instead, teachers undertake most responsibilities (Üstünoğlu, 2009).

In the light of this information, it is important to assess how teachers feel that learner autonomy must be supported, to assess the frequency they perform these behaviors and there is a need for a measurement scale to determine this. When literature in Turkey on this subject is analyzed, it could be seen that there are various measurement scales. For example; "Teacher Autonomy Support Scale" to assess teachers' learner autonomy support was developed by Güvenç (2011). The scale is in a 5-point Likert-type ranging from "always" to never". There are two dimensions in this scale; "Making Decisions" and "Autonomy Opportunity" each consisting of eight items. The Cronbach alpha coefficient of the scale was found to be 0.83. On the other hand, Bay et al. (2010) developed "Democratic Constructivist Learning Environment Scale" for teacher candidates. One of the six dimensions of this scale is "Autonomy". This dimension consists of ten items and Cronbach alpha coefficient was found to be 0.85. The other scale "Scale for Teachers to Motivate Stu-

dents" that was adapted by Sünbül et al. (2003) was developed to assess the level at which teachers motivate students. The scale consists of four sub dimensions; High Level Control, Moderate Level Control, Moderate Level Autonomy Support and High Level Autonomy Support and 32 items in total. Cronbach alpha internal consistency coefficient was found to be 0.76.

Also, Üstünoğlu (2009) developed two distinct questionnaires for students and teachers in order to assess students and teachers' perceptions regarding autonomous learning in English classes. In teacher scale that aims to assess English class teachers' perceptions regarding autonomous learning, there are three main sections with "Responsibilities", "Abilities", and "Activities" titles consisting of 42 items in total. In the study by Sert (2007) that tries to examine English class teachers' and students' learning autonomy, first, students' and teachers' perceptions regarding this subject were determined and later, in-class observation form was used to assess the frequency of in-class activities by teachers that promote learning autonomy. There are 10 items in the observation form graded as five-point ranging from "almost never" to "always".

When scales developed to measure learner autonomy support in Turkey are examined, it could be observed that most of them are developed to assess English, primary education or science and technology teachers' autonomy support or to assess students' perceptions regarding this concept. However, there is not any measurement scale the reliability and consistency of which are tested and which aims to assess how primary and secondary school teachers feel the need for learner autonomy support and the frequency at which teachers performe these behaviors in classroom environments. There is, thus, a need for measurement scale that will help the teachers who works in primary and secondary schools to express their opinions about the necessity and performation of the autonomy support behaviors. Therefore, such a scale to be developed is thought to contribute to future research to be conducted on this area. The aim of the present study is to develop a scale to determine how necessary the primary and secondary school teachers view the learner autonomy support behaviours and how much they performe these behaviours.

Method

The steps to develop a Likert-type scale to determine how necessary the primary and secondary school teachers view the learner autonomy support behaviours and how much they performe these behaviours are followed in this study.

Research Group

The research group of the study consists of 324 teachers working in primary and secondary school teachers working in Kütahya Province during the spring term of 2011-2012 Educational year. Although there are various opinions regarding sampling size so as to carry out factor analysis in scale development studies, it is generally accepted that sampling size could be between fivefold and tenfold of the number of items (Kline, 1994; Pett, Lackey, & Sullivan, 2003; Tavşancıl, 2002). Tenure of the teachers ranges between 1 and 45.

Preparation of the Pilot Form of the Scale

Necessary procedures for preparation of a Likert-type scale were followed while the pilot form of the scale were prepared in the study (Erden, 1998; Tavşancıl, 2002). Based on this, the phases; creation of scale items, getting expert opinions and application of pre-piloting were followed during the preparation of the pilot form.

Autonomy sub-dimension of Democratic Constructivist Learning Environment Scale developed by Bay et al. (2010); Teacher Autonomy Support Scale developed by Güvenç (2011); in-class observation form in Sert's (2007) study to assess the frequency of in-class activities that promote autonomous learning and Üstünoğlu's (2009) Autonomous Learning Teacher Questionnaire was utilized during the composition of the items. Through use of literature and similar expressions of scales (Assor et al., 2002; Aydoğdu, 2009; Bay et al., 2010; Bozack et al., 2008; Güvenç, 2011; Hagger et al., 2007; Lim & Wang, 2009; Sert, 2007; Stefanou et al., 2004; Sünbül et al., 2003; Thaliah & Hashim, 2008; Üstünoğlu, 2009), a pool of items consisting of 49 items that aim to assess how teachers feel the need for learner autonomy support and the frequency they performe these autonomy supportive behaviors was created. Experts were consulted for the meaning, content and clarity and a pilot study was carried out with 37 teachers after necessary arrangements were made.

There were 49 items in the scale related to teachers' behaviors to support learner autonomy following the pilot study. Participants were both asked to express their opinions both on the necessity and performation of the autonomy support behaviors. They stated their opinions on a 5-point Likert-type rating scale consisting of choices: (5) always, (4) mostly, (3) sometimes, (2) seldom, (1) never.

Data Analysis

While analyzing the data gathered from the participants, descriptive statistics for each item score and scale scores were calculated. In order to assess the construct validity of the scale, firstly, Explanatory Factor Analysis (EFA) and later, Confirmatory Factor Analysis (CFA) ware carried out. Pearson correlation coefficients were calculated to determine relationship among factors in the scale. Item analysis techniques based on item-total correlations and the difference between high and low group means (t test) were also calculated. For scale reliability estimation, internal consistency (Cronbach alpha) coefficient and split half techniques were used.

Descriptive Analysis

As there were 49 items in the scale, the expected lowest score was 49.00, the highest score was 245.00, and the range was 196.00. Also, for the "necessity" of behaviors, the calculated lowest score was found to be 124, the highest score was 245, and the range was 121. For the "performation" of behaviors, the calculated lowest score was found to be 97, the highest score was 243, and the range was 146. Distribution of the scale was found to be close to normal distribution.

Findings on Validity of the Scale

Explanatory factor analysis was carried out to test construct validity of the scale. Kaiser-Meyer Olkin (KMO) was 0.94 for necessity and 0.96 for performation in Principal Component Analysis. Bartlett test result was also found to be significant both for necessity (7703.319, sd: 1176; p<.001), and for performation (9541.263, sd: 1176; p<.001). As a result of factor analysis, items with factor loadings lower than 0.40, with high loading values in both factors and for which the difference between loading values in both factors were lower than 0.10 were removed from the scale.

It was observed that, at the end of analysis, 16 items in the scale were categorized into three factors with eigenvalues higher than 1 both in necessity and performation dimensions. Total variance explained by these three factors was 56.252% for necessity and 62.065% for performation. It is also seen that common factor variances of items ranged from 0.438 to 0.704 for necessity and from 0.407 to 0.726 for performation. It was also revealed that all factor loading values in the first factor for necessity ranged from 0.485 to 0.728 and from 0.596 to 0.753 for performation; the variance explained by the first factor was % 38.723 for necessity and 45.684% for performation. The scale consists of 16 items in total and three factors with 7 items in the first factor, 5 in the second factor and 4 in the third factor. The factors were named as "Support for Feelings and Thoughts", "Support for Learning Process" and "Support for Assessment".

Confirmatory factor analysis was carried out to confirm the construct validity of the scale. Fit indices gathered for necessity (AGFI value is .89, GFI value is .92, CFI value is .97 and RMSEA value is .064) showed that model fit is sufficient. The Chi-square value of the model (χ^2 =236.05, sd =101) was found to be significant at p< .001 level. Chi-square degree of freedom is below 5 with a score of χ^2/sd = 2.33, and this refers to an acceptable fit value (Şimşek, 2007; Thompson, 2000). When goodness of fit values for "performation" dimension are analyzed, it could be seen that AGFI value is .86, GFI value is .90, CFI value is .97, RMSEA value is .077 and SRMR value is .052. Chi-square value of the model (χ^2 =296.45, sd =101) is found to be significant at p < .001 level. Chi-square degree of freedom is below 5 with a score of χ^2/sd = 2.93, and this refers to an acceptable fit value. These goodness of fit values show that Leaner Autonomy Support Scale measurement model is an acceptable model (Kline, 2011; Schermelleh-Engel, Moosbrugger, & Müller, 2003; Schumacker & Lomax, 2004; Şimşek, 2007). Item-factor loadings values based on DFA range from 0.51to 0.76 for necessity and from 0.59 to 0.81 for performation. When item t values for all items in the scale are analyzed, it could be observed that factor loading values are statistically significant. Based on these findings, it could be asserted that the scale has construct validity.

After the analysis of correlation coefficients for sub factors of the scale, positive and significant relationships (p<.01) were found between factor scores and corrected item total scores. It could be noted that there is a positive and moderate level relationships between factors, also a positive relationship between factors and corrected item total scores.

Findings Related to Analysis of Items in the Scale

That total item scores correlation was positive and high shows that items are sampling similar behaviors and that the internal consistency of the test was high (Büyüköztürk, 2005). Items with 0.40 and higher item-test correlation coefficient are discriminating items. Items the item-test correlation coefficients of which range between 0.30 and 0.40 are good items, and those ranging between 0.20 and 0.30 are items that need to be adjusted (Erkuş,

2003). Item-total correlation is expected to range minimum between 0.20 and 0.25 (Tavşancıl, 2002). Items with low correlations need to be removed from the scale so as to ensure high level of validity and reliability (Tezbaşaran, 1997). It was observed that item-total correlation values range from 0.43 to 0.65 for necessity and 0.54 and 0.70 for performation of behaviors.

Total scores teachers got from the piloting were calculated so as to determine discriminating power of items in the study, two groups were created with 27% high group (n=87), 27% low group (n=87) and t test for non-groups was applied to these groups. As a result of analysis, discriminating power of items were found to be significant at $p<0.001$ level both for necessity and performation.

Reliability of the Scale

Reliability is the determination between the independent measurements of the same thing. To ensure the reliability, random errors in the measurement must be debug (Karasar, 1991). Cronbach alpha coefficient was calculated to estimate reliability of the scale through internal consistency method. Cronbach alpha internal consistency coefficient of scale calculated for the "necessity" of teachers' autonomy supportive behaviors was α=0.89 and according to the sub-factors, starting from the first factor, these coefficients were respectively 0.94, 0.92 and 0.90. Cronbach alpha internal consistency coefficient of scale calculated for the "performation" of teachers' autonomy supportive behaviors was α=0.92 and according to the sub-factors, starting from the first factor, these alpha coefficients were respectively 0.88, 0.80 and 0.86. That alpha coefficient was higher than 0.80 shows that that scale is a highly reliable scale (Özdamar, 1999). Split-half reliability of the scale was calculated as 0.81 for necessity of behaviors and 0.83 for performation of behaviors.

Conclusions and Recommendations

There are 16 items in "Learner Autonomy Support Scale". As a result of EFA and CFA analyses, it was found out that the scale has one dimension and three factors. The lowest score to get from the scale is 16 and the highest is 80. Higher scores indicate that teachers view learner autonomy support necessary and greater performance concerning these behaviors; on the other hand, low scores indicate low support concerning the necessity of learner autonomy and less performance for those behaviors. In the light of the findings, it could be stated that the scale created as a result of this study has necessary psychometric features and could be used in further research. However, further research on the scale reliability and validity is recommended.

References/Kaynakça

Altunay, U. ve Bayat, Ö. (2009). The relationship between autonomy perception and classroom beahviors of english language learners. *Dil Dergisi*, *144*, 7-15.

Andersen, S. (2000). Fundamental human needs: Making social cognition relevant. *Psychological Inquiry, 11*(4), 269-276.

Assor, A., Kaplan, H., & Roth, G. (2002). Choice is good, but relevance is excellent: Autonomy enhancing and suppressing teacher behaviours predicting students' engagement in schoolwork. *British Journal of Educational Psychology*, *72*, 261-278.

Aydın, B. (2008). Autonomous learners in an autonomy class. IATEFL TTED SIG Newsletter, *1,* 9-11.

Aydoğdu, C. (2009). Yabancı dil öğretiminde otonom öğrenme: Neden ve nasıl? *Uluslararası Sosyal Araştırmalar Dergisi*, *2*(8), 68-74.

Balçıkanlı, C. (2008). Fostering learner autonomy in EFL classrooms. İngilizce'nin yabancı dil olarak öğretildiği sınıflarda öğrenen özerkliğini arttırmak. *Kastamonu Eğitim Dergisi*, *16*(1), 277-284.

Bay, E., Kaya, H. İ. ve Gündoğdu, K. (2010). Demokratik yapılandırmacı öğrenme ortamı ölçeği geliştirilmesi. *e-Journal of New World Sciences Academy Education Sciences, 1C0153, 5*(2), *646-664.* http://www.newwsa.com/site_dergi_arsivi.asp?d=1&dergi_id=2 adresinden edinilmiştir.

Bayat, Ö. (2007). *Yabancı dil olarak ingilizce öğrenenlerde özerklik algısı, okuduğunu anlama başarısı ve sınıf içi davranışlar arasındaki ilişkiler* (Doktora tezi, Dokuz Eylül Üniversitesi, Eğitim Bilimleri Enstitüsü, İzmir). http://tez2.yok.gov.tr/ adresinden edinilmiştir.

Bieg, S., Backes, S., & Mittag, W. (2011). The role of intrinsic motivation for teaching, teachers' care and autonomy support in students' self-determined motivation. *Journal for Educational Research Online (Journal für Bildungsforschung Online), 3*(1), 122-140.

Black, A. E., & Deci, E. L. (2000). The effects of instructors' autonomy support and students' autonomous motivation on learning organic chemistry: A self-determination theory perspective. *Science Education*, *84*, 740-756.

Bozack, A. R., Vega, R., Mccaslin, M., & Good, T. L. (2008). Teacher support of student autonomy in comprehensive school reform classrooms. *Teachers College Record, 110*(11), 2389-2407.

Brooks, J. G., & Brooks, M. G. (1993). *In search of understanding: The case for constructivist classrooms.* Alexandria, VA: American Society for Curriculum Development.

Büyüköztürk, Ş. (2005). *Sosyal bilimler için veri analizi el kitabı: İstatistik, araştırma deseni SPSS uygulamaları ve yorum* (Göz. Geç. 5. bs). Ankara: Pegem A Yayıncılık.

Çankaya, Z. Ç. (2009). Özerklik desteği, temel psikolojik ihtiyaçların doyumu ve öznel iyi olma: Öz-belirleme kuramı. *Türk Psikolojik Danışma ve Rehberlik Dergisi, 4*(31), 23-31.

Castle, K. (2004). The meaning of autonomy in early childhood teacher education. *Journal of Early Childhood Teacher Education*, *25*(1), 3 -10.

Chirkov, V., Ryan, R. M., Kim, Y., & Kaplan, U. (2003). Differentiating autonomy from individualism and independence: A self-determination theory perspective on internalization of cultural orientations and well-being. *Journal of Personality and Social Psychology, 84*(1), 97-110.

Coleman, P. (2000). Aging and the satisfaction psychological needs. *Psychological Inquiry, 11*(4), 291-294.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.

Deci, E. L., & Ryan, R. M. (1987). The support of autonomy and the control of behavior. *Journal of Personality and Social Psychology*, *53*(6), 1024-1037.

Deci, E. L., Schwartz, A. J., Sheinman, L., & Ryan, R. M. (1981). An instrument to assess adults'orientations toward control versus autonomy with children: Reflections on intrinsic motivation and perceived competence. *Journal of Educational Psychology, 73,* 642-650.

Erden, M. (1998). *Eğitimde program değerlendirme* (3. bs). Ankara: Anı Yayıncılık.

Ergür, D. O. (2010, November). Öğrenen özerkliğinin kazandırılmasında öğretmenin rolü. *International Conference on New Trends in Education and Their Implications* içinde (s. 354-359). Antalya. www.iconte.org/FileUpload/ks59689/File/74.pdf adresinden edinilmiştir.

Erkuş, A. (2003). *Psikometri üzerine yazılar*. Ankara: Türk Psikologlar Derneği Yayınları No: 24.

Fosnot, C. T. (1996). Constructivism: A psychological theory of learning. In C.T. Fosnot (Ed.), *Constructivism: Theory, perspectives, and practice* (pp. 8-33). New York: Teachers College Press.

Gagne, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior, 26*, 331-362.

Güven, Z. Z., & Sünbül, A. M. (2007, November). *The relation between the learners' autonomy levels and their learning styles*. Paper presented at the International Conference on Quality in Education in The Balkan Countries, Selanik, Greece.

Güvenç, E. ve Güvenç, H. (2011, Eylül). *Fen ve teknoloji öğretmenlerinin özerklik destekleri ve sınıf yönetim biçemleri*. 20. Ulusal Eğitim Bilimleri Kurultayı'nda sunulan bildiri, Mehmet Akif Ersoy Üniversitesi, Eğitim Fakültesi, Burdur.

Güvenç, H. (2011). Sınıf öğretmenlerinin özerklik destekleri ve mesleki özyeterlik algıları. *Kuram ve Uygulamada Eğitim Yönetimi, 17*(1), 99-116.

Hagger, M. S., Chatzisarantis, N. L. D., Hein, V., Pihu, M., Soos, I., & Karsai, I. (2007). The perceived autonomy support scale for exercise settings (PASSES): Development, validity, and cross-cultural invariance in young people. *Psychology of Sport and Exercise*, *8*, 632-653.

Ingledew, D. K., Markland, D., & Sheppard, K. E. (2004). Personality and self-determination of exercise behaviour. *Personality and Individual Differences*, *36*, 1921-1932.

Karasar, N. (1991). *Bilimsel araştırma yöntemi: Kavramlar, ilkeler, teknikler* (4. bs). Ankara: 3A Araştırma Eğitim Danışmanlık Ltd. Şti.

Kart, M. E. ve Güldü, Ö. (2008). Özerk benlik yönetimi ölçeği: Uyarlama çalışması. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi dergisi*, *41*(2), 187-207.

Keskin, G. ve Yıldırım, G. Ö. (2008). Yapısalcı yaklaşım normlarında üniversite öğrencilerinin problem çözme, otonomi, çoklu zeka durumlarının değerlendirilmesi. *İnönü Üniversitesi Eğitim Fakültesi Dergisi*, *9*(16), 67-88.

Kline, P. (1994). *An easy guide to factor analysis.* New York: Routledge.

Kline, R. B. (2011). *Principles and practice of structural equation modeling.* New York: The Guilford Press.

Koç, G. (2006). Yapılandırmacı sınıflarda öğretmen-öğrenen rolleri ve etkileşim sistemi. *Eğitim ve Bilim*, *31*(142), 56-64.

Kowal, J., & Fortier, M. S. (1999). Motivational determinants of flow: Contributions from self-determination theory. *The Journal of Social Psychology, 139*(3), 355-368.

Lim, B. S. C., & Wang, C. K. J. (2009). Perceived autonomy support, behavioural regulations in physical education and physical activity intention. *Psychology of Sport and Exercise*, *10*, 52-60.

Núñez, J. L., León, J., Grijalvo, F., & Albo, J. M. (2012). Measuring autonomy support in university students: The Spanish version of the learning climate questionnaire. *The Spanish Journal of Psychology, 15*(3), 1466-1472. Retrieved from http://dx.doi.org/10.5209/rev_SJOP.2012.v15.n3.39430.

Özdamar, K. (1999). *Paket programlar ile istatistiksel veri analizi*. Eskişehir: Kaan Kitabevi.

Öztürk, İ. H. (2011). Curriculum reform and teacher autonomy in Turkey: The case of the history teaching. *International Journal of Instruction*, *4*(2), 113-128.

Pett, M. A., Lackey, N. R., & Sullivan, J. J. (2003). *Making sense of factor analysis: The use of factor analysis for instrument development in health care research.* Thousand Oaks, CA: Sage.

Ramos, R. C. (2006). Considerations on the role of teacher autonomy. *Colombian Applied Linguistics Journal*, *8*, 183-202.

Reeve, J. (2006). Teachers as facilitators: What autonomy-supportive teachers do and why their students benefit. *The Elementary School Journal, 106*(3), 225-236.

Reeve, J., Bolt, E., & Cai, Y. (1999). Autonomy-supportive teachers: How they teach and motivate students. *Journal of Educational Psychology, 91*(3), 537-548.

Reeve, J., Deci, E. L., & Ryan, R. M. (2004). Selfdetermination theory: A dialectical framework for understanding sociocultural influences on student motivation. In D. M. McInerney & S. Van Etten (Eds.), *Big theories revisited: Research on sociocultural influences on motivation and learning* (pp. 31-60). Greenwich, CT: Information Age.

Reeve, J., Jang, H., Carrell, D., Jeon, S., & Barch, J. (2004). Enhancing students' engagement by increasing teachers' autonomy support. *Motivation and Emotion, 28*(2), 147-169.

Ryan, R., & Deci, E. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development and well- being. *American Psychologist, 55*(1), 68-78.

Şahin, T. Y. (2004, Temmuz). Sosyal bilgiler öğretiminde oluşturmacı yaklaşım sonucunda ortaya çıkan öğrenen çalışmalarının değerlendirilmesi. XIII. Ulusal Eğitim Bilimleri Kurultayı'nda sunulan bildiri, İnönü Üniversitesi, Eğitim Fakültesi, Malatya.

Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Test of significance and descriptive goodness-of-fit measures. *Methods of Psychological Research - Online, 8*(2), 23-74.

Schumacker, R. E., & Lomax, R. G. (2004). *A beginner's guide to structural equation modeling* (2nd ed.). Mahway, New Jersey: Lawrence Erlbaum Associates, Inc.

Sert, N. (2006). EFL student teachers' learning autonomy. *Asian EFL Journal, 8*(2), 180-201.

Sert, N. (2007). Öğrenen özerkliğine ilişkin bir ön çalışma. *İlköğretim Online, 6*(1), 180-196.

Sierens, E., Vansteenkiste, M., Goossens, L., Soenens, B., & Dochy, F. (2009). The synergistic relationship of perceived autonomy support and structure in the prediction of self-regulated learning. *British Journal of Educational Psychology*, *79*, 57-68.

Şimşek, Ö. F. (2007). *Yapısal eşitlik modellemesine giriş (Temel ilkeler ve lisrel uygulamaları).* Ankara: Ekinoks Eğitim Danışmanlık Hiz. ve Bas. Yay. Dağ. San. ve Tic. Ltd. Şti.

Stefanou, C. R., Perencevich, K. C., DiCintio, M., & Turner, J. C. (2004). Supporting autonomy in the classroom: Ways teachers encourage student decision making and owership. *Educational Psychologist*, *39*(2), 97-110.

Sünbül, A. M., Dülger, O., Bozoğlan, B., & Güven, Z. (2008, September). *The teachers' supportive level of the students' autonomy*. Paper presented at WCCI 13th World Conference in Education, Antalya, Turkey.

Sünbül, A. M., Kesici, Ş. ve Bozgeyikli, H. (2003). *Öğretmenlerin psikolojik ihtiyaçları, öğrencileri motive ve kontrol etme düzeyleri*. Konya: Selçuk Üniversitesi Araştırma Projesi. Proje no: 2002-236.

Tavşancıl, E. (2002). *Tutumların ölçülmesi ve SPSS ile veri analizi*. Ankara: Nobel Yayın Dağıtım.

Tessier, D., Sarrazin, P., & Ntoumanis, N. (2008). The effects of an experimental programme to support students' autonomy on the overt behaviours of physical education teachers. *European Journal of Psychology of Education, 23*(3), 239-253.

Tezbaşaran, A. A. (1997). *Likert tipi ölçek geliştirme kılavuzu* (2. bs.). Ankara: Türk Psikologlar Derneği Yayınları.

Thaliah, R., & Hashim, R. A. (2008, November). *Teacher's autonomy suport and ESL classroom engagement: The road less traveled*. Proceedings of the EDU-COM 2008 International Conference. Sustainability in Higher Education: Directions for Change, Edith Cowan University, Perth Western Australia. Retrieved from http://ro.ecu.edu.au/ceducom/50

Thompson, B. (2000). Ten commandments of structural equation modeling. In L. G. Grim & P. R. Yarnold (Eds.), *Reading and understanding more multivariate statistics* (pp. 261-283). Washington, DC: American Psychological Association.

Üstünoğlu, E. (2009). Autonomy in language learning: do students take responsibility for their learning? *Eğitimde Kuram ve Uygulama*, *5*(2), 148-169. http://eku.comu.edu.tr/index/5/2/e_ustunluoglu.pdf adresinden edinilmiştir.

Wang, P. (2011). Constructivism and learner autonomy in foreign language teaching and learning: To what extent does theory inform practice? *Theory and Practice in Language Studies, 1*(3), 273-277.

Yager, R. E. (1991). The constructivist learning model towards real reform in science education. *The Science Teacher National Science Teachers Association*, *58*(6), 52-57.

Yaşar, Ş. (1998). Yapısalcı kuram ve öğretme-öğrenme süreci. *Anadolu Üniversitesi Eğitim Fakültesi Dergisi*, *8* (1-2), 68-75.

Yıldırım, Ö. (2005). *ELT students' perceptions and behavior realted to learner autonomy as learners and future teachers* (Yüksek lisans tezi, Anadolu Üniversitesi, Eğitim Bilimleri Enstitüsü, Eskişehir). http://tez2.yok.gov.tr/ adresinden edinilmiştir.

Ek1.
Öğrenen Özerkliğini Destekleme Ölçeği

A.Davranışların Gereklilik Derecesi						**B. Davranışların Sergilenme Derecesi**				
Her zaman	**Çoğu zaman**	**Ara sıra**	**Çok az**	**Hiçbir zaman**	**ÖĞRETMENLERİN ÖĞRENEN ÖZERKLİĞİNİ DESTEKLEME DAVRANIŞLARI**	**Her zaman**	**Çoğu zaman**	**Ara sıra**	**Çok az**	**Hiçbir zaman**
					1. Öğrencilere empatik bir anlayışla (kendisini onun yerine koyarak) yaklaşmak.					
					2. Öğrencilerin öğrenme sorunlarını dile getirmelerine olanak vermek.					
					3. Öğrencilerin, öğrenme sürecindeki her türlü (etkinlik, materyal, yöntem vb.) seçimleriyle ilgili duygu ve düşüncelerini paylaşmak.					
					4. Öğrencilerin öğrenmeleriyle ilgili duygu ve düşüncelerini paylaşmak.					
					5. Öğrencileri, öğrenmelerini geliştirici ek çalışmalar (araştırma, okuma, proje vb.) yapmaya teşvik etmek.					
					6. Öğrencilere öğrenmeleriyle ilgili dönüt (geri bildirim) vermek.					
					7. Derslerde öğrencileri soru sormaya cesaretlendirmek.					
					8. Öğrencilerin sınıf dışındaki gerçek yaşam materyallerini (otantik) kendi kendilerine kullanmalarını teşvik etmek.					
					9. Öğrencilerin, öğrenmelerini desteklemek için, sınıf dışındaki bireylerden (anne, baba, bir uzman vb.) yardım almalarını sağlamak.					
					10. Öğrencilerin, sınıfta kendi kendilerine bağımsız çalışmalar (alıştırma, tekrar, okuma, özet çıkartma vb.) yapmalarını desteklemek.					
					11. Öğrenme süreciyle ilgili konularda öğrencilerin aileleriyle işbirliği yapmak.					
					12. Öğrencilerin öğrenme hedeflerini belirlemelerine yardım etmek.					
					13. Öğrencilerin, birbirlerinin çalışmalarını değerlendirmelerine olanak vermek.					
					14. Öğrencilerin öğrenmeleriyle ilgili değerlendirmelerini paylaşmak.					
					15. Ölçme ve değerlendirme ile ilgili kararlara katılmalarını desteklemek.					
					16. Öğrencilerin, kendi çalışmalarını değerlendirmelerine olanak vermek.					