

Self-efficacy for Learning Form (SELF) for Pre-service Teachers: The Study of Reliability and Validity

Ahmet YAMAÇ¹, Gürbüz OCAK²

ABSTRACT

This study investigated the validity and reliability of the Turkish version of the Self-efficacy for Learning Form (SELF). In order to examine the validity and reliability properties of the scale, exploratory factor analysis, confirmatory factor analysis, cronbach's alpha correlation coefficients, corrected item-total correlations and t-tests between items' means of upper 27%-lower 27% points were used. The sample of the study consisted of 409 prospective teachers. The results of exploratory and confirmatory factor analyses demonstrated that this scale yielded a unitary factor structure as original form and the model was well fit. The internal consistency of the entire inventory was .85. The item-total correlations ranged from .30 to .63. According to t-test results, differences between each item's means of upper 27 % and lower 27 % points were significant. Findings provided some evidence for the validity and reliability of the SELF scores.

Keywords: Self-efficacy, self-regulatory efficacy, self-regulated learning.

Öğretmen Adayları Öğrenme Öz-yeterliği Ölçeği: Geçerlik ve Güvenirlik Çalışması

ÖZ

Bu araştırmada Öğrenme Öz-yeterliği Ölçeği'nin Türkçe geçerlik ve güvenilirlik çalışmaları yapılmıştır. Ölçeğin geçerlik ve güvenilirliğini incelemek için açımlayıcı faktör analizi, doğrulayıcı faktör analizi, cronbach alfa katsayısı, madde-toplam korelasyonu ve %27'lik alt ve üst grupların madde puanlarındaki farklara ilişkin t-testi kullanılmıştır. Çalışmanın örneklemini 409 öğretmen adayı oluşturmaktadır. Açımlayıcı ve doğrulayıcı faktör analizi sonuçlarına göre, ölçeğin tek faktörlü bir yapıya sahip olduğu ve modelin iyi uyum gösterdiği ortaya konmuştur. Ölçeğin tek faktörlü yapısı için iç tutarlık katsayısı .85 olarak bulunmuş ve madde-toplam korelasyonu .30 ile .63 arasında değişmektedir. T-testi sonuçlarına göre ise, alt-üst %27'lik gruplar arasındaki madde ortalamalarına ilişkin t değerleri anlamlıdır. Bütün bu bulgular, Öğrenme Öz-yeterliği Ölçeği'nin (SELF) geçerlik ve güvenilirliğine ilişkin bir takım kanıtlar ortaya koymaktadır.

Anahtar kelimeler: Öz-yeterlik, öz-düzenleyici yeterlik, öz-düzenleyici öğrenme.

INTRODUCTION

Individuals face with the knowledge and skills that they have to learn and call for in many cases. Individuals have to regulate on their own their learning in the absence of an external factor that guides individuals to learn. In this sense,

¹ Research Asst. Afyon Kocatepe University, yamac87@gmail.com

² Assoc. Prof. Afyon Kocatepe University, gurbuzocak@gmail.com

individuals have to carry out the activities such as goal setting, determining steps for learning process, choosing the learning strategies, monitoring the process and checking the learning outputs. In a society that need the lifelong learning, the importance of self-regulated learning ability on the achievement have been continuing to increase not only for academic settings but also for nonacademic settings (Zimmerman, 2008). For this reason, there has been a growing interest about self-regulated learning and self-efficacy in educational science for three decades (Bandura, 1993; Bembenuddy, 2005; Eccles & Wigfield, 2002; Nikolaki, & Koutsouba, 2012; Ogawa, 2011; Pajares, 2002; Schunk, 1990; Tavakolizadeh & Oavam, 2011; Wolters, 1999; Zimmerman & Martinez-Pons, 1986). Many models and definitions have been suggested regarding self-regulated learning based on Bandura's social-cognitive theory (Boekaerts & Niemivirta, 2000; Pintrich, 2004; Zimmerman, 2000; Winne & Nesbit, 2009).

According to Pintrich (2000), self-regulated learning is an active and constructive process that learners set goals for their own learning and attempt to control, regulate and observe their cognition, behavior and motivations. Zimmerman (2000) asserts that self-regulated learning is not a mental ability or an academic skill. Rather, it is a self-managed process that learners transfer their mental abilities into their academic skills. According to Schunk & Ertmer (2000), it is production of emotions and thoughts that individuals need for their learning and motivation, and application the actions systematically in line with these emotions and thoughts. From this aspect, self-regulation emphasizes thoughts, emotions and behaviors that learners intending to attain the targets generate on their own. Self-regulated learning underline that learners to set goals in line with own skills and ability, determine the learning setting and learning strategies in order to attain that goals, regulate their behavior, cognition and environment by monitoring the learning process.

Self-regulated learners control their cognitions by monitoring cognitive processes (Pintrich, 2000), seek to find necessary knowledge and jump to next step in learning (Zimmerman, 1990), are aware of when, why and who they can receive help from (Ryan & Pintrich, 1997), have ability to control and sustain their effort (Pintrich, 2000) and review whether or not the environment is suitable for learning. In conclusion, self-regulated learners are autonomous, active, responsible, self-managed, regulatory and master learners.

The reason why self-regulated learning has been studied so much is its relation with academic achievement. Many researches have indicated that self-regulated learning predicts academic achievement (Kitsantas, Steen & Huie, 2009; Pintrich & De Groot, 1990; Sink, Barnett & Hixon, 1991; Zimmerman & Martinez-Pons, 1986; Wolters & Pintrich, 1998), and self-regulation skills could be developed (Clearly & Zimmerman, 2004; De La Paz, 1999; Gündoğdu, 2006; Nikolaki, & Koutsouba, 2012; Santangelo, Harris & Graham, 2007; Schunk, 1996).

It is suggested that self-efficacy along with self-regulation have an important role in educational setting (Pajares & Schunk, 2001). Self-efficacy is defined as student's beliefs about their abilities to achieve particular tasks and goals within a domain (Bandura, 1977; Bandura, 1986; Schunk, 1985). Perceived self-efficacy for self-regulated learning involves student's perceived capabilities to use a variety of self-regulated learning strategies. These learning strategies might be exemplified as planning and organizing students' own academic activities, transforming instructional information using cognitive strategies to understand and remember the taught material, resisting distractions, motivating themselves to complete school work, structuring relevant environments to study, and being participatory in the classroom (Zimmerman & Martinez-Pons, 1986). Bandura (1989), being one of the researchers studied this construct, developed the self-efficacy for self-regulated learning. The scale assessed student's perceived self-efficacy about using various studying methods. Zimmerman, Bandura and Martinez-Pons (1992) have found that self-efficacy for self-regulated learning does not have directly a predictive causal. However, it affects academic achievement implicitly owing to self-efficacy for academic achievement.

Self-efficacy for self-regulated learning is a key factor for its primacy in contemporary societies. Information technologies have been globalizing knowledge and making changes in educational systems. In the past, the development of students depended on quality of schools. However, today, students have greater control over their own learning using multimedia instruction on internet. Individuals have to educate themselves throughout their life (Bandura, 2002; Caprara et al., 2008). At this point, self-efficacy for self-regulated learning has an important role in learning processes. Individual's beliefs about their capabilities to regulate their learning both provide resistance and affect their motivation and achievement (Bandura, 1993; Zimmerman, Bandura & Martinez-Pons, 1992). Recently, Zimmerman and Kitsantas (2005, 2007) have developed a new scale in order to measure self-efficacy for self-regulated learning. However, educational literature of our country has an immense need for a scale assessing self-regulatory efficacy. The purpose of current study is to explore the reliability and validity of Turkish version of Self-Efficacy for Learning Form (SELF).

METHOD

Participants

The study group consisted of 409 students studying at different departments of Afyon Kocatepe University. For the first step, the scale was applied to 205 students to conduct the exploratory factor and reliability analyses. Then, the confirmatory factor analysis was carried out in another study with 204 students. The age range of the participants fluctuated between 18 and 34 with a mean age of 20.7.

Table 1. Demographic Variables of Participants

		n	%
Gender	Male	106	25.9
	Female	303	74.1
	Total	409	100
Department	Pre-school education	114	27.9
	Social-studies education	116	28.4
	Primary school education	123	30
	Computer and educational technologies education	24	5.9
	Turkish language education	32	7.8
	Total	409	100
Grade	First grade	76	18.6
	Second grade	161	39.3
	Third grade	103	25.2
	Fourth grade	69	16.9
	Total	409	100

Self-Efficacy for Learning Form (SELF)

The SELF was developed to measure students' use of various learning processes such as note taking, reading, writing, test-taking, and studying (Zimmerman & Kitsantas, 2005). The first scale consisted of 57 items. Then, the items in the study were abridged to 19 items (Zimmerman & Kitsantas, 2007). Abridged form was grouped into test taking, studying, and note taking. The students responded to each item using a scale ranged from 0 to 100 points (0=definitely cannot do it, 30=probably cannot do it, 50=maybe, 70=probably can do it, 100=definitely can do it). The higher scores on this scale reflect more positive self-efficacy for learning beliefs.

Translation and Turkish-English equivalence of the Scale

The SELF was translated into Turkish by three professional experts in English. Then, three different translations were integrated. The Turkish translation of the scale was again translated into English by three different experts. Lastly, the translations were evaluated once more and the scale took its final form. To examine the consistence between Turkish and English versions, Pearson's correlation coefficient was used. The scales were administered respectively on 70 students two weeks apart. According to the findings, correlation coefficients between items ranged from .60 to .86. These results confirm that Turkish and English versions of the scales might be regarded as equivalent.

Data Analysis

The construct validity of the scale was examined using confirmatory (CFA) and exploratory factor analyses (EFA). Item-total correlation, cronbach's alpha and t-test for reliability were computed.

RESULTS

Exploratory Factor Analysis and Reliability Analysis

Firstly, EFA was performed to explore the factor structure of the scale. The Kaiser Meyer Olkin (KMO) value indicating the coherence of the sampling group for factor analysis was .84. According to EFA, the scale had a unitary factor structure with 18 items. As a criterion of a simple factor structure, the factor loading of an item was accepted as minimum .30 value as a cut off. Because factor loading was below .30, item one was removed from the scale. Eigen value of the factor was 5.63 and the factor accounted for 31.3 % of the variance. The cronbach's reliability coefficient for scores on this scale was .85.

Table 2-a. Means, Standard Deviations, and Factor Loadings for the SELF

Questions	M	SD	FL
1) When your teacher's lecture is very complex, can you write an effective summary of your original notes before the next class?	59.9	27	.55
2) When a lecture is especially boring, can you motivate yourself to keep good notes?	55.5	28.1	.49
3) When you had trouble understanding your instructor's lecture, can you clarify the confusion before the next class meeting by comparing notes with a classmate?	63.9	25.6	.58
4) When you have trouble studying your class notes because they are incomplete or confusing, can you revise and rewrite them clearly after every lecture?	61.1	25.7	.57
5) When you are taking a course covering huge amount of material, can you condense your notes down to just the essential facts?	73	19.8	.43

Table 2-b: Means, Standard Deviations, and Factor Loadings for the SELF

Questions	M	SD	FL
6) When you are trying to understand a new topic, can you associate new concepts with old ones sufficiently well to remember them?	75.7	17.5	.53
7) When another student asks you to study together for a course in which you are experiencing difficulty, can you be an effective study partner?	75.1	22.8	.35
8) When problems with friends and peers conflict with schoolwork, can you keep up with your assignments?	62.1	24.8	.43
9) When you feel moody or restless during studying, can you focus your attention well enough to finish your assigned work?	59.6	25.3	.43
10) When you find yourself getting increasingly behind in a new course, can you increase your study time sufficiently to catch up?	68.3	21	.62
11) When you discover that your homework assignments for the semester are much longer than expected, can you change your other priorities to have enough time for studying?	73	20.6	.60
12) When you have trouble recalling an abstract concept, can you think of a good example that will help you remember it on the test?	79.4	17.8	.57
13) When you have to take a test in a school subject you dislike, can you find a way to motivate yourself to earn a good grade?	70.8	21.3	.72
14) When you are feeling depressed about a forthcoming test, can you find a way to motivate yourself to do well?	69.5	20.5	.71
15) When your last test results were poor, can you figure out potential questions before the next test that will improve your score greatly?	68.6	19.7	.56
16) When you are struggling to remember technical details of a concept for a test, can you find a way to associate them together that will ensure recall?	73.3	17.7	.63
17) When you think you did poorly on a test you just finished, can you go back to your notes and locate all the information you had forgotten?	72.2	23.7	.57
18) When you find that you had to "cram" at the last minute for a test, can you begin your test preparation much earlier so you won't need to cram the next time?	68.5	26.3	.47

M: Mean

SD: Standard deviation

FL: Factor loading

In order to find out the item discrimination of the items, corrected item-total correlation was calculated. Item-total correlations varied between .30 and .63 for 18 items. All the differences between the item mean-scores and the factor scores of the upper 27% and lower 27% groups were found to be significant.

Confirmatory Factor Analysis

To test unitary factor structure of the SELF, a confirmatory factor analysis was also conducted on the second sampling group (204). One factor solution was tested and each item on the scale was assigned to the unitary factor. To assess the model data fit χ^2/df (Chi-square/Degree of free), RMSEA (Root Mean Square Error of Approximation), SRMR (Standardized Root Mean Square Residuals), and CFI (Comparative fit index) were used. According to Schermelleh-Engel, Moosbrugger & Müller (2003), $\chi^2/df < 2$ is indicative of a good fit and $2 < \chi^2/df < 3$ is indicative of an acceptable fit. For RMSEA, values less than .07 indicate a good model fit (Stieger, 2007). SRMR have values than less .08 (Hu & Bentler, 1999). For CFI, values greater than .95 are indicative of good fit (Hooper, Coughlan & Mullen, 2008). Because initial fit index was not at the satisfactory level, the error variance between item 4 and 5, and 14 and 15 were set free. After this revision, the model attained adequate fit as shown by the Chi-square/Degree of Free ($\chi^2/df=2.1$), Standardized Root Mean Square Residuals (SRMR=.075), Root Mean Square Error of Approximation (RMSEA=.076), and Comparative Fit index (CFI=.90).

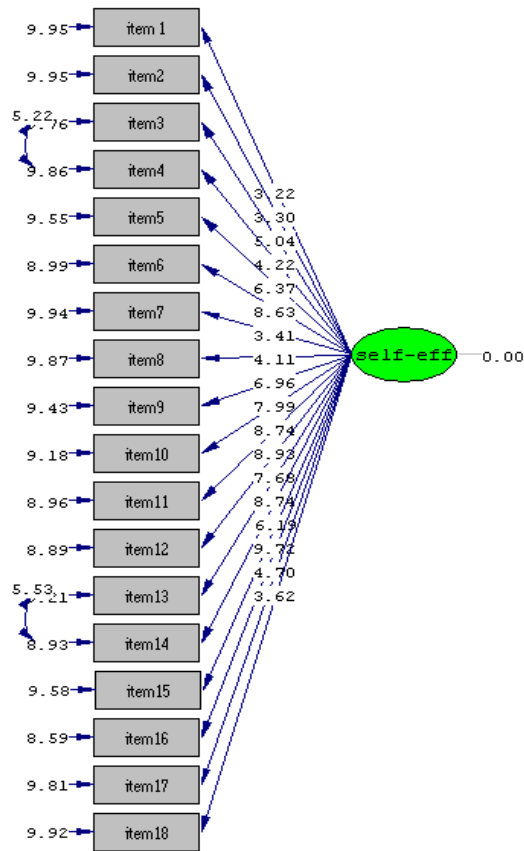


Figure 1. Structural Model for the 18 Items

DISCUSSION and CONCLUSION

Self-efficacy for learning refers to beliefs about using self-regulatory processes, such as goal setting, self-monitoring, strategy use, self-evaluation, and self-reactions to learn (Zimmerman & Kitsantas, 2005 pp.398). The goal of current study is to adapt the SELF developed by Zimmerman and Kitsantas into Turkish and to investigate the reliability and validity of it. The SELF measures self-efficacy for self-regulation. The SELF was initially developed to measure students' perceived self-efficacy performing various forms of academic learning, such as reading, note taking, test taking, writing and studying by Zimmerman and Kitsantas (2005). Then, the scale was transformed into the form of abridged SELF involving 19 items. The SELF with 19 items involved a single self-regulatory factor and was highly reliable (Zimmerman & Kitsantas, 2007). The

results of current study are consistent with the findings of Zimmerman and Kitsantas.

First, the English form of the SELF was translated into Turkish and back translated to English by language experts. The coherence was examined between Turkish and English forms and some corrections were applied. Then, Turkish and English forms were administered to 70 students two weeks apart. The correlation coefficients between items ranged from .60 to .86. CFA and EFA were performed for the construct validity of the SELF. The application was carried out with 409 (204 students for EFA and 205 students for CFA) prospective teachers totally. Single factor solution was obtained through EFA. The Eigen value of the factor was 5.63 and it explained 31.3% of the total variance. As the factor load was below .30, item one was removed from the scale. The confirmatory factor analysis tested the presence of a unifactorial model directly, and a significant fit was obtained ($\chi^2/df=2.1$, RMSEA=.076, SRMR=.075 CFI=.90). The internal consistency of the SELF was found .85 for the unitary factor structure. The corrected item-total correlations ranged from .30 to .65. For each item, the differences between mean scores of upper 27% and lower 27% groups were significant.

Students' scores on SELF have special value for educators who are interested in assessing students' perceptions of efficacy regarding their self-regulation of academic functioning (Zimmerman & Kitsantas, 2007, pp.162). Overall findings demonstrated that this scale has high validity and reliability scores. The SELF can be used to evaluate pre-service teachers' perceived self-efficacy for learning. The properties of this scale need to be confirm different sample. In additionally, further studies using the SELF are important for its measurement force.

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GENİŞLETİLMİŞ ÖZET

Kuramsal olarak Bandura'nın sosyo-bilişsel öğrenme teorisine dayanan öz-düzenleyici öğrenme ile ilgili birçok model ve tanım ortaya atılmıştır (Boekaerts ve Niemivirta, 2000; Pintrich, 2004; Zimmerman, 2000; Winne ve Nesbit, 2009). Öz-düzenleyici öğrenme, öğrencilerin kendi beceri ve yetenekleri doğrultusunda hedef belirlemeleri, bu hedeflere ulaşmak için öğrenme çevrelerini ve öğrenme stratejilerini saptamaları, daha sonra öğrenme sürecini izlemeleri ve buna bağlı olarak bilişsel, davranışsal ve çevresel düzenlemeler yapmalarına vurgu yapmaktadır.

Öz-düzenleme ile bağlantılı olarak araştırılan motivasyonel inançlar arasında, öz-yeterlik inancının özellikle önemli bir rol oynadığı ileri sürülmektedir (Pajares ve Schunk, 2001). Öz-yeterlik, öğrencilerin belirli bir alanda belirli hedefleri ya da görevleri başarma yeteneği hakkındaki yargıları olarak tanımlanmaktadır (Bandura, 1977; Bandura, 1986; Schunk, 1985).

Öz-düzenleyici öğrenme yeterliği ise akademik aktiviteleri düzenleme ve planlama, dikkat dağıtıcı şeylere direnme, okul çalışmalarını tamamlamak için kendilerini motive etme, çalışmaya uygun olarak çevreyi yapılandırma, öğretilen konuyu hatırlamak ve anlamak için bilişsel stratejileri kullanarak bilgiyi transfer etme gibi öz-düzenleyici öğrenme stratejilerini kullanımı hakkında öğrencilerin algıladıkları yetenekleri ile ilgilidir (Zimmerman, Bandura ve Martinez-Pons, 1992). Öz-düzenleyici yeterlik, çağdaş yaşamdaki gitgide artan üstünlüğünden dolayı anahtar bir faktördür. Bilgi teknolojileri bilgiyi küreselleştirmekte ve eğitim sistemlerini değiştirmektedir. Geçmişte öğrencilerin gelişimi çoğunlukla okulların niteliğine bağlı iken, şimdi öğrenciler zamandan ve mekândan bağımsız olarak kendi öğrenmeleri üzerinde daha fazla kontrole sahiptirler. İnsanlar, çağımızda kendilerini yaşamları boyunca eğitmek zorundadır. (Bandura, 2002; Caprara ve diğerleri, 2008). Bireylerin öz-düzenleyici yeterlik inancı dayanma gücü sağlayarak, kendi öğrenmelerini düzenlemede ve farklı akademik konularda ustalaşmada onların motivasyon ve başarı seviyesini etkilemektedir (Bandura, 1993; Zimmerman ve Bandura, 1994; Zimmerman, Bandura ve Martinez-Pons, 1992).

Bu yapıyı ölçmeye çalışan ilk araştırmacılardan olan Bandura'nın (1989) geliştirdiği çok boyutlu yeterlik ölçeklerinden birisi de Öz-düzenleyici Öğrenme Yeterliği Ölçeği'dir. Bu ölçek, öğrencilerin okul çalışmalarını düzenleme ve planlama gibi çeşitli akademik çalışma metotlarını kullanımı hakkındaki öz-yeterlik algılarını değerlendirmektedir. Son zamanlarda ise Zimmerman ve Kitsantas (2005, 2007) Öğrenme Öz-yeterliği Ölçeği (SELF) geliştirmişlerdir. Bu çalışmanın amacı, Öğrenme Öz-yeterliği Ölçeği'ni (SELF) Türkçeye uyarlayarak geçerlik ve güvenirliğini incelemektir.

Çalışmanın katılımcılarını Afyon Kocatepe Üniversitesi eğitim fakültesinin çeşitli bölümlerinde öğrenim gören 409 öğrenci oluşturmaktadır. Elde edilen

verilerin 205'i açımlayıcı faktör analizi ve güvenilirlik analizleri için kullanılırken, 204'ü ise doğrulayıcı faktör analizi için kullanılmıştır. Öğrencilerin yaşları 18 ile 34 arasında değişmekte olup, yaş ortalaması 20,7'dir.

İlk olarak Öğrenme Öz-yeterliği Ölçeği (SELF) not tutma, okuma, yazma, sınava hazırlanma ve çalışma gibi öğrenme süreçlerine ilişkin öğrenci öz-yeterliklerini belirlemek amacıyla Zimmerman ve Kitsantas (2005) tarafından geliştirilmiştir. Daha sonra Zimmerman ve Kitsantas (2007) tarafından 19 maddeli kısaltılmış formuna dönüştürülmüştür. Kısaltılmış form not tutma, çalışma ve sınava hazırlanma ile ilgili maddelerden oluşmaktadır. Öğrenciler her bir maddeye 0'dan 100'e doğru sıralanan bir dereceleme ile cevap vermektedir (0=Kesinlikle yapamam, 30=Muhtemelen yapamam, 50=Belki yapabilirim, 70 =Muhtemelen yapabilirim, 100= Kesinlikle yapabilirim). Ölçekteki yüksek puanlar yüksek öğrenme öz-yeterliğine işaret etmektedir.

Ölçeğin Türkçeye çevrilmesinde İngilizce eğitiminde görevli toplam 6 dil uzmanı görev almıştır. 3 tanesi İngilizceden Türkçeye 3 tanesi de Türkçeden İngilizceye çeviri yapmıştır. Tüm bu çeviriler birleştirilerek ve son Türkçe form elde edilmiş ve dil tutarlığını sağlamak amacıyla İngilizce hazırlık programında öğrenim gören toplam 70 öğrenciye Türkçe ve İngilizce formlar 2 hafta ara ile uygulanmıştır. Elde edilen bulgulara göre maddeler arasındaki korelasyonlar .60 ile .86 arasında değişmektedir. Veri analizinde ölçeğin geçerliği için açımlayıcı faktör analizi kullanılmıştır. Ayrıca madde geçerliği için madde toplam korelasyonu, güvenilirlik çalışmaları için ise cronbach alfa katsayısı ve alt-üst %27'lik gruplar arasındaki farklılıklar için t-testi kullanılmıştır.

Ölçeğin faktör yapısını keşfetmek amacıyla açımlayıcı faktör analizi yapılmış ve ölçeğin 18 maddeli tek faktörlü yapısına ulaşılmıştır. Birinci maddenin faktör yükü .30'un altında bulunduğu için analiz dışı bırakılmıştır. Tek faktörlü yapının eigen değeri 5,63 olup varyansın %31,1'ini açıklamaktadır. Ayrıca ölçeğin iç tutarlık katsayısı (Cronbach alfa katsayısı) .85 olarak bulunmuştur. Madde toplam korelasyonu .30 ile .63 arasında değişmekte olup, alt üst %27'lik gruplar için hesaplanan t değeri tüm maddeler için anlamlıdır. Tek faktörlü yapıyı test etmek için yapılan doğrulayıcı faktör analizine göre ise modeli uyum indeksleri memnun edici düzeydedir ($\chi^2/df=2.1$, RMSEA=.076, SRMR=.075 CFI=.90).

Öğrenme öz-yeterliği hedef belirleme, öz-izleme, strateji kullanımı, öz-değerlendirme ve öz-tepki gibi öz-düzenleyici süreçleri kullanma hakkındaki öğrenci algılarına vurgu yapmaktadır. Bu çalışmanın amacı Zimmerman ve Kitsantas tarafından geliştirilen Öğrenme Öz-yeterliği Ölçeği'nin Türk kültüründe geçerlik ve güvenilirlik çalışmalarını yapmaktır. SELF öz-düzenleme öz-yeterliğini ölçmektedir. SELF için gerçekleştirilen geçerlik ve güvenilirlik çalışmalarına dayalı olarak ölçeğin yüksek düzeyde geçerlik ve güvenilirliğe sahip olduğu ve deneysel ve tarama çalışmalarında kullanılmak için uygun olduğu söylenebilir. Ayrıca farklı örneklemelerde daha fazla çalışma yapılarak ölçeğin ölçme gücü artırılabilir.

Ek: Öğrenme Öz-yeterliği Ölçeği (Türkçe Form)

1. Öğretmenin ders anlatımı çok karmaşık olduğunda, bir sonraki derse girmeden önce tuttuğun notların etkili bir özetini çıkarabilir misin?
2. Bir ders özellikle sıkıcı olduğunda iyi not tutmak için kendini motive edebilir misin?
3. Öğretmenin ders anlatımını anlamakta zorluk çektiğinde, bir sonraki dersten önce bir arkadaşınla notlarını karşılaştırarak kafa karışıklığını açıklığa kavuşturabilir misin?
4. Derste tuttuğun notlara çalışırken, notlar eksik ya da kafa karıştırıcı olduğu için zorluk çektiğinde, onları her dersten sonra gözden geçirip açık bir şekilde yeniden yazabilir misin?
5. Çok fazla konuyu kapsayan bir ders alırken, tuttuğun notları sadece temel olgulara indirgeyebilir misin?
6. Yeni bir konuyu anlamaya çalışırken, yeni kavramları hatırlamak için eski kavramlarla yeterli bir şekilde ilişkilendirebilir misin?
7. Zorluk çektiğin bir derste başka bir öğrenci seninle birlikte çalışma teklif ettiğinde, etkili bir çalışma ortağı olabilir misin?
8. Arkadaşların ve akranlarıyla ilgili problemler ödevlerinle çakıştığında, ödevlerini yapmayı sürdürebilir misin?
9. Ders çalışırken kendini karamsar ve huzursuz hissettiğinde, sana verilen görevi bitirebilmek için yeterince odaklanabilir misin?
10. Yeni bir derste kendini giderek geri kalıyor bulduğunda, açığı kapatmak için çalışma zamanını etkili bir şekilde artırabilir misin?
11. Dönem arası için verilen ödevlerin beklediğinden daha uzun süre alacağını fark ettiğinde, daha fazla zaman yaratmak için diğer önceliklerini değiştirebilir misin?
12. Soyut bir kavramı hatırlamakta zorlandığında, sınavda onu hatırlamana yardım edecek iyi bir örnek düşünebilir misin?
13. Okulda sevmediğin bir dersin sınavına girmek zorunda kaldığında, iyi not almak için kendini motive etmenin bir yolunu bulabilir misin?
14. Yaklaşan bir sınavla ilgili kendini karamsar hissettiğinde, daha iyi olmak için kendini motive etmenin bir yolunu bulabilir misin?
15. Son sınav sonuçların kötü geldiğinde, notunu fazlasıyla düzeltebilecek gelecek sınavdan önce, çıkması muhtemel soruları belirleyebilir misin?
16. Bir sınav için bir kavramın teknik detaylarını hatırlamaya çalışırken, hatırlamanı sağlayacak olan kavramlarla onları, ilişkilendirmenin bir yolunu bulabilir misin?
17. Yeni çıktığın bir sınavın kötü geçtiğini düşündüğünde, notlarına geri dönüp unutmuş olduğun bilgileri tespit edebilir misin?
18. Bir sınav için son dakikaya kadar çalışmak zorunda kaldığını fark ettiğinde, bir sonraki sefer son dakikaya kadar sıkışmamak için sınava hazırlanmaya daha erken başlayabilir misin?