

## Adaptation of the Global Academic Performance Scale: Reliability and Validity Study\*

Arif DAMAR\*\*

Zülbiye KAÇAY\*\*\*

Ersin ESKİLER\*\*\*\*

Fikret SOYER\*\*\*\*\*

**Abstract.** Today, with the skills that cannot be imitated by others the person who gains competitive advantage in the organization contributes to the organizational goals. In this way, the good performance of the employees provides reputation, prestige, brand value, awareness, quality, effectiveness, efficiency and profitability. Therefore, it is important to integrate the knowledge, experience, talent and motivation level of an academic staff with the university objectives to which it is connected and to increase the quality of education. In this context, this research was carried out to adapt the Global Academic Performance Scale developed by Abubakar et al. (2018) into Turkish, to test its validity and reliability, and to measure the academic perceptions of academic staff on global academic performance. In this research, which is an empirical research, survey technique was used as a data collection tool. Academic staff working in Faculty of Sport Sciences at universities constitute of the population of the research. In this context, data from 198 samples determined by convenience sampling method were collected. Descriptive statistics, independent groups t-test, and explanatory and confirmatory factor analyzes were used in the analysis of the data. As a result, it can be stated that the Global Academic Performance Scale is a valid and reliable measurement tool which can be used for determining the academic performance perceptions of the employees in different samples and practices in Turkey.

**Keywords:** Global Academic Performance, Academic Personel.

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\* Ethics committee approval for this study was obtained from the Balıkesir University Rectorate Ethics Committee, dated 25/05/2020 and numbered 2020/05.

\*\* Orcid ID: <https://orcid.org/0000-0002-4366-3985>, Res. Assist., Bilecik Şeyh Edebali University, Accounting and Finance Management, Turkey, [arif.damar@bilecik.edu.tr](mailto:arif.damar@bilecik.edu.tr)

\*\*\* Orcid ID: <https://orcid.org/0000-0002-9794-0888>, Res. Assist. Dr., Çanakkale Onsekiz Mart University, Sports Management, Turkey, [zzkacay@gmail.com](mailto:zzkacay@gmail.com)

\*\*\*\* Orcid ID: <https://orcid.org/0000-0001-7617-2958>, Assoc. Prof. Dr., Sakarya Applied Sciences University, Sports Management, Turkey, [eeskiler@gmail.com](mailto:eeskiler@gmail.com)

\*\*\*\*\* Orcid ID: <https://orcid.org/0000-0002-8528-3622>, Prof. Dr., Balıkesir University, Sports Management, Turkey, [fikretsoyer@gmail.com](mailto:fikretsoyer@gmail.com)

## 1. INTRODUCTION

Providing competitive advantage for enterprises will be possible with the planned, simultaneous and coordinated action of organizational activities, business employees and managers to achieve their goals. Therefore, effective work of the physical, organizational and intellectual resources of the enterprise will increase organizational performance. In this context, high level performance will enable businesses to respond dynamically to environmental changes, market conditions, and changes in consumer demands and needs. With the reflection of globalization in every field, universities are trying to gain a competitive advantage, as in businesses. In this context, with the support of scientific research, the academic community is expected to do more studies by concentrating on scientific research and these studies are considered as performance indicators. Therefore, in order to gain competitive advantage, universities should encourage scientists working at universities with appropriate infrastructure and research opportunities, and scientists who love their jobs should provide quality education to their students (Suryadi, 2007). In this context, ensuring quality is based on organizational performance. However, the correct evaluation of performance will be possible by determining the correct performance criteria. In the literature, there are definitions such as financial, non-financial, contextual, task performance in defining performance. In addition, research, service, and training performance criteria were stated in determining performance criteria (Elton, 1988; Esen & Esen, 2015; Kaptanoğlu & Özok, 2006). Since the concept of performance has a multidimensional structure, criteria such as academic incentive, academic promotion and score criteria, journal impact factor, index h, article impact score have been determined as academic performance criteria in higher education institutions (Tonta, 2014). In line with this information, based on the question of how to measure the perceptions of academic staff about organizational performance in the simplest, easiest and most reliable way, it is thought that the results to be obtained as a result of testing the Turkish language validity and reliability of the “Global Academic Performance Scale” by Abubakar et al. (2018), will contribute to the determination of academic performance perception and to make managerial decisions.

### Conceptual Framework

The concept of performance is defined as “success, work done, practice, action” (tdk.gov.tr). Performance is the amount of goods or services produced in a given time for businesses; in terms of employees, it is expressed as the individual “productivity” and “efficiency” level shown in reaching the predetermined target (Tutar & Altınöz, 2010, p.201). In short, performance is explained as the level of achievement of a job according to the determined conditions (Demirer et al., 2019, p.235). In other words, performance is an indicator of the extent to which targets and standards are achieved in line with predetermined goals (Çöl, 2008, p.39). In general, organizational performance is defined as the degree to which the organization achieves its goals and objectives (Demirağ & Çavuşoğlu, 2019, p.10; Wade & Recardo, 2001), while organizational performance can be evaluated with the employee performance that constitutes it. From this point of view, organizations can provide effective, efficient and quality outputs depending on the quality

of their human resources. Akande (2011) considers performance as a synonym for success, while Man (2009) considers it as a result of adopting an effective management process. On the other hand, scientific research performance or academic performance is based entirely on the performance of individual, organizational and macrological actors (Schäfer, 2016, p.4).

Abubakar et al. (2018) discusses the concept of academic performance as the development trends and academic success results of universities. In this context, the measurement and management of general and academic performance serve two main purposes. First, performance measurement and management can provide accurate and full-time information about business processes to both senior management and employees in order to make effective managerial decisions. However, performance measurement and management can be used as an effective tool to determine to what extent employees comply with or contribute to the standards in pre-determined job analyzes and definitions (Çukurçayır & Eroğlu, 2005). In addition to these two main services, according to (Barutçugil, 2002), an accurate performance measurement and management style to be realized based on this measurement will contribute to the realization of business goals and objectives.

Performance appraisal was first used in the 3rd century. It was used by the Chinese philosopher. Its first industrial application was realized in the cotton mills in Scotland in the early 1800s (Murphy & Cleveland, 1995, p.3). The first examples of systematic and formal evaluation were carried out in public institutions in the USA in the 1900s. Later, as a result of measuring the productivity of employees with the Scientific Management Approach of F.W.Taylor, the concept of performance appraisal started to be used in business organizations (Şimşek & Öge, 2009, p.283). Performance appraisal should be seen as a systematic process that evaluate successes, failures and competencies related to activities (Helvacı, 2002: 158). In other words, performance appraisal is a planned process that evaluates the employee's contribution to the success of the enterprise and reveals what the training, reward, development and motivation to be provided to the employee as a result (Sarıaltın, 2017, p.120).

Performance appraisal, expressed in the form of success appraisal, merit appreciation or employee ranking (Şimşek & Öge, 2009, p.283) is the psychological need at the level of the individual and the source of motivation and the achievement of goals at the organizational level. Therefore, performance appraisal, while providing an overview of the organization as a whole, reveals the status of the organization's resources, employees' basic skills and efforts towards the goals. In addition, performance appraisal enables the identification of individual or organizational differences (Camgöz & Alperden, 2006, p.193). As a result, performance appraisal also contributes to the establishment of a fair wage, promotion, transfer and reward system in ensuring efficiency and productivity in organizations, directing the efforts of employees to the goals and determining competent employees. Determining to what extent the employee's experience, knowledge level and abilities will contribute to the work constitute the subject of performance evaluation (Şimşek & Öge, 2009, p.283). In this context, performance measurement stands out as one of the most

important issues for all organizations, including the academic environment (Dill & Soo, 2004). On the other hand, academic performance is expected to reflect both the general and scientific performance of the higher education institution. It can be stated that performance scales of this nature are necessary in terms of guiding stakeholders' decision-making processes. When the literature on organizational performance measurement is examined, it is noteworthy that different measurement criteria are adopted by different researchers (Abubakar et al., 2018). (see Table 1).

Table 1

*The sample studies related to the Oeganizational Performanc*

Study	Performance measurement criteria	Sample group	Author(s)
Accounting Outsourcing and Firm Performance in Iranian SMEs	Financial performance	658 (small and medium business) SMEs	Kamyabi and Devi (2012)
The Relationship among Knowledge Management, Organizational Learning, and Organizational Performance		327 Taiwan knowledge-intensive firms	Liao and Wu (2009)
The Role of Networks in Small and Medium-Sized Enterprise Innovation and Firm Performance	Non-Financial performance	1435 small and medium enterprises	Gronum et al. (2012)
Sourcing strategies, practices and effects on organisational performance		314 senior company executives	Hilman and Mohamed (2011)
Integrated performance measurement systems: A development guide	Both financial and non-financial performance	-	Bititci et al. (1997)
Consider your options: Changes to strategic value during implementation of advanced manufacturing technology		17 interviews with 14 managers	MacDougall and Pike (2003)

It is noteworthy that the scales in Table 1 are generally prepared in accordance with for-profit organizations. This situation restricts and / or makes the use of relevant measurement criteria for non-governmental organizations, education, research and academic environment in which publications are made inadequate (Abubakar et al., 2018). However, a limited number of studies focus on higher education institutions /

academic performance measurement. Abubakar et al. (2018) determined that some studies focus on scientific research in various studies (Gulbrandsen & Smeby, 2005; Johnes & Johnes, 1993; Lukman et al., 2010; Nederhof, 2006) and teaching performance (Asif & Searcy, 2014; Badri & Abdulla, 2004; Chen et al., 2015), and some studies focus on service performance and financial performance (Asif et al., 2013; Lukman et al., 2010). However, researchers state that evaluations regarding academic recognition, employability of graduates, faculty and / or student ratio and field-specific awards are neglected or ignored (Abubakar et al., 2018).

In Turkey, academic performance, scientific studies of university employees (articles, papers, projects, works in the arts, scholarships, awards, achievements in foreign language and science exams, edited are references) reflects his academic performance (Erarlan, 2015, p.41). There is no tool for a standard method of measurement used to determine the general academic performance in Turkey (Ertuğrul, 2006; Kaptanoğlu & Özok, 2006). In general, the individual tries to respond to the statements about his performance in the best way and sometimes ignores the objective criteria. However, The Global Academic Performance Scale developed by Abubakar et al. (2018) measures the individual's perceptions about the performance of the institution he / she works for and allows the individual to evaluate the performance of the institution in general. In this context, it is clear that the employee can be more objective about both his own work and other studies and practices within the organization. In this way, it is predicted that it will contribute to the determination of the institutional performance levels of universities and their sub-units more objectively by the employees.

Eventually, it can be clearly observed that a multi-dimensional understanding should be adopted in measuring academic performance. Today, it is possible to express that it should be benefitted from an internationally recognized measure in order to determine Turkey's academic performance and compare its performance with other countries. In addition, Savaşır (1994) emphasizes that thanks to the adaptation and use of a measurement tool to other languages other than the language in which it was developed, this measurement tool can be used in comparative studies between cultures, languages and ethnic groups and the data on the relevant field can be expanded (Savaşır, 1994). In other words, scale adaptation studies have the potential to contribute to international scientific integrity and knowledge production. In the light of the explanations, the main purpose of this study was to test the Turkish validity and reliability of the Global Academic Performance Scale by Abubakar et al. (2018) which includes research outputs, internationalization, research scholarship, abundance of resources, community service, infrastructure and facility indicators in addition to the issues that are ignored in performance measurement, to determine the performance of universities and other higher education institutions.

## 2. METHOD

### Research Model

This study is a quantitative study and the cross-sectional data acquisition technique was used to reveal the situation of the cases at a particular moment.

### Study Group

In determining the study group of this research, the convenience sampling method, which is widely used in the field of social sciences and in which volunteers are included in the sample, was used. In this direction, the working group comprised of 198 people working in the academic staff of the Faculty of Sport Sciences. Tabachnick and Fidell (2007) and Hair et al. (2009), emphasizes that the appropriate sample size should be at least 5 to 10 times the number of items in the scale for performing statistical tests such as factor analysis. Within the scope of this study, the sample size/number of items was 198/12 and it was determined that the minimum criteria specified by the researchers could be met. The participants whose average age is  $\bar{X}= 40.53 \pm 8.24$ , 78.3% (n = 155) are male and 21.7% (n = 43) are female. In addition, it was determined that the participants had 2-32 years ( $\bar{X}= 15.19 \pm 9.14$ ) of work experience. Other characteristics of the participants are summarized in Table 2.

Table 2

#### *Descriptive Statistics of Study Group*

Gender	frequency	%
Female	43	21.7
Male	155	78.3
Age	Mean	S.Deviation
25-54	40.53	8.24
Education Status	frequency	%
Graduate	45	22.7
Doctorate	126	63.6
Post-Doc	27	13.6
Academic Title	frequency	%
Res. Assit.	24	12.1
Res. Assit. Dr.	4	2.0
Lecturer	53	26.8
Lecturer Dr.	12	6.1
Dr. Lecturer	53	26.8

Assoc. Prof.	40	20.2
Prof. Dr.	12	6.1

## Process

The authors who brought the Global Academic Performance Scale into the relevant literature were contacted and requested permission to adapt the scale into Turkish. As a result of the positive response to this request by the authors, the adaptation process of the scale started. First of all, in order to ensure the equivalence of the scale items, the English scale items were translated into Turkish by those who have command of both languages (Turkish and English) and who have previously taken part in scale adaptation studies in the field of sports sciences. Expert opinion was sought to determine the appropriateness of the items in the Turkish form of the measurement tool (Karasar, 2014). After the expert opinions, necessary arrangements were made, and in order to determine whether the Turkish items created for the measurement tool adequately represented the equivalents of the English items, a second opinion was taken from academicians who have command of both languages. After these evaluations, a sample of 13 people with different academic titles working in the Faculty of Sport Sciences of the Balıkesir University, the scale items were pre-applied, the instant feedbacks were taken into account and the necessary arrangements were made, and the final version of the scale applicable to sampling was created. In obtaining data, online and face-to-face survey methods were preferred in order to maximize the return rate and the number of appropriate data. The study data were collected as a result of the approval obtained at the meeting of Balıkesir University Social and Human Sciences Ethics Committee dated 20.05.2020 and numbered 2020/05.

Raw data obtained after field studies were checked one by one in order to eliminate potential errors and make them suitable for analysis, and 26 questionnaires with incomplete and/or incorrect markings were excluded from the study.

## Data Collection Tool

The original form of the Global Academic Performance Scale consists of 12 items and one dimension. The Cronbach Alpha value of the scale was reported as .895. All of the items in the scale have a 5-point Likert Type rating “*Strongly disagree, ..., Strongly agree*” measurement level. It was determined that the response time of the measurement tool ranged from approximately 2-3 minutes.

## Analysis of Data

SPSS and AMOS 20.0 package programs were used to perform statistical analysis. Explanatory factor analysis (EFA) and confirmatory factor analysis (CFA) were used in accordance with the approach to the development of original scales in order to examine the factor structure of the scales formed by the scores obtained from the Turkish population. In this context, the construct validity of the scales was examined using two

different factor analysis. In determining how adequately the items in the scales are in distinguishing individuals in terms of their measured characteristics, the corrected item-total score correlations were first calculated. The t-test was used to determine whether there was a significant difference between the scale scores and item scores of the upper 27% and lower 27% groups determined according to the total score obtained. Cronbach alpha internal consistency coefficient was taken into account to determine the reliability of the scales.

### 3. RESULTS

EFA was applied to 12 items in the Global Academic Performance Scale and the analysis results are summarized in Table 3. When the results were examined, it was determined that the scale was gathered under two factors with an eigenvalue greater than 1. It was determined that the item "GAP11." one of the scale items, has a load value close to each other (1st Factor = .511, 2nd Factor = .452) under two different factors. Büyüköztürk (2016) states that the difference between two factor load values for an item should be at least 10%. In this context, the analysis was repeated by removing the relevant item and it was seen that the scale was collected under a single factor with an eigenvalue greater than 1. The adequacy of the sample size for factor analysis was determined by Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity. The values obtained (KMO=.915,  $\chi^2 = 953.83$ ,  $df = 55$ ,  $p < .01$ ) show that the sample size is sufficient for factor analysis (Büyüköztürk, 2016). A solution with the lowest item load value of .598 and similar to the factor structure in the original scale was reached. The total amount of variance explained by this solution is 50%. Analysis results and Cronbach alpha internal consistency coefficient are included in Table 3.

Table 3

*EFA Results*

Items	<i>Factor 1</i>
KAP5	.820
KAP7	.768
KAP4	.749
KAP2	.731
KAP1	.705
KAP3	.684
KAP10	.683
KAP12	.666



KAP6	.652			
KAP8	.629			
KAP9	.598			
Total	5.609			
%Variance	49.877			
Cronbach's Alfa	.895			
KMO Sample Adequacy	.915			
Bartlett'Test of Sphericity	$\chi^2 = 953.83$	df = 55	p < .01	

The original factor load structure obtained as a result of EFA was tested by CFA. Although there are various differences of opinion on the application of EFA and DFA to the data obtained from the same sample, Doğan et al. (2017) stated that doing EFA and CFA by dividing the data in one-dimensional structures and small sample sizes may cause biased results. In this context, CFA was carried out using data obtained from the same. Adhering to the theoretical structure, the item "GAP11." was included in the first model tested with CFA, and it was seen that low fit index values were obtained as a result of the analysis ( $\chi^2/df$  (164.16/54)=3.04, RMSEA=.101, GFI=.84, AGFI=.77, CFI=.87, TLI=.84). It was decided to exclude the item from the analysis by examining the obtained fit and modification index values. When the fit indices of the repeated CFA result are examined, the ratio  $\chi^2/df$  is (133.242/44)=3.028. Other fit index values were determined as RMSEA=.101, GFI=.88, AGFI=.82, CFI=.90, TLI=.88. When the modification index values were examined, it was determined that there was a significant correlation between the error covariances of the items "GAP9." and "GAP10.". In this context, the error correlations observed between the relevant items were added to the model and the analysis was repeated. Analysis result was  $\chi^2/df$  (95.935/43) = 2.231, RMSEA=.079, GFI=.91, AGFI=.86, CFI=.94, TLI=.93 and the values obtained were in the range of good/acceptable fit index values. As seen in Figure 1, the factor weights of the scale items take a value between .81 (item 5) and .50 (item 8) and all item weights are statistically significant (p < .01)(Doğan vd., 2017).

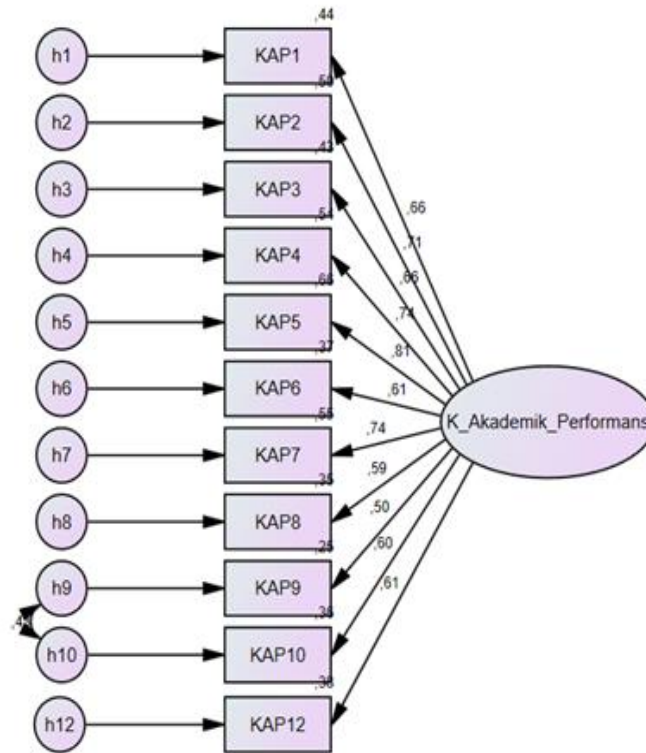


Figure 1. Diagram Representation of Standardized Analysis Values

When the values obtained from CFA as a whole were examined, it is possible to state that the model-data fit of the scale was at an acceptable level. It can also be said that the results of the factor analysis provide evidence that confirms the construct validity of the Global Academic Performance Scale. On the other hand, in order to determine the reliability of the scale, the differences between the upper and lower 27% groups formed according to the item-total score correlation values and the scale total scores were examined (Table 4).

Table 4

*Independent t test Results Between Global Academic Performance Scale Corrected Item Total Correlations and Top 27%-Bottom 27% Total Scores*

	Corrected Item Total Correlations <sup>1</sup>	t (top %27 - bottom %27)**
GAP1.	.629	-12.528
GAP2.	.650	-12.228
GAP3.	.601	-11.751

GAP4.	.669	-13.585
GAP5.	.755	-17.025
GAP6.	.575	-10.345
GAP7.	.698	-13.317
GAP8.	.544	-9.324
GAP9.	.525	-9.545
GAP10.	.616	-11.811
GAP12.	.589	-10.064

GAB: Global Academic Performance

\* $p < .01$

It was stated that the items with an item-total score correlation value of  $\geq .30$  distinguish individuals well (Büyüköztürk, 2016). The findings show that the corrected item-total correlation values of the items in the Global Academic Performance Scale were between .52 and .75 and above the minimum level. The results of the independent sample t test performed between the total scores of the upper 27% and the lower 27% group show that there was a significant difference for all items ( $p < .01$ ).

#### 4. CONCLUSION, DISCUSSION AND SUGGESTIONS

How to increase the productivity of employees has always been one of the most important issues for businesses since the emergence of the classical management approach. Therefore, the aim of the employees to achieve success by using their experience, skills, knowledge and other skills shows their performance. The high performance of the employees is an indicator that the business goals will be achieved more easily and more quickly (Asif et al., 2013). As a matter of fact, performance measurement is one of the important issues for all organizations, including the academic environment (Dill & Soo, 2004). In this context, it is thought that scientific and general performance scales are necessary to guide the decision-making processes of stakeholders (Abubakar et al., 2018). In order to measure performance in the academic field, Abubakar et al. (2018) created a global performance scale by benefiting from the academic knowledge and experience of the top executives of the best universities in 2015 in the QS ranking. In this context, this study was carried out in order to determine the validity and reliability of the Turkish form of the Global Academic Performance Scale.

In order to reveal the factor load structure of the measurement tool, principal components factor analysis was used. As a result of the factor analysis, it was determined that an item was under two different factors, so the analysis was repeated, excluding the relevant item.

As a result of the two analyzes, it was determined that a solution with the lowest item load value was .598 and similar to the factor structure in the original scale. The total amount of variance explained by this solution is 50%. Çokluk et al. (2018) is considered sufficient if the variance explained by 40% to 60%. In addition, it was determined that the Cronbach Alpha internal consistency coefficient of the measurement tool was greater than the expected value of .70 (Büyüköztürk, 2016)( $\alpha=.895$ ). Accordingly, it was determined that both the original study ( $\alpha = .974$ ) and the measurements obtained in this study had high reliability values.

The original factor load structure obtained as a result of EFA was tested by CFA. As a result of the application of the proposed modification was  $\chi^2/df$  (95.935/43)=2.231, RMSEA=.079, GFI=.91, AGFI=.86, CFI=.94, TLI=.93 and the values obtained were in the range of good/acceptable fit index values. In addition, it was concluded that the factor weights of the scale items ranged from .81 to .50 and that all item weights were statistically significant ( $p<.01$ ). Finally, in order to distinguish the individuals in the measurement tool and to test this discrimination, the difference between the mean scores given to each item by the individuals in the upper part of 27% and lower part of 27% in the sample is independent samples t-test. The discrimination power of the items was determined by comparing them with. Unlike the original measurement tool, the item "GAP11." was excluded from the analysis in this study and it was determined that the Turkish form of the scale was one-dimensional and consists of 11 items. The sample of this study consists of academicians working in the academic staff of sports science faculties, in this context, it is thought that the relevant item may be perceived by the participants as an item for the evaluation of sports facilities only. As a matter of fact, university sports facilities in our country are opened for common use by sports sciences faculties for education and training purposes and for the use of free time of other faculty/department students. This situation may have caused the academic staff of sports sciences to perceive the facilities as insufficient.

Performed analysis and in light of the findings obtained it can be stated that this form of Global Academic Performance Scale gives valid and reliable measurement results to determine the academic performance perceptions of employees of the Sports Science Faculty in different ways and applications in Turkey sample. As a matter of fact, it is predicted that the results obtained from this study can support the interpretation of future research results. In this context, this scale, which can help to measure employee performance in universities, can provide an opportunity to overcome the deficiencies by revealing the current performance status of institutions and to encourage researchers. In addition, it is an important issue that should not be overlooked by practitioners and academicians that other internationally accepted performance evaluation criteria should be taken into account in addition to determining the perceptions of academic staff.

The main limitation of this study is that the data used in the analysis are limited to the perceptions of the academic staff of the Faculty of Sports Sciences and the cross-sectional data acquisition technique was used. Therefore, it is not possible to make causal

inferences from the study findings. On the other hand, the possibility of selection bias should be taken into consideration in the interpretation of the research, since the convenience sampling method was preferred in the sampling process and the data were collected both face-to-face and by online survey technique. In this context, the inclusion of other educational units of the universities in future studies and studies to be carried out with the data obtained from the administrators of schools, faculties, institutes and general universities, who play a key role in university administration, will make the findings of the present study more meaningful. Longitudinal studies including different evaluation criteria will provide useful information to practitioners and the field.

## References

- Abubakar, A., Hilman, H., & Kaliappen, N. (2018). New Tools for Measuring Global Academic Performance. *SAGE Open*, 8(3), 1-10. doi:10.1177/2158244018790787
- Akande, O. (2011). Accounting skill as a performance factor for small businesses in Nigeria. *Journal of emerging trends in economics and management sciences*, 2(5), 372-378.
- Asif, M., Raouf, A., & Searcy, C. (2013). Developing measures for performance excellence: is the Baldrige criteria sufficient for performance excellence in higher education? *Quality & Quantity*, 47(6), 3095-3111.
- Asif, M., & Searcy, C. (2014). A composite index for measuring performance in higher education institutions. *International Journal of Quality & Reliability Management*, 31(9), 983-1001.
- Badri, M. A., & Abdulla, M. H. (2004). Awards of excellence in institutions of higher education: an AHP approach. *International Journal of Educational Management*, 18(4), 224-242.
- Barutçugil, İ. (2002). *Performans yönetimi [Performance Management]*. İstanbul: Kariyer Yayınları.
- Bititci, U. S., Carrie, A. S., & McDevitt, L. (1997). Integrated performance measurement systems: a development guide. *International journal of operations & production management*, 17(5), 522-534.
- Büyüköztürk, Ş. (2016). *Sosyal Bilimlerde veri analizi el kitabı: İstatistik, araştırma deseni ve yorum [Data analysis handbook in Social Sciences: Statistics, research design and interpretation]* (22. ed.). Ankara: Pegem Akademi.
- Camgöz, S. M., & Alperden, İ. N. (2006). 360 derece performans değerlendirme ve geri bildirim: bir üniversite mediko-sosyal merkezi birim amirlerinin yönetsel yetkinliklerinin değerlendirilmesi üzerine pilot uygulama örneği [360 Degree Performance Appraisal And Feedback: "A Pilot Study Illustration in Appraising the Managerial Skills of Supervisors Working in Health Care Centre of a University"]. *Yönetim ve Ekonomi: Celal Bayar Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 13(2), 191-212.
- Chen, J.-F., Hsieh, H.-N., & Do, Q. H. (2015). Evaluating teaching performance based on fuzzy AHP and comprehensive evaluation approach. *Applied Soft Computing*, 28, 100-108.
- Çokluk, Ö., Şekercioğlu, G., & Büyüköztürk, Ş. (2018). *Sosyal bilimler için çok değişkenli istatistik: SPSS ve LISREL uygulamaları [Multivariate statistics for social sciences: SPSS and LISREL applications]* (5. ed.). Ankara: Pegem Akademi.

- Çöl, G. (2008). Algılanan güçlendirmenin işgören performansı üzerine etkileri [The effects of perceived empowerment on employee performance]. *Doğuş Üniversitesi Dergisi*, 9(1), 35-46.
- Çukurçayır, M. A., & Eroğlu, H. T. (2005). *Yerel yönetimler ve performans denetimi, yerel yönetimler üzerine güncel yazılar [Current articles on local governments and performance auditing, local governments]* (1 ed.). Ankara: Nobel Yayıncılık.
- Demirağ, B., & Çavuşoğlu, S. (2019). Sosyal sermayede güven boyutunun örgütsel performans ve bağlılık üzerindeki etkilerine yönelik teorik bir değerlendirme [A theoretical assessment of the effect of trust in social capital on organizational performance and commitment]. *Business & Management Studies: An International Journal*, 7(2), 644-667.
- Demirer, M. C., Demirer, Ö., & Yürürer, G. (2019). İç Girişimciliğin İşgören Performansı Üzerindeki Etkisi: Üretim İşletmelerinde Bir Araştırma [The Impact of Intrapreneurship on Personnel Performance: A Research in Production Businesses]. *Gümüşhane Üniversitesi Sosyal Bilimler Enstitüsü Elektronik Dergisi*, 10(1), 231-245.
- Dill, D. D., & Soo, M. (2004). Transparency and quality in higher education markets. In Teixeira P., J. B., Dill D., Amaral A. (Ed.), *Markets in higher education: Rhetoric or Reality* (Vol. 6, pp. 61-85). Netherlands: Springer, Dordrecht.
- Doğan, N., Soysal, S., & Karaman, H. (2017). *Aynı örnekleme açımlayıcı ve doğrulayıcı faktör analizi uygulanabilir mi? [Can exploratory and confirmatory factor analysis be applied to the same sample?]* Ankara: Pegem Akademi.
- Elton, L. (1988). Appraisal and accountability in higher education: some current issues. *Higher Education Quarterly*, 42(3), 207-229.
- Erarslan, I. (2015). Üniversitelerin uluslararası görünürlüğü: Akademik performans ve üniversite marka değeri ilişkisi [International visibility of universities: relation of academic performance and university brand value]. *Beykent Üniversitesi Sosyal Bilimler Dergisi*, 8(1), 37-47.
- Ertuğrul, İ. (2006). Akademik performans değerlendirmede bulanık mantık yaklaşımı [Fuzzy logic approach in academic performance evaluation]. *Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi*, 20(1), 155-176.
- Esen, M., & Esen, D. (2015). Öğretim Üyelerinin Performans Değerlendirme Sistemine Yönelik Tutumlarının Araştırılması [Investigation of Faculty Members' Attitudes towards Performance Evaluation System]. *Journal of Higher Education & Science/Yükseköğretim ve Bilim Dergisi*, 5(1), 52-67.
- Gronum, S., Verreynne, M. L., & Kastle, T. (2012). The role of networks in small and medium-sized enterprise innovation and firm performance. *Journal of Small Business Management*, 50(2), 257-282.
- Gulbrandsen, M., & Smeby, J.-C. (2005). Industry funding and university professors' research performance. *Research policy*, 34(6), 932-950.
- Hair, J. F., Anderson, R. E., Tatham, R., & Black, W. C. (2006). *Multivariate data analysis*. In (5th Edition ed.). Uppersaddle River, NJ: Pearson Prentice Hall.
- Helvacı, M. A. (2002). Performans yönetimi sürecinde performans değerlendirmenin önemi [The importance of performance evaluation in the performance management process]. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi*, 35(1), 155-169.
- Hilman, H., & Mohamed, Z. A. (2011). Sourcing strategies, practices and effects on organisational performance. *Journal for Global Business Advancement*, 4(1), 18-31.

- Johnes, G., & Johnes, J. (1993). Measuring the research performance of UK economics departments: an application of data envelopment analysis. *Oxford University Press*, 45(2), 332-347.
- Kamyabi, Y., & Devi, S. (2012). The impact of advisory services on Iranian SME performance: An empirical investigation of the role of professional accountants. *South African Journal of Business Management*, 43(2), 61-72.
- Kaptanoğlu, D., & Özok, A. F. (2006). Akademik performans değerlendirme için bir bulanık model [A fuzzy model for academic performance evaluation]. *İTÜDERGİSİ/d*, 5(1), 193-204.
- Karasar, N. (2014). *Bilimsel araştırma yöntemleri: Kavramlar, teknikler ve ilkeler [Scientific research methods: Concepts, techniques and principles]* (27. ed.). Ankara: Nobel Yayınevi.
- Liao, S.-h., & Wu, C.-c. (2009). The relationship among knowledge management, organizational learning, and organizational performance. *International journal of business and management*, 4(4), 64-76.
- Lukman, R., Krajnc, D., & Glavič, P. (2010). University ranking using research, educational and environmental indicators. *Journal of cleaner production*, 18(7), 619-628.
- MacDougall, S. L., & Pike, R. H. (2003). Consider your options: changes to strategic value during implementation of advanced manufacturing technology. *The international journal of management science (Omega)*, 31(1), 1-15.
- Man, M. M. K. (2009). The Relationship between Innovativeness and the Performance of small and Medium-size Enterprises (SMEs) of Malaysian manufacturing sector. *International Journal of Management and Innovation*, 1(2), 1-14.
- Murphy, K. R., & Cleveland, J. N. (1995). *Understanding performance appraisal: Social, organizational, and goal-based perspectives*. Thousand Oaks, London, New Delhi: Sage.
- Nederhof, A. J. (2006). Bibliometric monitoring of research performance in the social sciences and the humanities: A review. *Scientometrics*, 66(1), 81-100.
- Sarıaltın, H. (2017). Performans yönetiminde performans değerlendirme ve öneri sistemlerinin sürdürülebilir verimliliğe etkisinin incelenmesi: Bir örnek olay çalışması [Examining the impact of performance evaluation and suggestion systems of performance management on sustainable productivity: a case study]. *İşletme Bilimi Dergisi*, 5(1), 117-141.
- Savaşır, I. (1994). Ölçek uyarlamasındaki sorunlar ve bazı çözüm yolları [Problems in scale adaptation and some solutions]. *Türk Psikoloji Dergisi*, 9(33), 27-32.
- Schäfer, L. O. (2016) Performance assessment in science and academia: effects of the RAE/REF on academic life. In, (pp. 1-43). London: Centre for Global Higher Education CGHE working papers 7.
- Suryadi, K. (2007). Framework of measuring key performance indicators for decision support in higher education institution. *Journal of Applied Sciences Research*, 3(12), 1689-1695.
- Şimşek, M. Ş., & Öge, H. S. (2009). *Stratejik ve uluslararası boyutları ile insan kaynakları yönetimi [Human resources management with its strategic and international dimensions]* (2. ed.). Ankara: Gazi Kitabevi.
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics*. Hudson Street, NY: Pearson Education Company.
- Tonta, Y. (2014). Akademik Performans, Öğretim Üyeliğine Yükseltme ve Yayın Destekleme Ölçütleriyle İlgili Bir Değerlendirme [An Evaluation Regarding Academic Performance, Academic Promotion and Publication Support Criteria]. Retrieved from

<http://yunus.hacettepe.edu.tr/~tonta/yayinlar/tonta-yukseltme-kriterleri-hakkinda-degerlendirme-11-Temmuz-2014.pdf>

Tutar, H., & Altınöz, M. (2010). Örgütsel iklimin işgören performansı üzerine etkisi: ostim imalat işletmeleri çalışanları üzerine bir araştırma [The effect of organizational climate on employee performance: a study on the employees of ostim manufacturing enterprises]. *Ankara Üniversitesi SBF Dergisi*, 65(02), 196-218.

Wade, D., & Recardo, R. J. (2001). *Corporate performance management: how to build a better organization through measurement-driven strategic alignment*. USA: Butterworth-Heinemann.



Ethics committee approval for this study was obtained from the Balıkesir University Rectorate Ethics Committee, dated 25/05/2020 and numbered 2020/05.