Teachers' Efficacy Scale in Student Recogniton: Validity and Reliability Study

Fuat TANHAN*

Abstract

The population of the present study which was designed to develop "Teachers' Efficacy Scale in Student Recognition" (TESSR), consists of teachers who teach in public elementary schools in different branches. The sample of the study is 139 participants determined randomly and participating voluntarily. After testing the appropriateness of the data analysis, the scale showed, four-dimensional structure consisting of 28 items as result exploratory factor analysis. According to these values, among these factors first factor explain %35,906%, second factor 8.366%, third factor 6,862% and fourth factor 5.842% of the total variance of the scale. The total variance explained by these four factors together is 56.976%. The factors forming the scale were named by looking at teachers' behavior of student recognition that items include. Suitability of the obtained model was tested with Confirmatory Factor Analysis. Accordingly, for RMSEA 0.000, for CFI 1.00, for GFI 0.69, for RMR 0.073 and for the AGFI 0.64 fit indexes were calculated. As a result of reliability analysis carried out on the scale, the Cronbach alpha internal consistency coefficient was calculated as 0,869 for the first factor, 0.858 for the second factor, 0.860 for the third factor and 0.823 for the fourth factor. The internal consistency coefficient (Cronbach alfa) calculated for all items of TESSR was found as 0,928. According to these values, the development of "Teachers' Efficacy Scale in Student Recognition" which is valid, reliable and suitable for use in the field has been completed.

Key Words: Efficacy, Student Recognition, Teachers' Efficacy

* Yrd. Doç. Dr. Yüzüncü Yıl Üniversitesi Eğitim Fakültesi, ftanhan@gmail.com

Extended Abstract

To fulfill the responsibilities well waited from a teacher is mostly related to the professional competence of teacher (Hoy and Woolfolk, 1993). Thus, it is expected that teachers communicate with their students and other sharers of education as well as having well-qualified content knowledge, teaching the knowledge to the students and having proficiencies such as to conduct and to organize the education processes (Hoy and Woolfolk, 1990; Hoy and Woolfolk, 1993). Consequently, knowing students is a precondition of a correct dialog (Dökmen, 2003). With various aspects, students are to be known by teachers (Miller, 2008; Özgüven, 2005; Karayon, 1994). That the responsibilities taken on by teachers during the education process are carried by them according to their tasks is possible by their professional relation with the students (Ashton and webb, 1986; Smylie, 1988). It is possible teachers know their students well and that is mixed the education process so that their dialogs can be correct (Parkay, Greenwood, Olejnik and Proller, 1988). Within the frame of this importance, that teachers know their students is regarded as an essentiality. So, it is important that "The Student Recognition Qualifications Questionnaire" (SRQQ) will be developed.

The Study Universe and The Study Group

The universe of the study consists of teachers at public elementary schools under Ministry of Education. 139 voluntary teachers from the universe and at Van Service Training Institute form the study group.

Process and Data Analysis

Exploratory factor analysis for the construct validity of SRQQ (Tezbaşaran, 1997) and confirmatory factor analysis to test the accuracy of the construct factor obtained have been determined as a method. The Cronbach alpha value whose aim is to obtain the internal consistency coefficient, for the reliability of sub-dimensions of the scale is evaluated as a standard (Büyüköztürk, 2002). The convenience of the data fort he factor analysis was testes by Kraiser-Meyer-Olkin (KMO) and Barlett Test (Büyüköztürk, 2007).

Findings

KMO value of the data set is 0.853 at an appropriate level and the value regarding Barlett Sphericity Test is meaningful (χ^2=1993,122; p> 0,001). Normal distribution regarding the total score obtained from the scale was tested by Kolmogorov-Smirnov. It was observed that according to Kolmogorov-Smirnov Test, (Z=1,106; p ≥ 0.05), the total score's variances are normal. The scale consists of four factors. The factor eigenvalues of the scale was calculated as 10,054 for the first factor; as 2,342 for the second factor; as 1,921 the third factor and as 1,636 for the fourth factor. According to these values, the first among important factors explains 35,906 % regarding the total variance; the second factor explains 8,366 % ; the third factor explains 6,862 % and the fourth explains 5,842 %. It was determined that four factors explaining the variance together is 56,976 %. Factors forming the scale were performed according to the items which involve item statements revealing teachers' behaviors towards knowing students. According to that, the first factor was called "Knowing students' developmental characteristics"; the second factor was called "To care the interests and needs of students"; the third factor was called "To value students" and the fourth factor was called "To guide students".

As a result of reliability analyzes were carried out on the scale, the internal consistency coefficient was calculated for the first factor 0,869; for the second factor 0,858; for the third factor 0,860 and for the fourth factor 0,823. When the internal consistency coefficient calculated for all items; the result was 0,928 for SRQQ. The score will be between 28 and 140 for SRQQ. According to the results of the exploratory factor analysis of 28 items of the four-dimensional factor structure was tested by confirmatory factor analysis. Suitability of the obtained model has been tested with RMSEA, CFI, GFI, AGFI and RMR adaptation measures. As a result of the analysis, the calculated values for the RMSEA, when regarded the suitability of the model compliance, is 0.000; for the CFI is 1,00; for the GFI is 0.69; for the RMR is 0,073 and for the AGFI is 0.64.

Conclusion

In conclusion, it can be said that according to obtained results, it is a valid and reliable scale and it is suitable for use in developed areas. However, in today's world information and technology changing so fast and the feature of teachers' efficacy to now their students will change in the process, also. For this reason, it would be appropriate to study on re-construct validity and reliability of the Student Recognition Qualifications Questionnaire in the process. When all criteria are considered, as a result of confirmatory analysis, four-factor structure can be considered as a defensible model.

***

References

Akpınar, B. ve Aydın, K. (2007). Eğitimde Değişim ve Öğretmenlerin Değişim Algıları. *Eğitim ve Bilim.* 32, 71-80.

Anderson, J. C. ve Gerbing, D. W. (1984). The effect of sampling error on convergence, improper solutions, and goodness-of-nt indices for maximum likelihood confirmatory factor analysis. *Psychametrika*. 49, 155-173.

Ashton, P. T., & Webb, R. B. (1986). *Making a difference: Teachers' sense of efficacy and student achievement*. New York: Longman.

Başar, H. (2001). *Sınıf Yönetimi*. Pegem Yayınları, Ankara.

Büyüköztürk, Ş. (2002). Faktör Analizi: Temel Kavramlar ve Ölçek Geliştirmede Kullanımı. *Eğitim Yönetimi Dergisi*, 32: 470-483.

Büyüköztürk, Ş. (2007). *Sosyal Bilimler İçin Veri Analizi El Kitabı (7.Baskı).* Pegem A Yayıncılık, Ankara:

Çokluk, Ö., Şekercioğlu, G. & Büyüköztürk, Ş. (2012). *Sosyal bilimler için çok değişkenli SPSS ve LİSREL uygulamaları* (2. Baskı). Pegem Akademi Yayınları.

Demirel, Ö. (2007). *Eğitimde Program Geliştirme*. Pegem A Yayıncılık, Ankara.

Dökmen, Ü. (2003). *İletişim Çatışmaları ve Empati.* Sistem Yayıncılık: İstanbul.

Erdoğan, İ. (2002). *İletişimi Anlamak*. Erk Yayınları: Ankara.

Gutek, G. L. (1997). *Eğitime Felsefi ve İdeolojik Yaklaşımlar* (çev. N. Kale). Pegem Yayınları, Ankara.

Hoy, W. K., & Woolfolk, A. E. (1990). Socialization of student teachers. *American Educational Research Journal*, 27, 279–300.

Hoy, W. K., & Woolfolk, A. E. (1993). Teachers' sense of efficacy and the organizational health of schools. *The Elementary School Journal*, 93, 356–372.

Karakoyun, F. (1994). *Projektif Teknikler*. Ankara Üniversitesi Eğitim Bilimleri Fakültesi Yayınları, No:175.

Kayri, M. (2009). Internet Bağımlılık Ölçeğinin Türkçe'ye Uyarlanması: Geçerlik-Güvenirlik Çalışması. *Ankara Üniversitesi Eğitim Bilimleri Dergisi*, 42 (1). ss. 157-175.

Kuzgun, Y. (2002). *Rehberlik ve Psikolojik Danışma* (7. Baskı). ÖSYM Yayınları, Ankara.

Marsh, H. W., Balla, J. R. ve McDonald, R. P. (1988). Goodness of fit indexes in confirmatory factor analysis: The effect of sample size. *Psychological Bulletin*. 103, 391-410.

Maruyama, G.M.(1998). *Basic of Structual Equation Modeling*. California: Sage, USA

MEB (2011). *http://otmg.meb.gov.tr/YetGenel.html*. Erişim tarihi: 21/10/2011.

Miller, P.H. (2008). *Gelişim Psikolojisi* (çev. Z. Gültekin). İmge Yayınevi, Ankara.

Oktay, A. (2001). 21. *Yüzyılda Yeni Eğilimler ve Eğitim, 21. Yüzyılda Eğitim ve Türk Eğitim Sistemi*. Serdar Yayıncılık: İstanbul.

Özgüven, İ. E. (2005). *Bireyi Tanıma Teknikleri*. PDREM Yayınları, Ankara.

Parkay, F. W., Greenwood, G., Olejnik, S., & Proller, N. (1988). A study of the relationship among teacher efficacy, locus of control, and stress. *Journal of Research and Development in Education*, 21(4), 13–22.

Schermelleh-Engel, K., Keith, N., Moosbrugger, H. & Hodapp, V. (2004). Decomposing person and occasion-specific effects: An extension of latent state-trait theory to hierarchical LST models. *Psychological Methods,* 9, 198-219.

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. Available: http://www.mpr-online.de/.

Smylie, M. A. (1988). The enhancement function of staff development: Organizational and psychological antecedents to individual teacher change. *American Educational Research Journal*, *23*, 1-30.

Sümer, N. (2000). Yapısal eşitlik modelleri: temel kavramlar ve örnek uygulamalar. *Türk Psikoloji Yazıları, 3* (6) 49-74.

Şimşek, Ö.F. (2007). *Yapısal Eşitlik Modellemesine Giriş*. Ekinoks, Ankara.

Tabachnick, G.B. & Fidell, L.S. (2001). U*sing multivariate statistics.* 4th Edition. Allyon and Bacon Press, USA.

Tabachnick, G.B., ve Fidell, L.S. (2001). U*sing multivariate statistics (4th ed)*. USA: Allyon and Bacon Press.

Tavşancıl, E. (2002). *Tutumların Ölçülmesi ve SPSS İle Veri Analizi*. Nobel Yayın, Ankara.

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

Tschannen-Moran, M., Woolfolk-Hoy, A., (2001). Teacher efficacy: Capturing an elusive concept. *Teaching and Teacher Education, 17*, 783-805.

Tschannen-Moran, M., Woolfolk-Hoy, A., Hoy, W. K. (1998). Teacher efficacy: its meaning and measure. *Review of Educational Research, 68 (2),* 220-248.

Yeşilyaprak, B. (2010). *Eğitimde Rehberlik Hizmetleri.* Nobel Yayın Dağıtım, Ankara.