Managerial Flexibility Regarding Scholarly Practices Scale: Validity and Reliability Studies in University Environment*

Bilimsel-Sosyal Uygulamalara İlişkin Yönetsel Esneklik Ölçeği: Üniversite Ortanında Geçerlik ve Güvenirlik Çalışması

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Abstract
Recent changes in higher education area has brought new challenges to universities such as collaborating with industry and government, forming alternative teaching programs, gaining external resources and engaging with community. To overcome these challenges, modern universities have to empower their entrepreneurial capacity by facilitating academics' scholarly activities with different practices. The operation of different managerial practices related to various parts of scholarly activities can be termed as Managerial Flexibility Regarding Scholarly Practices. In the line with this definition, the purpose of the research is to develop a scale related to managerial flexibility regarding scholarly practices. The data were collected from 399 faculty members by using the pilot version of the scale. According to exploratory factor analysis, the scale has 3-factorial structure, and explains 63.67% of variance for managerial practice flexibility. The reliability coefficient was \( \alpha = .92 \) for the whole scale, and \( \alpha = .79 - .86 \) for its dimensions. The structural model of the scale was also tested by confirmatory factor analysis with the secondary data set which was collected from other 504 faculty members, and 3-factorial structure was confirmed (\( \chi^2/df=2.457 \)). As a result, this scale is a valid and reliable data collection instrument to measure managerial flexibility regarding scholarly practices.

Keywords: University, flexibility, organizational flexibility, managerial flexibility, scholarly practices

Öz
Yükseköğretim alanında yaşanan değişimler beraberinde üniversiteler için yanı sıra ve devlet kuruluşlarıyla işbirliği, alternatif öğretim programları oluştururma, dış kaynakları edine ve topluma entegreşyon gibi yeni zorunluluklar getirmiştir. Bu zorunlulukları gerçekleştirmek için üniversiteler girişimci yöneri, akademisyenlerin bilimsel ve sosyal aktivitelerini farklı uygulamalarla destekleyerek güçlendirmeleridir. Akademisyenlerin çalışmalarını kolaylaştırıcı farklı yönetisel uygulamalar ise Bilimsel-Sosyal Uygulamalara ilişkin Yönetsel Esneklik Ölçeği'nin geliştirilmesidir. Ölçeğin pilot versiyonu ile 399 öğretim üyesinin verileri toplanmıştır. Araştırmaçı faktör analizi ile ölçeğin 3 boyuttan oluşturduğu ve yönetisel uygulama esnekliği ilişkin varyans %63.67'sini açıkladığı belirlenmiştir. Güvenirlik katsayıları ise ölçeğin bütün için \( \alpha = .92 \) ve alt-boyutlara \( \alpha = .79 - .86 \) olarak bulunmuştur. Ayrıca, pilot uygulama grubunun ardından 504 öğretim üyesinden toplanan ikinci veriler ile yapılan dovrulayıcı faktör analizinde (\( \chi^2/df=2.457 \)) 3 boyutlu yapı doğrulanmıştır. Sonuç olarak, bu ölçeğin bilimsel-sosyal uygulamaları ilişkin yönetisel esnekliği değerlendirilmesi için geçerli ve güvenilir bir veri toplama aracı olduğu belirlenmiştir.

Anahtar sözcükler: Üniversite, esneklik, örgütsel esneklik, yönetisel esneklik, bilimsel-sosyal uygulamalar

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Introduction

In the 21st century, besides technological and scientific advancement, many changes like mass education, globalization, privatization, corporatization and managerialism have led to the formation of third generation universities as entrepreneurial organizations (Clark, 2001; Wissema, 2009). Entrepreneurial universities, to improve their innovative capacity, have to overcome such various challenges as creating alternative teaching and learning environments, joining international research networks, initiating new programs to attract diverse student bodies, marketing their brands and competing to obtain external resources, collaborating with industry, business and government organizations to be involved actively in knowledge-based productions (Dalguç, Karadeniz, & Onat, 2012; Welch, 2005). These challenges also have brought academics, as universities’ major human resources, new duties and responsibilities such as gaining grants and funds, performing cooperative projects with external partners, improving the quality of teaching by new methods, collaborating national and international colleagues, serving with their expertise in internal structures and representing universities on external platforms (Bentley, Coates, Dobson, Goedegebuure, & Meek, 2013).

On the other hand, some news in different media in Turkey like Time-Serving Professor just for Salary, Insufficient Academics for their Students and Plagiarism Suicide have given rise to many serious questions about the fulfillment of academics’ duties and responsibilities. Although it is acknowledged that not all academics can accomplish their duties and responsibilities, this situation is not only the responsibility of academics themselves (Atila, 2009). One of the important variables leading to this unfortunate situation is that many universities cannot provide suitable conditions for academics to fulfil their duties and responsibilities. This reality is confirmed by several events such as recent critiques of academics about the reasons for the decreasing quality in higher education, students’ complaints related to managerial issues and many judicial disputes which have increased day by day between academics and higher education institutions (Erkutlu & Chafra, 2014; Tosun & Başgöze, 2015).

These controversies indicate that the most important feature of universities which influences academics’ scholarly productivity is the compliance level of work environments. The favorable work conditions in modern universities can be generated only by flexible structures, systems and operations (Çetinsaya, 2014; Estermann, Nokkala, & Steinel, 2011) like in other entrepreneurial institutions as Adhocracy organizations, unlike the definition for universities as Professional Bureaucracy (Mintzberg, 1979, 2014). These innovative universities as Professional Adhocracy institutions have to provide organizational flexibility in several aspects: Communication Flexibility, Labor Flexibility, Organizational Structure Flexibility, Organizational Clarity and Appreciation Flexibility, Strategy
As a dimension of organizational flexibility, Managerial Flexibility is the ability of managers to shift plans, to create alternative processes and to institute different practices for adaptation of organizations to the changes in internal and external environments (Aypay, 2015; Ceylan, 2001; Estermann et al., 2011). Therefore, university managements, to provide suitable work conditions for academics, should generate flexibility in operating core by instituting different practices to facilitate academics’ teaching, research and service activities.

In this regard, a data collection instrument to measure the Managerial Flexibility Regarding Scholarly Practices (MFRSP) in universities is needed to investigate academics’ perceptions about institutional mechanisms operated by management to support their scholarly activities. However, the researcher, in reviewing the literature, could access data collection tools mostly to evaluate institutional resources in universities as a factor influencing academics’ job satisfaction. For example, in the first international study of The Carnegie Foundation for the Advancement of Teaching (CFAT) in 1992-1993 about the academic profession, one part of the questionnaire aimed to examine academics’ satisfaction related to institutional resources (Altbach, 1996; Welch, 2005). After 15 years, Changing Academic Profession (CAP) Survey in the second international study of CFAT in 2007 was used to collect data about academics’ job satisfaction, and this questionnaire covered items related to Institutional Resources (e.g. teaching load, teaching support staff, laboratories, research equipment, research funding, research support staff, computer facilities, libraries, office space, telecommunications, secretarial support) (Bentley et al., 2013). In another study, Akman, Kelecioglu, and Bilge (2006), to evaluate the job satisfaction of academics, developed a questionnaire which covers some questions about teaching load arrangement, technological sufficiency of teaching mediums and office spaces, travel fund for academic events and social and sportive facilities. Furthermore, Campbell and O’Meara (2014) examined the relations between departmental variables and faculty members’ individual strategies-actions by using the scale including items about Professional Development Opportunities such as sharing resources, assistance for grant finding, pedagogical support to improve teaching, admin support during project management, access options for scholarly publications, and financial contributions in travel expenses. Based on the information given above, there is no data collection tool, which its validity and reliability was examined, in reviewed literature to measure MFRSP in universities. In this regard, the purpose of this research is to develop a valid and reliable scale to evaluate managerial practice flexibility towards academics’ scholarly activities.
Method

This research was designed as a scale development study to detect and evaluate MFRSP in universities. The factorial structure of Managerial Flexibility Regarding Scholarly Practices Scale (MFRSPS) was explored by Validity Analysis and the availability of the scale to re-use was examined by Reliability Analysis, and the results of these analyses are presented below. Besides, the accuracy of the model formed in accordance with the results of MFRSPS's validity and reliability analyses was tested, and the findings was evaluated in the light of relevant criteria.

Population and Sample

Faculty members as academics who have teaching, research and service duties together were included in the target population of this research. Therefore, the study group for the pilot application of the scale was composed of 399 faculty members employed in different disciplines from 29 Turkish public universities with different establishment dates (see Table 1). Furthermore, the secondary data set related to this scale was comprised the responses of 504 faculty members from other 46 universities [as: 179 female (35.5%) and 324 male (64.3%); 178 assist. prof (35.3%), 141 assoc. prof. (28%) and 173 prof. (34.3%); 229 from applied sci. (45.4%), 47 from art & humanities (9.3%), 65 from natural sci. (12.9%) and 151 from social sci. (30%); 235 from pre-1992 uni.es (46.6%), 165 from 1992-2005 uni.es (32.7%) and 101 from post-2005 uni.es (20%)]. Turkish universities were grouped according to their establishment dates by considering the first serious numerical expansion of Turkish public universities in 1992 with 21 universities and the second serious expansion after 2005 with 56 new universities (Günay & Günay, 2011; Özoğlu, Gür, & Gümüş, 2015) while disciplines in which the faculty members work were categorized according to Biglan’s Discipline Model (as cited in Chynoweth, 2009, p. 304).

Table 1

| Characteristic                      | Gender |          |          |          |          |
|-------------------------------------|--------|----------|----------|----------|----------|
|                                     | Female | Male     | Female   | Male     | Female   |
| Gender                              | 119 (29.8%) | 278 (69.7%) | 140 (35.1%) | 104 (26.1%) | 138 (34.6%) |
| Academic Title                      | Assist. Prof. | Assoc. Prof. | Prof. |          |          |
| Disciplines                         | 142 (35.6%) | 57 (14.3%) | 94 (23.6%) |          | 86 (21.6%) |
| Establishment Dates of Universities | Pre-1992 | 1992-2005 | Post-2005 |          |          |
|                                       | 207 (51.9%) | 110 (27.6%) | 76 (19%)  |          |          |
Developing the Scale

To identify the existing support mechanisms instituted by university management and the expectations of faculty members related to managerial practices for easing their scholarly activities, this scale was developed by the researcher based on the results of interviews conducted with Australian and Turkish faculty members. To include the opinions of academic managers, some of the interviewees were selected among faculty members who had administrative duties like vice-deputy chancellor, dean, assoc. dean, head of school and chair of department. In total, 32 interviews were conducted with faculty members in Australia (6 female [37.5%] + 10 male [62.5%]) and Turkey (6 female [37.5%] + 10 male [62.5%]). Australian faculty members were described according to their disciplines and universities which are in Top World 50 of QS Worldwide University Rankings by Subjects (www.topuniversities.com, 11.07.2014), whereas Turkish faculty members were assigned from different disciplines and universities (see Table 2).

During these interviews, a semi-structured interview form developed by the researcher was used. To ensure the validity, the initial version of this form were presented to 6 academics from mathematics, bio-engineering, health management, geography, Turkish language education, and educational sciences departments. After the evaluation of these expert opinions, the interview form was composed of 6 questions related to the flexibility generated by different managerial support practices towards academics’ scholarly activities. These questions were arranged according to 3 main scholarly practice areas as teaching, research and service activities. The questions were written in Turkish, and then an English version was created by translating the same questions.

Table 2
The Distribution of Australian and Turkish Participants of Interviews

|                      | Australian Participants | Turkish Participants |
|----------------------|-------------------------|----------------------|
|                      | Prof. Assoc. Prof. Prof. Assoc. Prof. Assis. Prof. |
| Advocacy for and Technology | 2 1 Arts and Sports 2 2 - | |
| Natural Sciences     | 1 1 Architecture and Engineering 1 - 1 |
| Life Sciences and Medicine | 1 1 Sciences and Mathematics - 1 - | |
| Medical and Health Sciences | 2 1 Social Sciences and Humanities 1 1 1 |
| Social Sciences      | 6 -                      | 2 2 2 |
| Total                | 12 4                     | 6 6 4 |
Firstly, interviews with Turkish faculty members were conducted and each interview took approximately 45 minutes, and only one of the interviewee did not agree with the audio recording. Secondly, to interview Australian faculty members, the research proposal was submitted to Human Ethics Office, the University of Sydney. After Human Research Ethics Committee’s approval, the researcher carried out several interviews with Australian faculty members during his research visit, and each of them took almost 30 minutes. Finally, all recorded interviews were transcribed, and the data set was examined by descriptive analysis technique. During the data analysis process, data were coded in accordance with 3 main themes decided before interviews as Managerial Practices Regarding Teaching, Research and Service, and the findings of the interviews for each theme are presented in Table 3.

Table 3
Main Findings from Interviews with Australian and Turkish Faculties

| Managerial Flexibility * |
|--------------------------|
| Regarding Teaching Practices |
| - physical-technological suitability of teaching-learning places |
| - ground support for lesson activities within social work |
| - quick arrangements for outdoor teaching-learning activities |
| - supplying necessary materials and equipment for teaching-learning activities |
| - accessing tech. and science labs, art and sport salons after hours by academics and students |
| - course evaluation by students |
| - ICT support for Learning Management System (Blackboard, TurnitIn, etc.) |
| - pedagogical support units (teac. & lear. institute for academics, learning center for students) |
| - teaching support staff (tutors, teaching assistants, evaluators, etc.) |
| - professional support for curriculum development, accreditation and evaluation |
| Regarding Research Practices |
| - informing academics about external project funds |
| - professional support related to intellectual properties and obtaining patents |
| - establishing connections between academics and industrial or governmental institutions |
| - easy access to scientific resources by libraries |
| - opportunities to develop academics’ foreign language abilities |
| - professional support by research office (proposal prep., project admin. and dissem. of results) |
| - workshops, seminars, etc. about writing research proposal |
| - Sabbatical, research or conference leave with travel fund |
| - research/project grand search engine/software |
| - associate dean/supervisor responsible for research |
| Regarding Service Practices |
| - assistance to deliver the academics’ commentaries about social issues to the public |
| - encouraging academics to participate in national and international social projects |
| - facilitating academics’ participation in institutional opinion communiques for social events |
| - arranging field trips to investigate social phenomenon within their own conditions |
| - supporting academics to establish or lead NGOs related to social or community service |
| - supporting speech in media and talk publicly by providing media support for external activities |
| - arranging several official service activities and establishing several community networks |
| - providing venues for social service activities |
| - organizing publicity activities and information sessions for potential university students |
| - appreciating service activities and providing duty leave for external community service activities |

* Italic expressions indicate Australian faculty members’ responses and others indicate mostly Turkish faculty members’ expectations
Based on these findings, 103 items were generated for MFRSPS. This 103 item questionnaire was sent to 52 Turkish faculty members from different disciplines and universities by e-mail to get their opinion related to the questionnaire, but only 6 of them (all from Department of Educational Administration & Supervision of different universities) gave a reply to indicate their opinion about items. Based on these opinions, several arrangements of items were made and the second version of the questionnaire with 51 items was composed. The second version, for expert opinion, was presented to 3 academics who work in the Department of Educational Sciences at Canakkale Onsekiz Mart University (COMU) in Turkey. To ensure the content validity of the questionnaire, some regulations were carried out according to their suggestions, and 36 items (12 items for each dimension) were formed for the last version of the questionnaire. In addition, for face validity, the questionnaire items were checked by 3 different Turkish experts from COMU and some corrections were made on the questionnaire. Then, the items in the pilot version of the scale were arranged in 5-Point Likert Type to examine MFRSP in universities according to faculty members’ opinions.

**Data Collection**

As a first step, the researcher accessed 33898 faculty members’ contact information (address, phone number and e-mail) from ARBIS (Researcher Information System) interface on TUBITAK (The Scientific and Technological Research Council of Turkey) website (www.arbis.tubitak.gov.tr, 27.02.2015). These e-mail addresses were then categorized according to universities’ locations in terms of Turkey’s geographical regions (Aegean, Black Sea, Central Anatolia, East Anatolia, Marmara, Mediterranean and Southeast Anatolia) and establishment years (Pre-1992, 1992-2005 and Post-2005). To determine the faculty members for the pilot application of the scale, the researcher randomly selected 29 universities from 21 categories that were formed based on universities’ locations and establishment dates. After this process, the pilot version of the scale was arranged as an online questionnaire, and the link of this questionnaire was sent to 8382 faculty members from these 29 universities. The pilot MFRSP questionnaire was properly filled by 399 faculty members (4.76%), and these faculty members’ responses were included into the data set of pilot application to perform validity and reliability analyses of the scale. The researcher then sent the scale via e-mail to faculty members from randomly selected 46 universities, except the universities in pilot application of MFRSPS, and collected data from 504 faculty members as the data set of secondary application of the scale.

**Data Analysis**

During the data analysis, the researcher benefited from SPSS 21.0 (for Descriptive, Differential and Correlational analyses, and Exploratory Factor Analysis - EFA) and AMOS 20.0 (for Confirmatory Factor Analysis - CFA). At first, the data set of each item in the pilot form was examined by visual
inspection of histograms, normal Q-Q plots, box plots and Skewness & Kurtosis values (±2 interval is the criterion for normal distribution) to assess their distribution, and the researcher analyzed item-total correlations (r≥.20 item-total correlation is accepted as enough to include items into EFA) (Çokluk, Şekercioğlu, & Büyükoztürk, 2014). The structural validity of the scale was then explored via EFA with Principal Component and Varimax Rotation methods, and the reliability of the scales and their factors were assessed by using Cronbach’s Alpha technique (.60 and more “α” coefficient was assented as an evidence of reliability) (Aybek, Aslan, Dinçer, & Coşkun-Arxsoy, 2015). As the next step, the distinctiveness of each item was analyzed to determine the items’ discrimination power by t test for lower 27% and upper 27%.

After exploring the validity of the scale, the relations between dimensions were detected by using Bivariate Correlation Analysis on the secondary data set in researcher’s PhD study in order to determine the suitability of the factorial structure for CFA (r≥.30 between factors are accepted as precondition of CFA) (Hair, Black, Babin, & Anderson, 2010). The factorial structures of the scale was then tested with CFA for the secondary data set, and Chi-Square (χ²) with p = .00, Chi-Square/Degree of Freedom (χ² / df) < 5, Goodness of Fit Index (GFI) >.90, Adjusted Goodness of Fit Index (AGFI) >.90, Comparative Fit Index (CFI) >.90 and Root Mean Square Error of Approximation (RMSEA) <.08 were used as model fit indexes (Aslan & Ağıroğlu-Bakır, 2015). After all, the analysis results related to the scale development and the examination of the structural model in MFRSPS are presented in the next part of the research.

**Findings**

**Findings Related to Validity**

Before testing the factor structure of the scale, the sufficiency of respondent numbers for factor analysis was checked, and 399 respondents within the data set of pilot MFRSPS were found enough for proceeding to EFA (36 items x 5=180) according to the general rule “there should be at least 5 subjects per variable and a total of no fewer than 100 subjects” (Bryman & Cramer, 1990, as cited in Cohen, Manion, & Morrison, 2007, p. 563). As the next step, normal distributions for items were examined by Skewness & Kurtosis parameters, which were found in ±2 interval as a normal distribution indicator. Item-total correlations were then detected between .442 and .775, and these correlations show enough item-total correlations for EFA (Çokluk et al., 2014). After satisfying the preconditions of EFA, the structural validity of MFRSPS was checked with 36 items.

As the first step of EFA, the adequacy of sampling and suitability the data set in all groups for EFA was assessed by Kaiser-Meyer-Olkin (KMO) and Bartlett’s Test of Sphericity (BTS). According to Ömür and Nartgün (2014), KMO should bigger than .50 and χ² in BTS should produce a significant result with p≤.05 as pre-conditions to perform EFA. For this scale, KMO value was
.94 and BTS ($\chi^2=3042.48, p=.00$) showed a significant result. The researcher, based on the findings of KMO and BTS, decided that data set of pilot MFRSPS is suitable to perform EFA. EFA was then performed by using Principal Component and Varimax Rotation techniques, and all items with a factor loading under .45 and all items having joint factor loadings in two factors with the difference under .10 were excluded from the scale (Çokluk et al., 2014). After this analysis step of EFA, factor loadings and common factor variances for each item were found, as presented in Table 4.

Table 4
Factor Loading Values and Common Factor Variances (n = 399)

| Item No | Factor 1 (MFRserP) | Factor 2 (MFRresP) | Factor 3 (MFRteacP) | Common Factor Variance |
|---------|--------------------|--------------------|--------------------|------------------------|
| Item 33 | .765               | .180               | .288               | .700                   |
| Item 15 | .710               | .308               | .148               | .620                   |
| Item 27 | .709               | .023               | .335               | .615                   |
| Item 21 | .704               | .329               | .183               | .637                   |
| Item 18 | .695               | .366               | .263               | .686                   |
| Item 11 | .294               | .751               | .086               | .658                   |
| Item 5  | .333               | .111               | .195               | .654                   |
| Item 35 | .077               | .698               | .229               | .545                   |
| Item 2  | .198               | .695               | .347               | .642                   |
| Item 1  | .117               | .217               | .862               | .804                   |
| Item 13 | .299               | .157               | .740               | .661                   |
| Item 7  | .463               | .303               | .601               | .668                   |
| Item 3  | .410               | .426               | .558               | .661                   |
| Item 25 | .299               | .205               | .481               | .363                   |

Eigen Value 6.783  1.124  1.007
Variance Explained 24.19%  19.96%  19.52%
Total Variance Explained 63.67%

As shown in Table 4, the first factor (Managerial Flexibility Regarding Service Practices [MFRserP]) is composed of 5 items with .695-.765 factor loadings, and can explain 24.19% of variance (6.783 Eigen Value). The second factor (Managerial Flexibility Regarding Research Practices [MFRresP]) has 4 items which have .695-.751 factor loadings can explain 19.96% of variance (1.124 Eigen Value). The third factor (Managerial Flexibility Regarding Teaching Practices [MFRteacP]) consists of 5 items with .481-.862 factor loadings which can explain 19.52% (1.007 Eigen Value). In conclusion, the scale has 3-factorial structure within 14 items and can explain 63.67% of variance for MFRSP.

Table 5
The Correlation Coefficients among Dimensions

| Dimensions                           | 1     | 1.1   | 1.2   | 1.3   |
|--------------------------------------|-------|-------|-------|-------|
| 1. Managerial Flexibility Regarding Scholarly Practices | -     | -     | -     | -     |
| 1.1 Managerial Flexibility Regarding Service Practices | .91** | -     | -     | -     |
| 1.2. Managerial Flexibility Regarding Research Practices | .88** | .70** | -     | -     |
| 1.3. Managerial Flexibility Regarding Teaching Practices | .93** | .76** | .74** | -     |

(n = 504) ** p ≤ .01
After exploring the validity of the scale, the researcher checked the relations among the dimensions of MFRSP by analyzing the secondary data set which composed of 504 faculty members’ responses (see Table 5). According to results in Table 5, the correlations among MFRSP and its dimensions were significant at $p \leq .01$ level and varied between $r = .70$ and $r = .93$. These correlation coefficients were accepted as sufficient to test the theoretical model which was formed in accordance with the factorial structure of the scale (Hair et al., 2010), and then CFA was performed for the structural model in MFRSPS (see Figure 1). The model fit indexes were found as $\chi^2 = 174.48$, $p = .00$; $\chi^2/df = 2.46$; GFI = .95; AGFI = .93; CFI = .97; RMSEA = .05 (with .53 - .86 Standardized Regression Weights) as indicators of highly good fit.

Figure 1. CFA results of MFRSPS
Findings Related to Reliability and Item Analysis

As a first step, item-total correlations were calculated. The researcher then examined the reliability of the scale by using Cronbach’s Alpha (α) Internal Consistency Coefficient, and used Independent t-test to examine the significance of the difference between lower 27% (n = 108) and upper 27% (n = 108) groups’ item scores. Item-total correlations for all items in the scale and α reliability coefficient for each dimension are given in Table 6. Table 6 also shows t-test results to determine the discrimination power of each item in the scale by comparing lower group in the sample (assuming that this group is composed of people who has the specification in the item at a low level) and upper group (assuming that this group consists of people who has the specification in the item at a high level).

Table 6
Reliability Coefficients, Item-Total Correlations and t values for Items in the Scale

| Dimensions and Items | \( \bar{X} \) | s.d. | Item-Total Correlations | t ** (lower 27% – upper 27%) |
|---------------------|-----------|-----|------------------------|-----------------------------|
| MFRSP               | 3.13      | .81 |                        |                             |
| MFRserP (\( \alpha = .86 \)) | 2.83      | .89 |                        |                             |
| Item 33             | 2.51      | 1.13| .68                    | -33.48                      |
| Item 15             | 2.73      | 1.20| .64                    | -47.70                      |
| Item 27             | 2.33      | 1.08| .58                    | -38.74                      |
| Item 21             | 2.91      | 1.19| .67                    | -42.69                      |
| Item 18             | 3.10      | 1.20| .73                    | -42.53                      |
| MFRresP (\( \alpha = .79 \)) | 3.41      | .90 |                        |                             |
| Item 11             | 3.31      | 1.16| .59                    | -48.44                      |
| Item 5              | 3.14      | 1.21| .65                    | -43.90                      |
| Item 35             | 3.78      | 1.12| .50                    | -42.39                      |
| Item 2              | 3.34      | 1.17| .64                    | -40.77                      |
| MFRteacP (\( \alpha = .83 \)) | 3.20      | .89 |                        |                             |
| Item 1              | 3.28      | 1.08| .60                    | -35.86                      |
| Item 13             | 3.08      | 1.11| .62                    | -41.72                      |
| Item 7              | 3.06      | 1.13| .74                    | -41.58                      |
| Item 3              | 3.24      | 1.20| .75                    | -45.18                      |
| Item 25             | 3.44      | 1.22| .50                    | -45.60                      |

\( n = 399 \) * 1.00-1.79=Very Low, 1.80-2.59=Low, 2.60-3.39=Medium, 3.40-4.19=High, 4.20-5.00=Very High; ** \( p \leq .05 \)

As can be seen from Table 6, the reliability coefficient for MFRserP dimension was \( \alpha = .86 \); for MFRresP is \( \alpha = .79 \); for MFRteacP is \( \alpha = .83 \). The reliability coefficient of the whole scale was \( \alpha = .92 \) in pilot application of the scale. Moreover, the reliability analysis for the scale was performed again by using a data set of final application in the researcher’s PhD study, and the reliability coefficient was \( \alpha = .92 \) for the whole scale; \( \alpha = .83 \) for MFRserP; \( \alpha = .78 \) for MFRresP; \( \alpha = .85 \) for MFRteacP. All these findings show that the scale and
its dimensions are highly reliable according to general acceptance of $\alpha \geq .70$ as evidence for reliable scales (Hair et al., 2010). Besides, item-total correlations for items in $MFRserP$ are $r = .58 – .73$; in $MFRresP$ are $r = .50 – .65$; in $MFRteacP$ are $r = .50 – .75$. According to Çokluk et al., (2014), item-total correlations ($r$) $\geq .30$ are evidence for the validity of items in the scale. In this regard, all items in the scale can contribute to measure the specification which is the aim of the scale. In addition, the differences between lower-upper group of items are significant at $p \leq .05$ level according to $t$-values ($t = -48.44 – -33.48$). Based on these results, it can be affirmed that all items in the scale distinguish people who agree with the features in the items.

**Discussion, Conclusion and Suggestions**

As third generation higher education institutions, modern universities have become entrepreneurial organizations involved in transferring knowledge created by them into productions by means of their collaborations with industrial organizations, business companies, governmental institutions and social authorities (Clark, 2001; Erkan, 2011; Wissema, 2009). The innovative side of entrepreneurial universities can be improved only by academics’ scholarly activities, thus, universities should create flexible structures in their operating core to facilitate academics’ teaching, research and service duties by different managerial practices (Aypay, 2015; Çetinsaya, 2014; Mintzberg, 1979, 2014). In this regard, the managerial practice flexibility related to scholarly activities in universities need to be examined to understand the contributions of different institutional practices in academic productivity. However, in reviewed literature, the researcher could access several studies only about institutional resources for scholarly activities and the satisfaction of academics related to these resources.

Altbach (1996) and Welch (2005), to investigate academics’ opinions related to their profession and job satisfaction, used the data collected by using a 21 page questionnaire in CFAT’s academic profession survey in 14 countries; they found that academics’ job satisfaction was not very high because of low salaries, limited resources, insufficient secretarial support, greater bureaucracy and threatening professional autonomy. Akman et al. (2006), in their studies about the job satisfaction of academics in Turkish universities and the factors affecting their satisfaction, used a 37 item-questionnaire including questions related to institutional resources and practices like organization of teaching loads as allowing enough time to make research, ICT devices in office space and classrooms to facilitate scholarly activities, opportunities to attend national and international academic events and facilities in the university for social and sportive activities. Likewise, Bentley et al. (2013) made a comparative study about the job satisfaction of academics in 12 countries by using CAP Survey in the second study of CFAT in 2007, this survey contains 53 items in 6 major parts which
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include general work situation and activities (institutional resources), Teaching (teaching load), Research (available research time), Management (administration process). Recently, Campbell and O’Meara (2014) developed a scale with 38 items, as part of Faculty Work Environment Survey (FWES) in University of Maryland, to examine the departmental variables which influence faculty members’ agency perspective and action, and this scale covers a dimension including transparency about resource allocation and salary increases, professional development resources part about support to find grants, to improve teaching, to access scholarly publications, to attend conferences and to manage projects. Moreover, O’Meara, Lounder, and Campbell, (2014) benefitted from FWES again within a different factorial structure to determine the factors behind faculty-leave; better opportunities in more prestigious universities for salaries, career advancement options and institutional resources are some of these factors.

According the studies mentioned above, it can be stated that there are several data collection instruments to evaluate institutional resources, managerial process and the satisfaction of academics related to these institutional specifications, but there is no scale to examine the flexibility in managerial practices to support academics’ scholarly studies. In this regard, the new scale was developed in this research to measure managerial flexibility created by different institutional practices to facilitate academics’ teaching, research and service activities. This scale was developed based on the outcomes of interviews with Turkish and Australian faculty members within teaching, research and service themes. MFRserP consists of items about supporting the leadership of academics for social organizations, assisting the delivery of academics’ comments and ideas about social issues to the public, organizing field trips to investigate social phenomenon, notifying institutional opinions related to social discussions and encouraging academics to take part in social responsibility projects. MFRresP covers practices related to establishing different mechanisms to empower the relations between academics and industrial and governmental organizations, assisting academics about intellectual property rights and patent applications, providing all sorts of scientific publications by institutional units and informing academics about external research funds. MFRteacP items include practices about generating physically and technologically suitable teaching environments, providing teaching-learning materials and equipment, making necessary arrangements related to outdoor teaching-learning activities, providing ground for teaching activities within social work and encouraging the afterhours usage of teaching mediums by academics and students.

Furthermore, the results of validity and reliability analyses prove that MFRSPS is a highly reliable scale in terms of both general structural validity and its dimensions explained above. The items on MFRSPS, according to item
analysis, can contribute to measuring the flexibility of managerial practices related to scholarly activities, and each of them can distinguish universities which institute the practices in the item. Besides, the factorial structure of MFRSPS was tested by using CFA on the secondary data set in the researcher’s PhD study to discover the sufficiency of the relations between factors in the theoretical model of MFRSPS, and significant Regression Weights for items on the model were found. CFA’s model fit indexes demonstrate that MFRSPS has a good fit between its data and structure in factorial model. As a result, MFRSPS’ psychometric features show that this scale has a valid and reliable structure, and can be used to measure managerial practice flexibility regarding scholarly activities of academics. MFRSPS was also used in the researcher’s PhD study to examine the implementation level of these practices and the effects of some personal characteristics and institutional specifications of faculty members on their perceptions about MFRSP. However, it is necessary to re-test the validity and reliability of this scale to investigate its suitability for long-term usage in further studies to discover the influence of various personal, professional and organizational variables on the flexibility of scholarly practices generated by university management in different study groups.
Structured Abstract/Yapılandırılmış Öz

Bilimsel-Sosyal Uygulamalara İlişkin Yönetsel Esneklik Ölçeği: Geçerlik ve Güvenirlik Çalışması

Barış Uslu¹

Problem Durumu. Teknolojik ve bilimsel ilerlemenin yanı sıra, 21. yy’da kitlesel eğitim (hatta evrensel eğitim), küreselleşme, uluslararasılaşma, özelleştirme, şirketleme ve yeni kamu yönetimi anlayışı gibi birçok değişim yükseköğretim alanını derinden etkilemiştir. Bu değişimler sonucu oluşan rekabetçi yapıya sahibi üniversite öğrencileri daha girişimci örgütler haline gelmesine neden olmuştur (Clark, 2001). Bu doğrultuda günümüz üniversiteleri girişimci özelliklere sahip olmak için temel insan kaynağı olan akademisyenlerden geleneksel rolleri olan bilgi üreticiliği ve kamu entelektüellüğünün yanı sıra yenilikçi öğretim metotları geliştirme, alternatif kaynaklar üretme, devlet ve endüstri kuruluşları ile işbirliği şeklinde öncülük etme, uluslararası araştırma ağlarına katılım, disiplinlerini ve kurumlarını temsil etme gibi görevleri yerine getirmelerini beklemektedir (Welch, 2005). Akademisyenlerin bu görev ve sorumlulukları yerine getirebileme düzeyleri ise üniversiteler tarafından kendi kendileri sağlanan çalışma ortamının uygunluğuna bağlıdır (Atila, 2009; Campbell ve O’Meara, 2014).

Üniversitelerdeki çalışma koşullarının başında akademisyenlerin görevlerini kolaylaştırıcı kurumsal kaynaklar ve yönetsel uygulamalar yer almaktadır (Akman vd., 2006; Bentley vd., 2013). Üniversite yönetimleri tarafından yürütülen farklı akademik destek mekanizmalarının ve uygulamalarının bütünü ise; Esnek Yapı tipi örgüt yapısı (Mintzberg, 1979, 2014) ve Örgütsel Esneklik kapsamındaki Yönetsel Esneklik boyutuna (Ceylan, 2001) dayalı olarak Bilimsel-Sosyal Uygulamalarla İlişkin Yönetsel Esneklik olarak tanımlanmıştır. Bilimsel-Sosyal Uygulamalara İlişkin Yönetsel Esneklik kapsamındaki mesleki gelişim olanakları ve akademik destek mekanizmaları, akademisyenlerin iş doymalarını etkilediği kadar kendi kendilerinden beklenen rol davranışlarına yerine getirme düzeylerini de etkilemektedir (Aypay, 2015; Bentley vd., 2013; Çetinsaya, 2014). Bu bağlamda, akademisyenlerin çalışmalarını kolaylaştırmak rol davranışlarına ilişkin performanslarına katkı sağlayan Bilimsel-Sosyal Uygulamalara İlişkin Yönetsel

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Esneklik kavramının içeriğini oluşturan üniversite yönetimlerinin destek uygulamlarının ve bu kapsamdaki beklenlerele birlikte önemlidir.

Arastırmının Amacı. İlgili yerli ve yabancı literatürde yalıtılmış universitelerdeki kurumal kaynakların düzeyine yönelik ölçme araçlarına rastlanmaktadır, üniversite yönetimleri tarafından yürütülen akademik destek uygulamalarına yönelik bir ölçme aracı bulunmamaktadır (Akman vd., 2006; Altbach, 1996; Bentley vd., 2013; Welch, 2005). Bu konudaki eksikliğin giderilebilmesi ve üniversitelerdeki Bilimsel-Sosyal Uygulamalarla İlişkin Yönetsel Esneklik’in incelenerek bu kapsamdaki uygulamaların işleyişi ve yeterliği ilişkin genel bir görüş elde edebilmesi amacıyla Bilimsel-Sosyal Uygulamalarla İlişkin Yönetsel Esneklik Ölçeği’nin geliştirilmesi çalışmanın amacıdır.

Arastırmının Yöntemi. Araştırma ölçek geliştirme çalışması olarak tasarlanmıştır ve ölçek geliştirme sürecindeki geçerlik ve güvenirlik analizleri gerçekleştirilmiştir (Çokluk vd., 2014; Hair vd., 2010). Ölçeğin geliştirilmesi sürecinde ilk olarak ilgili literatür tarafından fakat kavram içeriğini yönelik kısıtlı sayıda çalışma yapılmıştır. Bu çalışmaların çoğunuğun kurumal kaynakları veya kurum içi düzenlemelere ilişkin olması nedeniyle madde havuzunun oluşturulabilmesi için öğretim üyesi ile görüşme yapılması karar verilmiştir. Ardından, Türkiye’deki farklı üniversitelerinden değişik alanlarda çalışan 16 öğretim üyesi (Sanat ve Spor Bilimleri’nden 2 profesör [dr.] ve 2 doçent [dr.], Mimarlık ve Mühendislik Bilimleri’nden 1 profesör [dr.] ve 1 yardımcı doçent [dr.], Fen ve Matematik Bilimleri’nden 1 doçent [dr.], Tip ve Sağlık Bilimleri’nden 1 profesör [dr.], 1 doçent [dr.] ve 1 yardımcı doçent [dr.], ve Sosyal ve Beşeri Bilimler’den 2 profesör [dr.], 2 doçent [dr.] ve 2 yardımcı doçent [dr.]) ile kurumlarındaki yönetim tarafından sürdürülen akademik destek uygulamaları ve bu kapsamdaki beklenlerele ilişkin görüşmeler yapılmıştır. Ayrıca, ölçekin kapsamının uluslararası geçerliliğinin sağlanması ve farklı uygulama örnekleri ile zenginleştirilmesi için QS University Ranking by Subject sıralamalarında Top 50 içerisinde yer alan Avustralya’da üniversitelerin farklı disiplinlerinde çalışan 16 öğretim üyesi (Sanat ve Beşeri Bilimler’den 2 profesör [dr.] ve 1 yardımcı doçent [dr.], Mühendislik ve Teknoloji Bilimleri’nden 1 profesör [dr.], 1 doçent [dr.] ve 1 yardımcı doçent [dr.], ve Sosyal Bilimler’den 6 profesör [dr.]) ile benzeri görüşmeler gerçekleştirilmiştir.

Bu görüşmelerde edinilen bulgular nitel araştırma desenlerinden olgu bilim yaklaşımlarına uygun olarak tematik betimsel analiz yöntemi ile analiz edilmiştir (Cohen vd., 2007). Arastırmaya İlişkin Yönetsel Esneklik, Öğretime İlişkin Yönetsel Esneklik ve Toplum Hizmetine İlişkin Yönetsel Esneklik olmak üzere 3 boyutta ele alınan sonuçlar doğrultusunda 103 maddelik havuz oluşturulmuştur. Ardından, e-mail yoluyla erişilen farklı Türk devlet üniversitelerinin eğitim fakültelerinde Eğitim Yönetimi, Teftiş, Planlaması ve Ekonomisi anabilim dallarında görevli 6 öğretim üyesinin görüşleri doğrultusunda madde sayısı 51’e
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düşürülmuştur. Sonraki aşamada ise ÇOMÜ Eğitim Bilimleri Bölümü’nde görevli 3 akademisyenin önerileri doğrultusunda madde sayısı her boyut için 12 madre olarak toplam 36 madre indirilerek kapsam geçerliği sağlanmıştır. 36 madre pilote ölçme aracını uygulanan 399 öğretim üyesinin yanıtları pilot uygulamaya ait veri setini oluşturmaktadır. Ayrıca, söz konusu ölçek araştırmanın doktora çalışması kapsamında tamamen farklı bir öğretim üyesi grubuna ki iki mail yoluya uygulanmıştır. Bu uygulama ile pilot uygulamadaki örneklem tamamen dışında olan 504 öğretim üyesinden veri toplanmış ve bu veriler ölçeye ait iki incelimi ve setini oluşturmaktadır.

Verilerin analizinde ise pilot uygulamaya ait veri setinin geçerlilik ve güvenilirlik çalışmaları için yeterli sayıda cevaplayıcı tespit edilmiş (normal dağılım gösteren her bir madde için en az 5 cevaplayıcı [Bryman ve Cramer, 1990, akt. Cohen vd., 2007, s. 563] kriterine göre: 36x5=180 cevaplayıcı [pilot uygulama veri setinde 399 cevaplayıcı]) ve pilot uygulamaya ait veri seti kullanılarak ilk olarak madde dengelerinin normal dağılımlarının Skewness-Kurtosis değerleri (±2 aralığı kriterine göre) üzerinden onaylanmış ve ardından madde toplam korelasyonlarının madde toplamların geçerlilik çalışmasına katılmımı sız konusu olan 36 x .20 kriteri temel alınarak) incelemesine (Çokluk vd., 2014). Ölçünün yapı geçerliliğinin belirlenmesi aşamasında ise özellikle Kaiser-Meyer-Olkin (KMO) and Bartlett’s Test of Sphericity (BTS) testleri ile veri setinin geçerlilik çalışmasına uygunluğunu belirlenmiş ve Principal Component ile Varimax Rotation teknikleri kullanılarak Açıklayıcı Faktör Analizi gerçekleştirilmiştir (Ömür ve Nartgün, 2014). Sonraki aşamada ölçüte yer alan madde toplamların ayırt edilebilirlikleri alt %27 ve üst %27 gruplarının ortalamalarının t testi ile karşılaştırılması ile incelemektir. Ardından, ölçekte ve ölçekteki 3 alt boyuta yönelik güvenilirlik analizleri Cronbach’s Alpha yöntemi kullanılmaktadır. Son olarak, pilot uygulamadaki 399 öğretim üyesinden tamamen farklı 504 öğretim üyesinden toplanan verilerle oluşturulmuş ikincil veri seti kullanılarak ölçüğün bütün ve ölçüğin alt boyutları arasındaki ilişkiler korelasyon analizi ile incelemiş ve ölçüğin faktörel yapısıyla yönelik Doğrulayıcı Faktör Analizi yapılmıştır.

Araştırmanın Buluşları. Ölçünün 36 madre pilote ölçüte ait veri setinin geçerlilik çalışmasına uygulanan KMO (.94) ve BTS ($\chi^2$=3042.48, p=.00) ile belirlenmiştir. Araştırında Principal Component ve Varimax yöntemleri ile gerçekleştirililen Açıklayıcı Faktör Analizi’nden elde edilen sonuçlar ise, ölçekte 3 faktör altında yer alan 14 maddenin faktör yüklerinin .481 ile .862 arasında (5
maddeden oluşan **Toplum Hizmetine İlişkin Yönetsel Esneklik** boyutu için .695 ile .765 arasında; 4 maddeden oluşan **Araştırmaya İlişkin Yönetsel Esneklik** boyutu için .695 ile .751 arasında; 5 maddeden oluşan **Öğretime İlişkin Yönetsel Esneklik** boyutu için .481 ile .862 arasında) değiştiği ve toplam varyansa %63.67'sinin açıklandığı şeklindedir. Bu sonuçlar, ‘öreck geliştirme çalışmalarında açıklandan toplam varyansın tek boyutlu ölçekler için %30 ve birden fazla boyutlu ölçekler için %40’ın üzerinde olması ve maddelerin faktör yüklerinin .30’un üstünde bulunması ölçeğin geçerli sayılabilmesi için yeterlidir’ kriterine göre çalışımda elde edilen faktör yükleri ve açıklanan varyans yüzdesi açısından geliştirilen ölçeğin yapısı geçerliğinin göstermekteydi (Çokluk vd., 2014). Olçeği oluşturan 14 maddenin ayırt ediciliklerine ilişkin alt %27 ve üst %27 gruplarının ortalamaları üzerinden yapılan t testlerine ait sonuçlar da (t=-48.44 – -33.48; p≤.05) maddelerin her birinin maddede yer alan yargıya/ifadeye ilişkin olumlu ve olumsuz görüşleri ayırt etme gücüne sahip olduğunu göstermiştir. Geliştirilen ölçege ait Cronbach’s Alpha yöntemi ile hesaplanan guvenirlik katsayı ise α=.92'dir (**Toplum Hizmetine İlişkin Yönetsel Esneklik** boyutunda α=.86; **Araştırmaya İlişkin Yönetsel Esneklik** boyutunda α=.79; **Öğretime İlişkin Yönetsel Esneklik** boyutunda α=.83).

504 öğretim üyesinden toplanan ikincil veri seti kullanılarak yapılan korelasyon analizleri ile ölçeğin bütününün ve ölçeğin alt boyutları arasındaki ilişkilere p≤.01 düzeyinde anlamlı olduğu ve bu korelasyon katsayılarının .70 ile .93 arasında değiştiği belirlenmiştir. Ölçek ve ölçeğin alt boyutları arasındaki ilişki katsaylarının yeterli olduklarının belirlenmesinin ardından ölçeğin faktörel yapısı Doğrulayıcı Faktör Analizi ile test edilmiştir. Yapılan Doğrulayıcı Faktör Analizlerinde elde edilen uyum değerlerine (χ²=174.480, p=.000; χ²/df=2.457; GFI=.952; AGFI=.929; CFI=.971; RMSEA=.054) göre ölçeğin faktörel yapısına ait model oldukça iyi bir uyum göstermektedir. Yapılan ikincil uygulamaya ait Cronbach’s Alpha yöntemi ile hesaplanan güvenirlik katsayısı isevine α=.92 (**Toplum Hizmetine İlişkin Yönetsel Esneklik** boyutu için α=.83; **Araştırmaya İlişkin Yönetsel Esneklik** boyutu için α=.78; **Öğretime İlişkin Yönetsel Esneklik** boyutu için α=.85) olarak hesaplanmıştır.

**Araştırmının Sonuçları ve Önerileri.** Bu araştırıldan, akademisyenlerin bilimsel sosyal etkinlikleri destekleme ve kolaylaştırma amacı ile üniversite yönetimleri tarafından gerçekleştirilen uygulamaların varlığı ve çeşitliliğini belirlemeye yönelik geçerli ve güvenilir bir ölçme aracı geliştirmesi amaçlanmıştır. Bu amaç doğrultusunda oluşturululan maddeler arasında örgüt işi örgüt uygulamaları içerisinde ‘ögretime ortamlarını fiziksel-teknochili yapısının eğitim faaliyetlerine uygulungu’, ‘ögretime faaliyetleri için gerekli materyal, malzeme, teknik donanım, vb. ihtiyaçlarının sağlanması’, ‘sınır dışı örgüt etkinliklerine ilişkin düzenlemelerin yapılması’, ‘toplum hizmeti kapsamındaki örgüt faaliyetleri için ihtiyaç duyulan ortamların sağlanması’ ve ‘ders saatleri dışındaki zamanlarda da örgütim alanlarının kullanma açık
olarak' gibi noktalara ilişkin maddelere yer verilmiştir. Araştırmaya ilişkin yönetsel uygulamaları örnek olarak ‘kurum içi farklı oluşumların aracılığıyla sanayi, araştırma veya uygulama kuruluşlarıyla ilişkilerin güçlendirilmesi’, ‘fikri mülk yetkilileri, telif edinme süreci, patent başvurusu gibi konularda destek sağlanması’, ‘ihtiyaç duyulan bilimsel kaynakların temin edilerek kullanma sunulması’ ve ‘proje veya etkinlik çalışmalarına yönelik kurum dışı fon kaynaklarını konusunda bilgilendirme yapılması’ gibi uygulamaları içeren maddeler oluşturulmuştur. Toplum hizmetine ilişkin yönetsel uygulamaları ilişkin maddeler ise ‘sosyal hayata katılamak artırmacı oluşumların kurulmasına veya devamlığının sağlanmasına önemli etme konusunda akademisyenlerin desteklenmeleri’, ‘toplumu ilgilendiren bilimsel konulara ilişkin akademisyenlerin açıklamalarının çeşitli araçlarla topluma ulaştırılmasına katkı sağlanması’, ‘toplumsal olaylar yerinde incelemeler konusunda eğitim veya araştırma gezilerinin gerçekleştirilmesi’, ‘toplumsal konularda, üniversitenin yetkili organları tarafından görüş bildirilmesi’ ve ‘toplumsal sorumluluk projelerinde akademisyenlerin rol almalarının desteklenmesi’ gibi uygulama örneklerini içermektedir.

Yukarıda kısaça değişilen üniversite yönetimlerinin olması uygulamalarına ilişkin maddeyle oluşan Bilimsel-Sosyal Uygulamaları İlişkin Yönetsel Esneklik Ölçeği’nin gerek faktör yapısı ve güvenirlik katsayıları, gerek doğrulayıcı faktör analizlerinde elde edilen iyi uyum değerleri sonucu üniversite ortamındaki öğretmen, araştırma ve toplum hizmeti kapsamındaki çalışmalarفصilik yönetim uygulamalarının değerlendirilmesinde yararlanlabilecek geçerli ve güvenir bir ölçüm olduğu belirlenmiştir. Sonuç olarak, araştırmanın başlangıçta amaça ulaşıldığı ve boyutları yalnız olarak belirlenmiş, cevaplama kolay bir ölçüm geliştirilerek alana katkı sağladığı söylenebilir. Bu noktada, Türkiye’de ve farklı ülkelerde değişik özellikleri temsil eden akademisyen ve üniversite örneklerinde ölçünün geçerlik ve güvenirliğinin incelendiği yeni çalışmalar yapılabilir. Ayrıca, Bilimsel-Sosyal Uygulamaları İlişkin Yönetsel Esneklik ile farklı değişkenlerle ilişkilerin araştırıldığı ileri çalışmalarında ölçektek yararlanlabılır.
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### Appendix A. Managerial Flexibility Regarding Scholarly Practices Scale (in English)

Please, consider your university management generally, and then indicate the frequency of managerial practices stated in below.

| MANAGERIAL FLEXIBILITY REGARDING SCHOLARY PRACTICES SCALE | 1 | 2 | 3 | 4 | 5 |
|----------------------------------------------------------|---|---|---|---|---|
| 33. (Ser. Prac.) Academics are supported in leading to establishment and continuity of the formations (NGO, association, club, etc.) which enhance their participation into social life. | | | | | |
| 11. (Res. Prac.) The relations between academics and industry, research or praxis organizations are empowered by different internal units (research office, techno-city, technology transfer bureau, career center, sporty-artistic activities unit, etc.). | | | | | |
| 1. (Teac. Prac.) Teaching mediums which have the physical-technological suitability (classroom, laboratory, saloon, studio, etc.) are provided for education activities. | | | | | |
| 15. (Ser. Prac.) Various channels (social networks, local press, national media, etc.) are provided to deliver the commentaries (declaration, reportage, newspaper article, etc.) of academics about social issues. | | | | | |
| 5. (Res. Prac.) Assistance is provided to academics about intellectual property rights, copyright acquisition process, patent application, etc. | | | | | |
| 13. (Teac. Prac.) The need for materials, equipment, technical installations, etc. is supplied on time not causing to delay to the teaching-learning activities. | | | | | |
| 27. (Ser. Prac.) The educational or research aimed field visits which academics from different disciplines can attend are organized to investigate social phenomena in their own areas. | | | | | |
| 35. (Res. Prac.) The scientific sources (article, newspaper, journal, book, e-source, etc.) which academics need are procured and presented to them by the library. | | | | | |
| 7. (Teac. Prac.) The regulations related to outdoor teaching-learning activities (field works, workplace visits, participation in academic events, etc.) are completed in required time. | | | | | |
| 21. (Ser. Prac.) Institutional views related to social issues are declared by component authorities in the university via various ways (notifications, public opinion surveys, scientific research reports, etc.). | | | | | |
| 2. (Res. Prac.) Information is provided to academics about external fund opportunities for their project or activity studies. | | | | | |
| 3. (Teac. Prac.) The physical mediums (classroom, saloon, sport area, art studio, etc.) needed for academics' teaching activities within community engagement are assured. | | | | | |
| 18. (Ser. Prac.) Undertaking roles (organizer, coordinator, trainer, etc.) by academics in nation-wide social responsibility projects is promoted. | | | | | |
| 25. (Teac. Prac.) The after-hours usage of technology classrooms, laboratories, saloons, etc., except planned lesson times, by students or academics is encouraged. | | | | | |

*This scale was translated into English by the researcher, but the English form of the scale has not been used yet.*
Appendix B. Managerial Flexibility Regarding Scholarly Practices Scale (in Turkish)

Görev yaptığınız üniversitenin yönetimini genel olarak değerlendirdiğinizde; aşağıdaki belirtilenlerin yönetim tarafından gerçekleştirilme sıklığını belirtiniz.

| 1 = Hiçbir zaman | 2 | 3 | 4 | 5 = Her zaman |
|------------------|---|---|---|-------------|
| **BİLİMSEL-SOSYAL UYGULAMALARA İLİŞKİN YONETSEL ESNEKLİK ÖLÇEĞİ** |
| 33. *(Top. Hiz. Uyg.)* Akademisyenlerin, sosyal hayata katkıları arttıracak oluşumların (STK, dernek, topluluk, vb.) kurulması veya devamlılığının sağlanması konusuna öncülük etmeleri desteklenir. |
| 11. *(Araş. Uyg.)* Kurum içi farklı oluşumlar (arastırma ofisi, teknokent, teknoloji transfer bürosu, kariyer merkezi, sportif-sanatsal etkinlikler birimi, vb.) yoluyla akademisyenlerin sanayi, araştırma veya uygulama kuruluşlarıyla ilişkileri güçlendirilir. |
| 1. *(Öğr. Uyg.)* Öğretim ortamlarının (sınıf, laboratuvar, salon, atölye, vb.) fiziksel-teknolojik yapısının eğitim faaliyetlerine uygunluğu sağlanır. |
| 5. *(Araş. Uyg.)* Fikri mülkiyet hakları, telif edinme süreci, patent başvuru, vb. konularında akademisyenlere gerekli destek sağlanır. |
| 13. *(Öğr. Uyg.)* Materyal, malzeme, teknik donanımın, vb. ihtiyaç açığı olarak, eğitim-öğretim faaliyetlerini aksatmayacak bir sürede sağlanır. |
| 27. *(Top. Hiz. Uyg.)* Farklı çalışma alanlarından akademisyenlerin yer aldığı topluluklarda, olayların üzerinde incelemeler, eğitim veya araştırma gezileri düzenlenir. |
| 35. *(Araş. Uyg.)* Akademisyenlerin ihtiyaç duydukları bilimsel kaynaklar (makale, gazete, dergi, e-kaynak, vb.) genel kamuoyuna ulaşılmasını sağlanması. |
| 7. *(Öğr. Uyg.)* Eğitim-öğretimde sınıf dışındaki etkinliklere (katılım, Màster, eğitim, vb.) ilgili düzenlemeler gereken zamanda yapılır. |
| 21. *(Top. Hiz. Uyg.)* Toplumsal konulara, üniversitenin yetkili organları tarafından değil, çalışanı yollarla (bilindiriler, kamuoyu araştırmaları, bilimsel çalışma sonuçları, vb.) kurumsal görüş bildirilir. |
| 2. *(Araş. Uyg.)* Akademisyenlerin, proje veya etkinlik çalışmaları için her ne kadar fon kaynakları konusunda bilgilendirme yapılar. |
| 3. *(Öğr. Uyg.)* Toplum hizmeti kapsamındaki eğitim faaliyetleri için akademisyenlerin ihtiyaç duydukları fiziki ortamlar (sınıf, salon, spor alan, sanat atölyesi, vb.) konusunda düzenlemeler de desteklenir. |
| 18. *(Top. Hiz. Uyg.)* Akademisyenlerin ülke çapındaki toplumsal sorumluluk projelerinde rol (düzeneleyici, yürütücü, eğitimci, vb.) almaları desteklenir. |
| 25. *(Öğr. Uyg.)* Planlanan ders saatleri dışında düzenlenmiş olarak, öğrencilere ve akademisyenlerin teknoloji sınıfları, laboratuvar, salon, vb. yerleri kullanımları desteklenir. |

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