

Validity and Reliability Study of Questionnaire on Self-Regulated Learning -7 Turkish Version

Öz-Düzenleyici Öğrenme-7 Ölçeğinin Türkçe Versiyonunun Geçerlik ve Güvenirlik Çalışması

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Abstract

The purpose of this study is to make the Turkish adaption, and to evaluate the psychometric properties, of the Questionnaire on Self-Regulated Learning-7 (SRL-7). During the language adaptation process, 10 language specialists evaluated the adaptation indexes. In the language validation study, 41 lycée students completed both the English and Turkish forms of the questionnaire. To determine reliability and validity, 214 students were asked to participate. Results of reliability analysis of the sub-scales made with KR20 were .84 for self-regulated learning, .70 for unreflective/impulsive and .72 for external. A Rasch analysis intended to evaluate internal consistency showed acceptable infit, outfit and DIF. Finally, predictive validity analysis indicated positive correlation between self-regulated learning and both intrinsic motivation and achievement; unreflective/impulsive and external correlated positively with extrinsic motivation, and negatively with achievement. Thus, the Turkish version of SRL-7 is a valid and reliable measurement, which can be used in further studies.

Key Words: Self-regulated learning, SRL-7, Rasch analysis, gifted and talented students

Öz

Bu araştırmada Öz-Düzenleyici Öğrenme-7 Ölçeğinin (ÖDÖÖ-7) Türkçe dil uyumu, geçerlik ve güvenirlik çalışmasının yapılması amaçlanmıştır. Dil uyumu aşamasında 10 uzmanla çalışılmış ve maddelerin uyum indeksleri belirlenmiştir. Tercüme işlemleri tamamlandıktan sonra, ölçeğin dil geçerliği için 41 lise öğrencisine (17 erkek, 24 kız) ölçeğin İngilizce ve Türkçe formları uygulanmıştır. Ölçeğin güvenirlik ve geçerlik çalışmaları için toplamda 214 (108 erkek, 106 kız) 4. ve 7. sınıf öğrencisiyle çalışılmıştır. Profillerin güvenirliliği KR20 formülü ile hesaplanmış ve öz-düzenleyici alt boyut .84, düşüncesiz-dürtüsel alt boyut .70 ve dıştan denetimli alt boyut .72 olarak saptanmıştır. İçsel yapı geçerliliği için yapılan Rasch analizi sonuçları iç uyum, dış uyum ve değişen madde fonksiyonlarının kabul edilebilir olduklarını; yordama geçerliği sonuçları ise ölçekteki profillerin motivasyon ve başarı arasındaki ilişkilerinin alan yazınla tutarlı olduğunu göstermiştir. Sonuç olarak ÖDÖÖ-7'nin Türkçe formunun geçerli ve güvenilir bir araç olduğu ve ileride üstün zekâlı ve yetenekli öğrencilerle yapılacak olan araştırmalarda kullanılabileceği düşünülmektedir.

Anahtar Sözcükler: öz düzenleyici öğrenme, ÖDÖÖ-7, Rasch analizi, üstün zekâlı ve yetenekli çocuklar

Summary

The Purpose and Significance: The 'nature vs. nurture' controversy continues to be a subject for discussion in the field of psychology (Simonton, 2001). Since Galton (1865), a number of researchers have seen talent as largely the result of inherited ability, while Ericsson

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(1996) and others claim that 10,000 hours of practice create expertise. A further two subjects under discussion are the development of talent and of expertise (Gobet, 2013). Simonton (2001), however, states that talent is created by a combination of the best personal characteristics for the development of expertise. Studies (Ericsson, Krampe, & Tesch-Romer, 1993; Richman, Gobet, Staszewski, & Simon, 1996) emphasize the importance of regular practice in the development of talent and the acquisition of expertise. Ericsson (2003) states that in order to become expert in any field, the possession of skills such as cognitive rearrangement of the task, the selection of appropriate techniques and strategies, and self-evaluation of the learning process – in short, problem-solving abilities - is required. These characteristics of deliberate practice are seen as important dimensions of self-regulation (Boekaerts, Zeidner, & Printich, 2000; Winne & Perry, 2000; Zimmerman, 1989).

Thus we see that self-regulated learning is a very important ability for the tracking of one's own learning process. Recently, Stoeger and Ziegler (2005) have proposed a model for self-regulated learning in which the possession of certain abilities is required for each step in this process: in the first step, that of assessing one's own learning; in the second, that of setting suitable learning goals; in the third, that of choosing an effective learning strategy; in the fourth, the application of a consistent learning strategy; in the fifth, that of monitoring one's own learning process; in the sixth, that of adjusting one's learning strategy accordingly; and in the last, that of assessing learning outcomes. In every step, students can exhibit three different profiles: (1) self-regulated; (2) unreflective/impulsive; or (3) external. The Questionnaire on Self-Regulated Learning-7 (SRL-7) was developed in order to determine self-regulated learning profiles for each of the above steps. The purpose of this study is to make an adaptation for Turkey of SRL-7 and to demonstrate its psychometric properties.

Method: Language adaptation was carried out by 10 language specialists. First, 3 different specialists did the translation from English to Turkish. Secondly, one language specialist carried out the back translation. Comparison by the author of the two English forms showed that they were similar. In the third step, 5 different language specialists were asked to evaluate the translation of every item in a scale from 0 to 10. In the fourth and last step, a Turkish language specialist corrected the SRL-7 in accordance with Turkish linguistic and grammatical rules. To determine language validity, 41 students (17 boys, 24 girls; mean age= 16, SD=1.04) attending a tourism high school in Istanbul were asked to complete first the English and - three weeks later - the Turkish version. To determine reliability and validity, 214 students (108 boys, 106 girls) from the 4th grade (mean age= 10.11, SD= .47) and the 7th grade (mean age= 13.04, SD= .33) at three different state schools were asked to participate.

Results: Index scores given by the language specialists showed that the item with the lowest score had $x = 7.20$ and $SD = 2.94$, which is acceptable. Wilcoxon signed rank test results for language validity showed only two items to be problematic (the 23th and 76th). KR20 reliability analysis results were acceptable for all profiles: .84 for self-regulated learning; .70 for unreflective/impulsive; and .72 for external learning. Rasch analysis intended to evaluate

internal consistency showed acceptable infit, outfit and DIF. Finally, in harmony with the results of previous studies, predictive validity analysis indicated positive correlation between self-regulated learning and both intrinsic motivation and achievement; unreflective/impulsive and external correlated positively with extrinsic motivation, and negatively with achievement.

Conclusions: The SRL-7 is the first questionnaire to take into consideration the seven-step cycle of self-regulated learning, and provides three general profiles: self-regulated, unreflective/impulsive, and external. The results of the study showed that the Turkish version of SRL-7 is a valid and reliable measurement.