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Araştırma Makalesi

TURKISH VERSION OF THE FEEDBACK ORIENTATION SCALE: INVESTIGATION OF PSYCHOMETRIC PROPERTIES

Aslı KARTOL*

Nihan ARSLAN**

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Abstract

The aim of the study is to examine the psychometric properties of the Feedback Orientation Scale. In the research, descriptive research method, which is one of the quantitative research methods, was used. The aim of this research is to adapt the Feedback Orientation Scale which is developed by Yang, Sin, Li, Guo and Lui (2014) to Turkish culture. The research was carried out on 219 university students. The four-dimensional model consisting of 20 items was found to be compatible in exploratory and confirmatory factor analysis. Internal consistency, item and factor analysis studies were conducted to examine the psychometric properties of the scale. As a result of reliability analysis, Cronbach Alpha coefficient for the scale was found as .90. As a result of exploratory factor analysis, Kaiser-Meyer-Olkin sample adequacy value of the scale was .89; 58% of the four-dimensional scale variance was explained. It was observed that the total correlated items of the scale varied between .39 and .68.

Keywords: Feedback, scale development, validity, reliability.

GERİ BİLDİRİM ORYANTASYON ÖLÇEĞİ: PSİKOMETRİK ÖZELLİKLERİNİN İNCELENMESİ

Öz

Araştırmanın amacı Geri Bildirim Oryantasyon Ölçeğinin psikometrik özelliklerinin incelenmesidir. Araştırmada nicel araştırma yöntemleri içerisinde yer alan betimsel araştırma yöntemi kullanılmıştır. Bu araştırmanın amacı Yang Yang, Sin, Li, Guo ve Lui (2014) tarafından geliştirilen Geri Bildirim Oryantasyon Ölçeğini Türk kültürüne uyarlamaktır. Araştırma 219 üniversite öğrencisi üzerinde uygulanmıştır. 20 maddeden oluşan dört boyutlu model açıklayıcı ve doğrulayıcı faktör analizinde uyumlu bulunmuştur. Ölçeğin psikometrik özelliklerini incelemek amacıyla iç tutarlılık, madde ve faktör analiz çalışmaları yürütülmüştür. Güvenilirlik analizleri sonucunda ise ölçek için Cronbach Alfa katsayısı .90 olarak bulunmuştur. Açıklayıcı faktör analizi sonucunda ölçeğin Kaiser-Meyer-Olkin örneklem yeterliliği değeri .89; dört boyutlu ölçek varyansının %58 sinin açıkladığı sonucuna ulaşılmıştır. Ölçeğin doğrulanmış madde toplam korelasyonlarının .39 ile .68 arasında değiştiği görülmüştür.

Anahtar Sözcükler: Geri bildirim, ölçek geliştirme, geçerlilik, güvenilirlik.

*  Dr. Öğr. Üyesi; Gaziantep Üniversitesi, Nizip Eğitim Fakültesi, aslikartol@gmail.com

**  Doç. Dr.; Necmettin Erbakan Üniversitesi, Ereğli Eğitim Fakültesi, nihan.arslan@erbakan.edu.tr

Ethics Committee Permission of Research: Research data were collected in the 2018-2019 academic year.

Introduction

Motivation, talent and prior knowledge are unique to every student. A good instructor who knows the student's structure adjusts the environment and adapts the teaching materials at the point of how the student can achieve the learning goal. The instructor determines the teaching method and presentation technique according to the student's body language and responses (Crosby and Ikehara, 2015). Especially in large classes, It is a difficult task to engage participation to the lesson and maintain the students interest. Although it is easy for students to remain silent, it is important to be able to participate in discussions with questions and answers (Bergstrom, Harris, and Karahalios, 2011). In addition, students learn more if they can participate actively in class (Weaver and Qi, 2005). Being motivated can actually be considered as the first step a person takes to do his / her duty (Yıldız and Taşgın, 2020). Özbey and Aktemur Gürlü (2019) emphasized the importance of motivation's effect on adaptation, success, problem behaviors and social skills.

Feedback has recently been one of the topics that its effect on the learning process has been investigated. So that it is considered one of the strongest effects on learning and success however, this effect can be positive or negative. To understand the effectiveness of feedback in the classroom, it is necessary to look at its conditions, timing and type. Feedback is conceptualized as information provided by an intermediary (eg teacher, peer, book, parent, self, experience) about one's performance or understanding. A teacher can provide corrective information, a peer can provide an alternative strategy, a book can provide information to clarify ideas, a parent can encourage and a student can search for the answer to assess the accuracy of an answer. Therefore, feedback can be said to be a "result" of performance (Hattie and Timperley, 2007). According to Sally (2016), getting feedback about performance is an important strategy that improves learning. The feedback or feedback technique that facilitates and makes the learning phenomenon effective is in full compliance with the nature of the performance evaluation approach. Because the common goal of both is to provide conscious and planned support to students in the learning process in order to improve themselves (Çepni, 2007).

The relationship that the teacher establishes with his student during the daily time spent at school mostly includes assessment. The student can follow his / her learning and progress by evaluating it verbally or in writing with feedback. It is very important how and in what way teachers 'feedback is incorporated into the teaching environment so that they can improve students' mentality, increase their capacity, and send them to try again even if they fail (Carpenter, 2018). In this regard, Randall and Zundel (2012) stated that the feedback given by the teacher after the evaluation has the capacity to increase the courage and motivation of the student as well as having the potential to feel weak and decrease the motivation of learning. Brookhart (2012) emphasized that the feedback given by the teacher does not provide a "learning" to the student, and helps him to direct his / her goal by contributing to the development of the student in the learning process. Brookhart (2012) elaborated on the importance of feedback in the classroom and listed the factors affecting the effectiveness of teacher feedback in particular as follows:

- * Timing - When and how often feedback is given
- * Amount: How many points does it correspond to
- * Form of Expression: Oral or written

- * Audience: individually or as a group
- * Focus: The work done or the student's own self-regulation skills
- * Function: Whether the language used is descriptive or evaluative
- * Comparison: Comparing the work put forth with the student's previous performances, the success of other students, or whether it provides effective working conditions
- * Value: positive or negative
- * Clarity: Whether the feedback given to the student is clear or not
- * Originality: Being a private- selective or general comment
- * Emphasis: Whether the student is respected for himself and his work

Effective teaching involves not only conveying knowledge and understanding to students (or providing constructive tasks, environments and learning), but also evaluating students' understanding of this information and preparing for the next teaching process. However, the impact dimensions reported in feedback meta-analyses show a significant variability, indicating that some types of feedback are stronger than others. Studies showing the greatest effect sizes included students getting feedback on a task and how to do it more effectively. Low effect sizes are related to praise, reward and punishment (Hattie and Timperley, 2007). Reward and punishment are the most ineffective in feedback (Deci, Koestner and Ryan, 1999). As a matter of fact, Hattie and Gan (2011) stated that although the effectiveness of feedback is well known, we have limited knowledge about the use of this effectiveness in the classroom. Similarly, Harris, Brown and Harnett (2014) stated that the importance of feedback in students' development is not known enough.

When the literature is analyzed, Wiskow, Matter and Donaldson (2019) preschool; Eriksson, Boistrup and Thornberg (2017) in elementary school students; Carpenter (2018) in secondary school students; Higgins, Hartley and Skelton (2001) conducted studies that highlighted the effect of feedback on high school students. In addition, Burnett (2003) revealed in his study on 747 students studying in primary education that teacher feedbacks have significant relationships with students' academic self-level and self-speaking level. Kara, Kazak and Aşçı (2018) adapted the Perceived Teacher Feedback Scale to Turkish. There are sub-dimensions related to positive or negative feedback. Korkmaz and Kırdök (2019) adapted the Career Goal Feedback Scale to Turkish. In this study, students' thoughts about feedback are investigated directly and consists of 4 sub-dimensions (Feedback Utility, Feedback Accountability, Feedback Social Awareness, Feedback Self-Efficacy). With these sub-dimensions, not only the type or aspect of the feedback; It reveals its originality by considering the feedback from different angles. In the light of these studies emphasizing the importance of feedback in terms of education, the aim of this research is to examine the psychometric properties of the feedback scale.

Method

Research Design

This study is an adaptation study prepared by researchers to determine the validity and reliability of the Feedback Orientation Scale.

Participants

For the Turkish version of the scale firstly, the scale was translated into Turkish by 4 faculty members working in the Guidance and Psychological Counseling department, and then these Turkish forms were translated back to English and the consistency between the two forms was examined. The same faculty members discussed the Turkish forms they obtained and made the necessary corrections in terms of grammar and meaning, and the Turkish form for experimentation was obtained. This study, which intends to carry out validity and reliability analysis of Feedback Orientation Scale by adapting it into Turkish culture. It was conducted with 64 (30%) male and 155 (70%) of women students using convenient sampling method. The average age of students is 22.9.

Process

In order to adapt the Feedback Orientation Scale (FOS) developed by Yang et al. (2014) to Turkish culture, the authors were contacted via e-mail and necessary permission was obtained to adapt the scale. For the Turkish version of the scale firstly, the scale was translated into Turkish by 4 faculty members working in the Guidance and Psychological Counseling department, and then these Turkish forms were translated back to English and the consistency between the two forms was examined. The same faculty members discussed the Turkish forms they obtained and made the necessary corrections in terms of grammar and meaning, and the Turkish form for experimentation was obtained. Then the scale applied to university students in 2019 academic year. This study, which intends to carry out validity and reliability analysis of Feedback Orientation Scale by adapting it into Turkish culture.

Measuring Tool

Feedback Orientation Scale (FOS)

The FOS consisted of 20 items in 4 dimensions including the feedback utility, feedback accountability, social awareness to feedback, and feedback self-efficacy with 5 items for each dimension. The utility dimension consisted of 5 items. For example, “Feedback is critical for improving performance.” and “I find that feedback is critical for reaching my goals.” Feedback Accountability consisted of 5 items. The sample items were “It is my responsibility to apply teachers’ feedback to improve my performance.” and “I feel obligated to make changes based on teachers’ feedback.” Social Awareness to Feedback consisted of 5 items. For example, “Feedback helps me manage the impression I make on teachers.” and “Using feedback, I am more aware of what teachers think of me.” Feedback Self-Efficacy consisted of 5 items. For example, “I believe that I have the ability to deal with feedback effectively.” A 5-point Likert scale with items from 1 (strongly disagree) to 5 (strongly agree) was used. A higher rating score of a subscale indicates stronger endorsement to corresponding feedback orientation. The items of the FOS loaded well on the four factors which these items were designed to measure. Specifically, factor loadings ranged from 0.64 to 0.70 for Feedback Utility (Mean=.67, SD=.02); 0.49 to 0.58 for Feedback Accountability (Mean=.54, SD=.05); 0.54 to 0.72 for Feedback Social Awareness (Mean=.63, SD=.06); 0.56 to 0.65 for Feedback Self-Efficacy (Mean=.60, SD=.04). The results showed that model fit indices were better for the FOS model with two correlated uniquenesses (CFI values of .94 vs .90; TLI values of .92 vs .89; RMSEA values of .05 vs .06; SRMR values of .05 vs .06).

Results

Reliability

The internal consistency reliability coefficient of the Feedback Orientation Scale was found to be .90. Feedback Orientation Scale consists of 4 sub-dimensions (Feedback Utility, Feedback Accountability, Feedback Social Awareness, Feedback Self-Efficacy). The reliability coefficient of the “Feedback Utility” sub-dimension was found .86. The reliability coefficient of the “Feedback Accountability” sub-dimension was found .74 . The reliability coefficient of the “Feedback Social Awareness ” sub-dimension was found .82. The reliability coefficient of the “Feedback Self-Efficacy” sub-dimension was found .70.

As a result of exploratory factor analysis, Kaiser-Meyer-Olkin sample adequacy value of the scale was .89; 58% of the four-dimensional scale variance was explained. The research findings were consistent with the 4 dimensions of the original structure of the scale. The coefficients of the adjusted item-total correlations of the scale are shown in Table 1.

Table 1: Item Total Correlation Scores of Feedback Scale Items

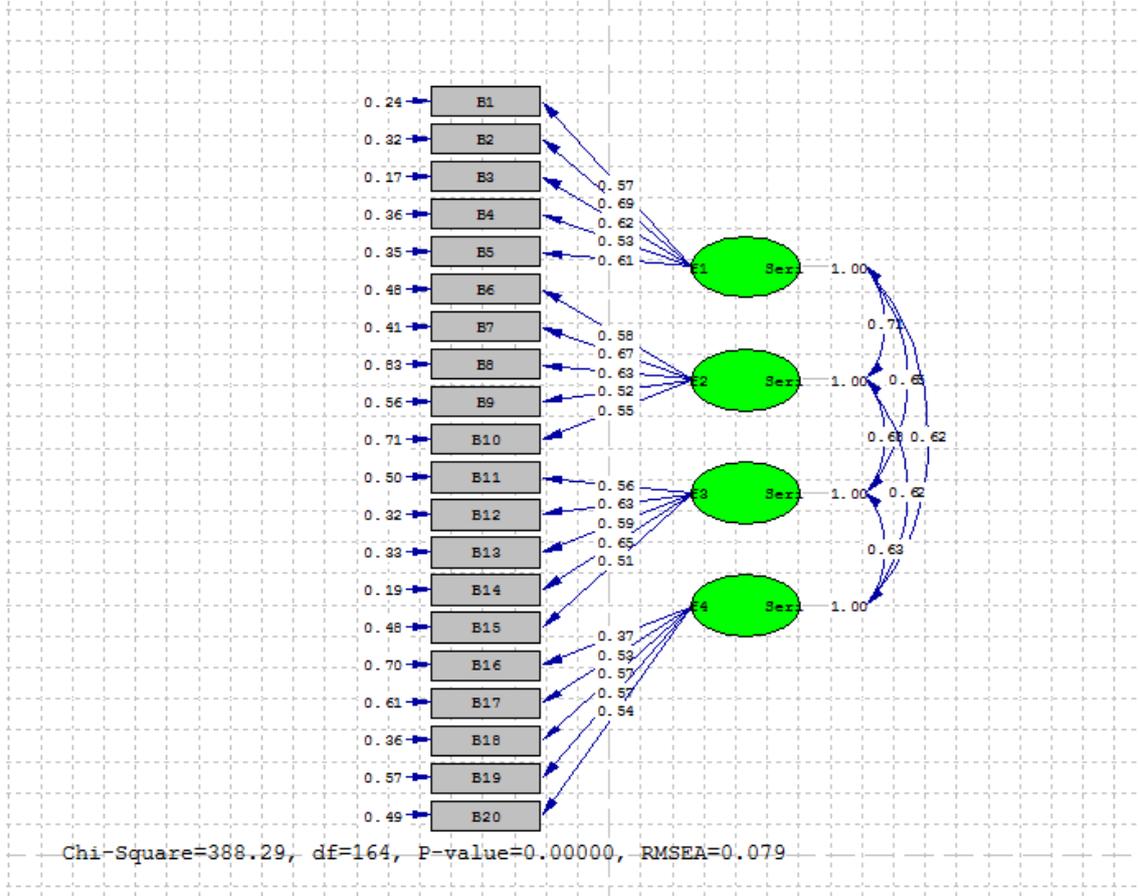
Item	<i>r_{jt}</i>	Item	<i>r_{jt}</i>	Item	<i>r_{jt}</i>	Item	<i>r_{jt}</i>
1	.57	7	.55	13	.60	19	.37
2	.59	8	.39	14	.68	20	.55
3	.68	9	.46	15	.53		
4	.57	10	.53	16	.43		
5	.63	11	.50	17	.44		
6	.55	12	.57	18	.47		

R_{jt}: correlation index

Construct Validity Confirmatory Factor Analysis

For the construct validity of the Feedback Scale, CFA was applied to confirm the factors in the original form of the scale. In the CFA performed, the fit indices of the model were examined and it was seen that the four-dimensional model fit well ($X^2 = 388.29$, $sd = 164$, $RMSEA = .079$, $CFI = .88$, $IFI = .88$, $NNFI = .86$, $GFI = .85$ and $SRMR = .076$). It was found that the values of the scale structural equation modeling fit indexes were at an acceptable level (Hu and Bentler, 1999).

Factor loads for the model are shown in Figure 1.



F1: Feedback Utility, F2: Feedback Accountability, F3: Feedback Social-Awareness, F4: Feedback Self-Efficacy

Figure 1: Confirmatory Factor Analysis Results

Conclusion, Discussion and Suggestions

In this study, it was aimed to adapt the Feedback Scale developed by Yang et al. (2014) to Turkish culture and to examine the validity and reliability of the Turkish form. The high reliability coefficients of the Feedback Scale indicate that the reliability is sufficient. Considering that the predicted level of reliability for the measurement tools that can be used in the research is .70, the findings obtained to determine the reliability of the Feedback Scale revealed that the scale was reliable enough. The internal consistency values show that the items in the scale are consistent with each other, so the reliability in terms of internal consistency is high. Considering that the scale is a measurement tool that can only be used in research, not diagnostic or classification purposes, these coefficients are sufficient. All findings obtained from the validity and reliability studies of the scale revealed that this scale has a sufficient level of validity and reliability in order to evaluate the effects of feedback on education and feedback for individuals. Scale studies related to feedback are included in the literature. Kara et al. (2018) used confirmatory factor analysis (CFA) regarding the construct validity and Cronbach Alpha reliability coefficient for determining reliability for perceived teacher feedback scale. Findings related to construct validity are consistent with the four factor structure of the original scale ($\chi / sd (172.06 / 761) = 2.82,$

RMSEA = 0.063, SRMR = 0.053, TLI = 0.94, CFI 0.96, GFI = 0.95). The Cronbach alpha reliability coefficients of the scale ranged from 0.69 to 0.83, and the test-retest reliability coefficients ranged from 0.70 to 0.90. Also, Canbulat (2020) were performed for 15-item validity and reliability analyses of the writing feedback scale. Data was collected from 346 teacher candidates for validity and reliability analyses of the scale. To determine the suitability of the data set for factor analysis, the KMO value has been calculated and the value found .888 has shown that it is suitable for factor analysis. The scale consists of 3 factors and 15 items according to the findings of the explanatory factor analysis. The cronbach Alpha internal consistency coefficient for the whole of the scale and its lower dimensions. In addition, Korkmaz and Kırdök (2019) found that Adaptation of Career Goal Feedback Scale adapted to Turkish, consisting of six dimensions and 24 items, was confirmed. The cronbach Alpha internal consistency coefficient of the scale is in the data group for college students .88, in the data group for high school students. It has been found to be 85. The research findings support the results of the study. It was determined that the Feedback Orientation Scale (FOS) has internal consistency and test-retest reliability in terms of both sub-dimensions and total score. According to the validity and reliability results, it can be said that the Turkish form of the scale is suitable for high school and university students. The limitations of the study include sample selection and size. Future research is proposed to be conducted in different samples. It is also important to generalize research results with qualitative data as well as experimental studies. It is suggested that the scale be used in different ethnic cultures and educational settings.

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GERİBİLDİRİM ORYANTASYON ÖLÇEĞİ

Her sorunun karşısında bulunan 1-Kesinlikle katılmıyorum, 2-Katılmıyorum, 3-Kararsızım, 4-Katılıyorum, 5- Kesinlikle katılıyorum anlamına gelmektedir.

1	Geribildirim okuldaki başarıyı arttırır.	1	2	3	4	5
2	Okulda becerilerimi geliştirmek için geri bildirimde güvenirim.	1	2	3	4	5
3	Performansı geliştirmek için geri bildirim önemlidir.	1	2	3	4	5
4	Öğretmenlerden gelen geri bildirimler öğrenmede ilerlememe yardımcı olabilir.	1	2	3	4	5
5	Hedeflerime ulaşmak için geri bildirim çok önemli olduğunu bilirim.	1	2	3	4	5
6	Performansımı arttırmaya yönelik geri bildirimde bulunmak benim için bir sorumluluktur.	1	2	3	4	5
7	Geri bildirimde uygun bir biçimde yanıt verme sorumluluğunu kendimde hissedirim.	1	2	3	4	5
8	Geri bildirimde cevap verene kadar kendimi rahat hissetmem.	1	2	3	4	5
9	Öğretmenim bana geri bildirim verirse cevap vermek sorumluluğunu hissedirim.	1	2	3	4	5
10	Geri bildirimde dayalı değişiklikler yapmak zorunda olduğumu hissediyorum.	1	2	3	4	5
11	Öğretmenlerin benim hakkımda ne düşündüklerinin farkında olmaya çalışırım.	1	2	3	4	5
12	Geribildirim kullanarak öğretmenlerin benim hakkımda ne düşündüklerini daha iyi anlarım.	1	2	3	4	5
13	Geribildirim, öğretmenler hakkında oluşturduğum izlenimi kontrol etmemi sağlar.	1	2	3	4	5
14	Geribildirim sayesinde öğretmenler tarafından nasıl algılandığımı anlarım.	1	2	3	4	5
15	Öğretmenlere iyi bir izlenim bırakmama yardımcı olacak geri bildirimde güvenirim.	1	2	3	4	5
16	Geribildirim aldığım zaman kendime olan güvenim artar.	1	2	3	4	5
17	Diğerleriyle karşılaştırıldığında, geri bildirim alma konusunda daha yetkinim.	1	2	3	4	5
18	Geçerli olacak şekilde geribildirimde bulunabileceğime inanıyorum.	1	2	3	4	5
19	Hem olumlu hem de olumsuz geri bildirimde bulunurken kendime güvenirim.	1	2	3	4	5
20	Bana gelen geri bildirim dikkate almam gerektiğini bilirim.	1	2	3	4	5