



Evaluation of the Published Articles in Education Field: A Bibliometric Analysis

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Article Information	ABSTRACT
<i>Received:</i> 04.04.2020	<p>The aim of this study is to analyze the articles published as Turkey-addressed in SSCI and ESCI indexed journals in the "Education & Educational Research (E&ER)" thematic field in the Web of Science (WoS) databases in the last decade. For this purpose, the published articles as Turkey-addressed between the years 2010 and 2019 were examined with respect to the distribution of the number of articles, the number of citations and uncited articles, journals' indexes, and Turkey's ranking in international field and universities' rankings, and the distribution of the articles to the journals. In the study, it was clear that the number of articles published as Turkey-addressed in the educational field tended to increase over the years, and this increase is due to the number of articles in ESCI indexed journals. Moreover, it has been determined that Turkey is ranked 6 in the total number of articles in the educational field when compared to other countries. The top three universities that contribute are (i) Hacettepe University, (ii) Gazi University, and (iii) Middle East Technical University. In addition, the three most published journals are (i) Education & Science, (ii) Educational Sciences in Theory and Practice, and (iii) Hacettepe University Journal of Education. Based on the research data, it can be said that although the publications of our country seemed to be at a good level quantitatively in the international field, we remained in a local state on a global scale according to the journal addresses of the published articles.</p> <p>Keywords: Education research, citation analyses, journal impact factor, bibliometric analysis, Turkey-addressed articles.</p>
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1. INTRODUCTION

Today's societies attach great importance to science and technology and make serious investments to have a say in the international field in the future. As a result of these investments, scientific researches are carried out by the universities of the countries or various Research & Development Centers, and the research findings are shared with other researchers through written materials such as journals, books, thesis, or oral and poster presentations in platforms such as scientific conferences or symposiums. In this context, both international journals in their own countries and other journals in the international field are at the forefront as the most common sharing tool. For this reason, one of the indicators of the development level of countries in terms of science and technology is the number of publications in scientific citation indexes made and published in that country, and is the quality of these publications (Tonta, 2017a). However, these numbers cannot reveal the quality of the publications, although the most basic indicator of the quality of a country, a university, a research institution or a scientist is the number of publications (Johnes & Yu, 2008; Kao & Pao, 2009; Tenekeci, 2013). Another indicator of quality in the scientific field is the number of citations that the publications have received (Borrego, Barrios, Villarroya & Olle, 2010; King, 2004). Citations to these scientific publications are also one of the most important indicators of the country's contribution to science (Tonta, 2017a). Another important indicator that reveals the quality of a publication is the journal that published in. The quality of a journal is determined by the number of citations of the publications published in that journal. For this reason, the number of citations these publications received from the publications in other scientific indexed journals is as important as the number of publications in scientific indexed journals. Citation is very important in terms of accessing and using scientific information as it is accepted as the documentation of previous information while producing new information (Danişman et al., 2016).

One of the most common methods used to evaluate the impact of a journal over the other journals is the Journal Impact Factor (JIF) (Chiu & Ho, 2007). JIF, for the year in which a journal's impact factor is calculated, is the ratio of the number of citations to

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the articles published in the previous two years to the number of articles published in the journal (Garfield, 1972; Karamustafaoğlu, 2007). JIF is widely used evaluating a journal's visibility and impact in its field.

The developing countries have to direct their science policies with systematic analysis to create their plans in the future while the developed countries show their presence with the scientific publications they produce in the international field (Danışman et al., 2016). Scientific publications are analyzed using bibliometric analysis methods. Bibliometry is defined as the examination of scientific studies such as journals, books, theses, or articles using mathematical and statistical methods (Diodato, 1994; Pritchard, 1969). Bibliometric analysis is defined as the quantitative examination the characteristics of the scientific publications such as subject, published journal, number of the authors, the year of publications and the institution that published (Al & Tonta, 2004). The main purpose of conducting bibliometric studies is to shed light on the future revealing status, change, development, and features of the field in a specified process in science. Bibliometric studies contribute to the determination of the science policies of a country or an organization, as well as determining the world-class position of that country or organization in certain fields, making comparisons with other countries or organizations, and performing the same operations in the national field (Danışman et al., 2016; Zan, 2012). In other words, bibliometric analysis is important in terms of following the process revealing the current situation such as "What is our situation? What are we doing? " and creating future policies such as "How should we lead? What should we do? " in a certain field.

1.1. Statement of the Problem

Although bibliometric studies are internationally quite common, they have been given importance and the number of studies has started to increase in recent years in Turkey. In Turkish national literature, bibliometric studies are encountered when evaluating Turkey's scientific performance (Al & Coştur, 2007; Birinci, 2008; Boztoprak, Demir & Çoruhlu, 2016; İnönü & Kurnaz, 2002; Karamustafaoğlu, 2007; Özel & Kozak, 2012; Şakar & Cerit, 2013; Tonta & İlhan 1997; Uzun, 1998; Yalçın, 2010; Yurtsever, Gülgöz, Yedekçioğlu & Tonta 2001, 2002), making comparisons of countries (İnönü, 2003), evaluating the contribution of them to a journal, a person or an institution to the field (Al & Tonta, 2004; Hotamışlı & Eren, 2014; Kaya, Fışkın & Nas, 2013; Orbay & Karamustafaoğlu, 2007; Polat, Sağlam & Sarı, 2013; Tonta & İlhan 2002; Ulu & Akdağ, 2015; Uzun, 2002; Yalçın, 2010), and evaluating Turkey-addressed journals removed or indexed in the Web of Science (WoS) database (Orbay, Karamustafaoğlu & Öner, 2007; Tonta, 2017a; Doğan, DHYI & Al, 2018). However, the study in the education field and teacher training is almost non-existent. Although the number of publications in educational sciences and teacher training has increased in recent years (Danışman et al., 2016), the low number of bibliometric analysis studies that reveal the effect value of information such as the number of articles in qualified journals, the number of citations, and the institution that produced the information is a lack. One of the studies in this field is that Danışman et al. (2016) analyzed citations and the number of articles published in Turkey addressed 33 journals between 2005-2014. The other study is that Bacanak, Değirmenci, Karamustafaoğlu and Karamustafaoğlu (2011) examined published articles about science education in Turkey addressed e-journals between 2004-2010. However, it has not been encountered a study that examines the articles published as Turkey-addressed in journals in the E&ER thematic field in the WoS databases. Consequently, in this study, bibliometric analysis of the Turkey addressed articles in the E&ER thematic field in the WoS databases is considered. This study is thought to be particularly important in terms of revealing the level of development, related to education studies in the last ten years, identifying problems or deficiencies in the last decade, and making suggestions for corrections to be made after.

1.2. Purpose of the Study

This study aims to analyze the articles published as Turkey-addressed in SSCI and ESCI indexed journals in the E&ER thematic field in the WoS databases in the last decade. For this purpose, answers to the following research problems were sought in order. In this context, the articles published as Turkey-addressed between the years 2010-2019 in SSCI and ESCI indexed journals:

1. What is the distribution of the number of the articles, the number of citations, average number of citations, and the number of uncited articles by years in SSCI, and ESCI indexed journals and total?
2. What is Turkey's ranking in international field by the number of the articles, the number of citations, average number of citations and the number of uncited articles?
3. What is the universities' ranking in Turkey by the number of published articles?
4. What is the distribution of the articles to the journals that has been published?

2. METHODOLOGY

2.1. Research Model and Sampling

The analysis of Turkey-addressed articles published in SSCI and ESCI-indexed journals in the E&ER thematic field in the WoS database in the last decade was performed using bibliometric analysis. Bibliometric analysis that the research model of this study is the use of statistics to determine certain features of the publications made in any field (Pritchard, 1969). In the bibliometric analysis method, various findings of scientific publications are obtained by examining certain features of the publications such as the number of publications by years, the most studied subjects, the number of authors, the organizations that contribute the most to the publications. The sample of the present study was consisted of Turkey-addressed research

articles and reviews published in SSCI and ESCI-indexed journals in the E&ER thematic field in the WoS database between 2010 and 2019.

2.2. Data Collection

The data constituting the sample of the present study were obtained from the WoS database. The main purpose of this study is to present a comprehensive picture examining the distributions on the basis of variables such as the year of articles, the journal in which it was published, its citation status and world rankings, a large number of Turkey-addressed high-quality article in education field. The purpose is not to examine in detail the few articles in specific journals or focusing on a particular topic. For this reason, it was decided to use the WoS database as it contains a large number of education publications from high quality journals all over the world (Gumus, Bellibas, Esen, & Gumus, 2016). WoS gives the number of publications and citations based on variables such as countries, universities, journals. In addition, this study focuses on studies published between 2010-2019. There are two main reasons for limiting study data to this time range. The first is that ESCI-indexed journals have been included in the WoS database since 2015, so five-year synchronizations before and after 2015 are preferred in order to make healthy comparisons to SSCI-indexed journals. Second is that the studies done in the education field have accelerated with the establishment of many new universities that involved education faculties in Turkey in 2006. The studies published since 2010 were taken into consideration since it is thought that these universities' ranks will reflect more accurately. Books, book chapters and conference papers were not included in our search criteria since it is thought that working in a data pool consisting of articles where the referee processes are carried out meticulously will provide more reliable and consistent results (Hallinger & Kovačević, 2019). For this reason, "research article" and "review" publications were preferred as document types in the study. In this study, initially, the articles published in SCI-Expanded, SSCI, AHCI and ESCI indexed journals were examined separately. However, it was decided to use only SSCI and ESCI indexes since it was thought that too much numerical data would cause confusion when tables were created. Also, a journal could be indexed to both SSCI and AHCI, and SCI-Expanded indexed journals were mainly published in pure field.

According to the criteria specified above, to collect the data, first, researchers entered the WoS database from the electronic library of Amasya University and the E&ER thematic field was selected. Then, search was respectively limited by selecting between 2010 and 2019 as the range of years, "article" and "review" as the document type, "Turkey" as countries/regions, and SSCI and ESCI as index. The articles publications obtained in this study are named as "research article", and compilation studies publications are named as "review". In addition, the sum of research articles and review were named as "articles". At the end of this search, a total of 7781 Turkey-addressed articles were reached. 5213 of these articles were published in SSCI indexed journals and 2568 in ESCI indexed. The data were collected and edited in December 2019 and revised on 28-29th January 2020.

For all 7781 articles searched at the end of research, the distribution of them by years in three categories SSCI, ESCI and total indexes, was arranged taking from the WoS database. Then, the distribution of the articles by years was examined in two five-year intervals, 2010-2014 and 2015-2019. For the total of the reached article, the distribution of the number of the articles, the number of citations and the number of uncited articles were obtained from the WoS database one by one according to the year intervals. Later, the same searches were made separately for the "SSCI" and "ESCI" indexes. Last, the same searches were made separately for the "research article" and "review" publication types.

The countries' ranking was taken from the *country* category to determine the position of Turkey in the international field, after the searches made according to search criteria that E&ER thematic field, year interval, type of publication, journals index. Then, each country in the top 10 was examined one by one, and the number of the articles, the number of citations and the number of uncited articles by years were obtained.

The number of the articles in total and by the years of each university were taken from the system selecting the related universities one by one in the *Organizations-Enhanced* category to determine the distribution of the number of the articles published as Turkey-addressed by the universities, after reaching 7781 articles. Then, the same searches were made separately for the "SSCI" and "ESCI" indexes. It should be taken into account that the same article can be seen in more than one university since some articles are made by more than one researcher in different universities. So, the total number of the articles in university is higher than the total number of the articles. On the other hand, the number of the articles were taken from the system after searching. Both names were selected together for the universities whose names were changed in these 10 years as in the examples that new universities were established as Karadeniz Technical University and Trabzon University dividing Karadeniz Technical University or the name of Erzincan University was changed as Erzincan Binali Yıldırım University.

The number of articles, citations and uncited articles is taken from the system selecting each journal in the top 25 one by one in the *source* titles category to determine the distribution of the number of the Turkey-addressed articles by the journal that have been published, after reaching 7781 articles. While obtaining the number of the articles published in each journal, the data were taken from system after searching both names of journals such as "*Kuram ve Uygulamada Eğitim Bilimleri*" as Turkish name and "*Educational Sciences and Theory Practice*" as English name.

2.3. Data Analysis

The articles published in the WoS database in the last ten years are divided into two intervals: the years covering the 2010-2014 and the years 2015-2019. After the distribution of the number of the articles, the number of citations and the number of uncited articles according to these two intervals of 7781 articles was taken from the system. Descriptive statistics such as the frequency and percentage values were used while the data were presented in the tables. Then, the average number of citations (B/A) was calculated dividing the number of citations (B) to the number of articles (A) and non-citation rates (C/A) was calculated dividing the number of non-cited articles (C) to the number of articles (A). Then, the numbers of SSCI and ESCI indexed articles were presented in a comparative line graphic by years. The distribution of the number of the articles published as Turkey-addressed to universities is presented in a table from the highest to the lowest in the ranking scale. The distributions of the articles according to the journals they published in were presented in a table from the highest to the lowest in the ranking scale after calculating the average citation, uncited rate values. The table includes 25 journals found to have published 50 or more articles in the last ten years.

Calculation of Journal Impact Factor (JIF): In this study context, ESCI indexed Turkey-addressed journals' impact factor values were calculated for the year 2018. While calculating the journals' JIF values, the total number of articles published in the relevant journals in 2016 and 2017, and the total number of citations to these articles in 2018 were taken from the WoS database. the journals' JIF value for the 2018 were calculated dividing the total number of citations to the number of articles. For example, according to the data obtained from the WoS database, *Pegem Journal of Education and Instruction* published a total of 50 articles, 26 in 2016 and 24 in 2017. These articles were cited 12 times in 2018. The JIF value of *Pegem Journal of Education and Instruction* for 2018 was calculated as 0.24 dividing 12 citations to 50 articles.

2.4. Limitations of the Study

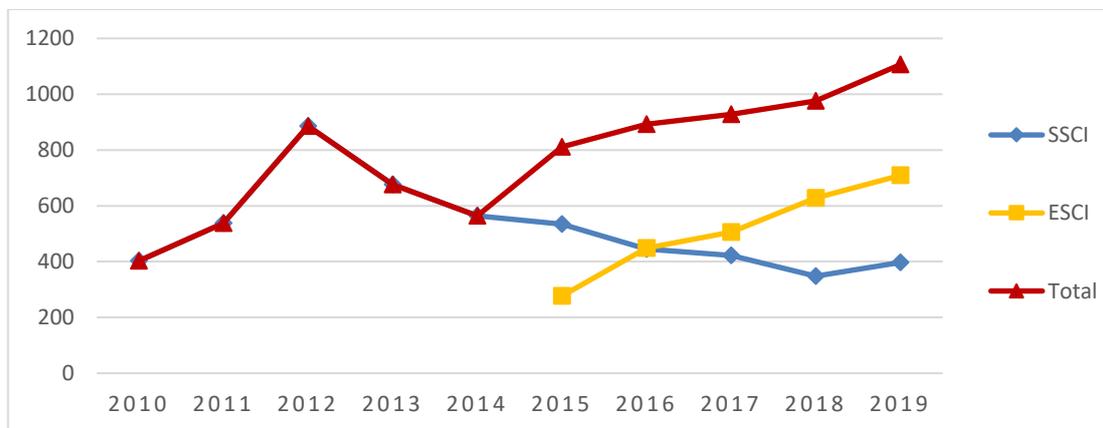
In this study, first, the articles are limited to research articles and review that published as Turkey-addressed in the journals in the E&ER thematic field in the WoS database. Time span is selected between 2010 and 2019 years and limited to the last ten years. Journal indexes are limited to SSCI and ESCI that are among the journal indexes in the WoS database. Countries are limited to the top 10 countries to determine Turkey's rank in the international field. It is also limited to December 2019, when the data was collected, and January 28-29, 2020, when it was revised. In the present study, the limitations of the data were revealed checking the relevant boxes and searching after reaching the WoS database.

3. FINDINGS

In this section, the findings obtained during the research process in the context of research questions; are presented in four categories as the distribution of the number of articles by years, Turkey's ranking in the international field, the distribution of the articles to university, and the distribution of the articles to journals that has been published.

3.1. The Distribution of the Number of the Articles by Years

A total of 7781 articles as Turkey-addressed has been published in SSCI and ESCI indexed journals between 2010-2019. The distribution of the number of articles published in SSCI, ESCI and Total categories by years is given in Graphic 1.



Graphic 1. The distribution of the number of articles in SSCI, ESCI, and Total categories by years

Although it is seen that there is a tendency to increase in the total number of articles by years in Graphic 1, a remarkable increase in the number of articles published in 2012 draws attention. When Graph 1 is examined according to journal categories, the number of articles published in SSCI indexed journals has a declining trend after peaking in 2012. There is a continuous increase in the number of articles published in ESCI indexed journals that have been included in the WoS database since 2015. The

increasing trend in the number of the articles published in ESCI indexed journals caused an increase in the total number of articles.

The distribution of the number of articles published, the number of citations, the number of non-cited articles, the average number of citations and non-citation rates by years in journals in the SSCI, ESCI and Total categories are given in Table 1.

Table 1.
Data of Articles in SSCI, ESCI and Total Categories

Index		2010-2014	2015-2019	Total
SSCI	The number of articles (A)	3067	2146	5213
	The number of citations (B)	5251	5532	24157
	The number of non-cited articles (C)	577	770	1347
	The average number of citations (B/A)	1.71	2.58	4.63
	Uncited rates (C/A)	0.19	0.36	0.26
ESCI	The number of articles (A)		2568	2568
	The number of citations (B)		1913	1913
	The number of non-cited articles (C)		1696	1696
	The average number of citations (B/A)		0.74	0.74
	Uncited rates (C/A)		0.66	0.66
Total	The number of articles (A)	3067	4714	7781
	The number of citations (B)	5251	7445	26070
	The number of non-cited articles (C)	577	2466	3043
	The average number of citations (B/A)	1.71	1.58	3.35
	Uncited rates (C/A)	0.19	0.52	0.39

When Table 1 is examined, it is seen that the average number of citations is higher in the articles published in SSCI indexed journals, while it is low in the articles in ESCI indexed journals. Citation rates are also in line with the average number of citations. On the other hand, the uncited rate in the total of ESCI indexed articles is 0.66, while this rate is 0.26 for SSCI indexed articles. In other words, 66% of ESCI indexed articles, 26% of SSCI indexed articles and 39% of articles in total were not cited in the last ten years. So, while the number of uncited articles in SSCI indexed articles is less, the number of uncited articles in ESCI indexed articles is higher. However, this may be related to the entry of ESCI into the WoS database since 2015.

In addition, the comparison of the number of citations, average citations and uncited rates of research articles and reviews were also made in the study. The comparative data of the research article, review and the total articles are given in Table 2.

Table 2.
The Comparative Data of the Research Article, Review, and the Total Articles

Index		Research Article	Review	Total Articles
SSCI	The number of articles (A)	5174	39	5213
	The number of citations (B)	23643	514	24157
	The number of uncited articles (C)	1340	7	1347
	The average number of citations (B/A)	4.57	13.18	4.63
	Uncited rates (C/A)	0.26	0.18	0.26
ESCI	The number of articles (A)	2520	48	2568
	The number of citations (B)	1877	36	1913
	The number of uncited articles (C)	1661	35	1696
	The average number of citations (B/A)	0.74	0.75	0.74
	Uncited rates (C/A)	0.66	0.73	0.66
Total	The number of articles (A)	7694	87	7781
	The number of citations (B)	25520	550	25520
	The number of uncited articles (C)	3001	42	3043
	The average number of citations (B/A)	3.32	6.32	3.28
	Uncited rates (C/A)	0.39	0.48	0.39

When Table 2 is examined, it is seen that generally the average number of citations of reviews are higher than research articles. When the non-citation rates of review are examined, it is seen that SSCI indexed review have lower uncited rates, that is, the number of cited reviews is more, while ESCI indexed review have higher non-citation rates.

3.2. Turkey's Ranking in International Field

According to the number of articles published in the last ten years, the number of articles, the number of citations, uncited articles, average number of citations and uncited rates of the top 10 countries are given in Table 3.

Table 3.

Data of the Top 10 Countries that Published the Most Articles in the Last Decade

Countries		2010-2014	2015-2019	Total	%
USA*	The number of articles (A)	16275	38283	54558	29.95
England*	The number of articles (A)	5106	10335	15441	8.48
Australia	The number of articles (A)	3901	9326	13227	7.26
	The number of citations (B)	13081	34140	97020	
	The number of uncited articles (C)	165	3000	3165	
	The average number of citations (B/A)	3.35	3.66	7.33	
	Uncited rates (C/A)	0.04	0.32	0.24	
Spain	The number of articles (A)	2138	9670	11808	6.48
	The number of citations (B)	4816	17657	42083	
	The number of uncited articles (C)	423	5545	5968	
	The average number of citations (B/A)	2.25	1.83	3.56	
	Uncited rates (C/A)	0.20	0.57	0.51	
Canada	The number of articles (A)	2094	5928	8022	4.40
	The number of citations (B)	9150	17203	57553	
	The number of uncited articles (C)	87	2464	2551	
	The average number of citations (B/A)	4.37	2.90	7.17	
	Uncited rates (C/A)	0.04	0.42	0.32	
Turkey	The number of articles (A)	3067	4714	7781	4.27
	The number of citations (B)	5251	7445	26070	
	The number of uncited articles (C)	577	2466	3043	
	The average number of citations (B/A)	1.71	1.58	3.35	
	Uncited rates (C/A)	0.19	0.52	0.39	
Brazil	The number of articles (A)	483	6948	7431	4.08
	The number of citations (B)	597	1390	5178	
	The number of uncited articles (C)	148	5827	5975	
	The average number of citations (B/A)	1.24	0.20	0.70	
	Uncited rates (C/A)	0.31	0.84	0.80	
China	The number of articles (A)	1452	5477	6929	3.80
	The number of citations (B)	4713	14583	38412	
	The number of uncited articles (C)	43	2361	2404	
	The average number of citations (B/A)	3.25	2.66	5.54	
	Uncited rates (C/A)	0.03	0.43	0.35	
Germany	The number of articles (A)	1785	3883	5668	3.11
	The number of citations (B)	5674	12796	39619	
	The number of uncited articles (C)	227	1554	1781	
	The average number of citations (B/A)	3.18	3.30	6.99	
	Uncited rates (C/A)	0.13	0.40	0.31	
South Africa	The number of articles (A)	993	3242	4235	2.33
	The number of citations (B)	2150	5424	14725	
	The number of uncited articles (C)	86	1659	1745	
	The average number of citations (B/A)	2.17	1.67	3.48	
	Uncited rates (C/A)	0.09	0.51	0.41	
				74.16	

* Since the WoS database does not provide the citation analysis of America and England, these data could not be obtained.

When Table 3 examined, it is seen that Turkey's ranking is 6 in international field according to the number of articles published in the E&ER thematic field in the WoS database, and the contribution of Turkey in these field of literature the World is 4.27%. In addition, the contribution of top 10 countries to the world literature is 74.16%. The comparison of the average number of citations of the Turkey-addressed articles with other countries is presented in Table 3. Accordingly, Turkey's average number of citations (3.35) is seen to be quite close to Spain (3.56), the number of articles of Spain is more than Turkey, while Turkey's average number of citations is lower than China (5.54) and Germany (6,99), the number of articles of Turkey is more than China and Germany. Another remarkable finding is that Brazil's average number of citations is very low (0.7) compared to other countries. Moreover, compared to 2010-2014 and 2015-2019 ranges, Turkey falls behind these countries increasing the number of articles approximately 1.5 times between the years examined, while America, England, Australia, Canada and Germany increased the number of articles approximately between 2.2 and 3 times. Number of articles; South Africa increased approximately 3.2 times, China and Spain 4.1 times, and Brazil 14 times.

3.3. The Universities' Ranking by the Numbers of Published Articles

When universities are ranked according to the number of articles published as Turkey-addressed in the SSCI, ESC and total categories, the distribution of the number of articles of the top 5 universities by years and their contribution as a percentage to the total number of articles are given in Table 4, and the ranking of all universities is given in Annex 1.

Table 4.

The Distribution of the Number of Articles of the Top 5 Universities and Their Contribution to the Total Number of Articles*

University Name	Index	2010-2014	2015-2019	Total	% Contribution
Hacettepe University	SSCI	350	193	543	9.27
	ESCI		178	178	
	Total	350	371	721	
Gazi University	SSCI	207	143	350	6.54
	ESCI		159	159	
	Total	207	302	509	
Middle East Technical University	SSCI	228	182	410	6.30
	ESCI		80	80	
	Total	228	262	490	
Anadolu University	SSCI	116	84	200	4.55
	ESCI		154	154	
	Total	116	238	354	
Ankara University	SSCI	133	85	218	4.39
	ESCI		124	124	
	Total	133	209	342	
Total					31.05

* It should be taken into consideration that common articles conducted with academicians in different universities are added to the number of articles of both universities. Therefore, the sum of the percentages will be over 100.

When Table 4 is examined, the university providing the greatest contribution to the number of articles published as Turkey addressed in the E&ER category is seen Hacettepe University as 9.27%. Hacettepe University is followed by Gazi University with 6.54%, Middle East Technical University with 6.30%, Anadolu University with 4.55% and Ankara University with 4.39%. The total contribution of these five universities to the number of Turkey-addressed articles is 31.05%. On the other hand, when the number of articles published in SSCI and ESCI indexed journals of the top five universities in Table 4 is examined by years, it is seen that there is a similar distribution to the total article distribution (Grafic 1 and Annex 1).

3.4. The Distribution of the Articles to the Journals that has been Published

The top 25 rankings SSCI and ESCI indexed journals that most published of the articles as Turkey-address are given in Table 5.

Table 5 shows that most Turkey-addressed articles were published in the journal *Education and Science* with 11.91%. Education and Science is followed by *Educational Sciences in Theory and Practice* with %11.55, *Hacettepe University Journal of Education* with %9.64, *Eurasian Journal of Educational Research* with %6.24, *Energy Education Science and Technology Part B-Social and Educational Studies* with %4.11. When the addresses of the journals were examined, it was determined that 15 of the top 25 journals is in Turkey and 6 of them is in the USA and England. Also, one journal has addressed from Switzerland, Denmark, Croatia, and Lithuania. On the other hand, 11 of these 25 journals are SSCI indexed while 14 are ESCI indexed journals. The number of articles published in 25 journals consisted of 71% of the total article published as Turkey-addressed. Also, only 17.68% of this 71% belongs to the articles in foreign addressed journals. When the average number of citations, the average number of citations exclude self and the number of uncited rate of the articles published in the journals were examined, Energy Education Science and Technology Part B-Social and Educational Studies has a considerable difference between the average number of citations exclude self and the average number of citations. On the other hand, ESCI indexed journals have low average number of citations and high rate of uncited articles. Articles published in journals with high JIF values such as *Computers & Education* have quite high rate both the average number of citations and the citation rates of the articles. Also, it draws attention that only 6 of the top 25 journals that published the most articles as Turkey-addressed have a JIF value over 1.

Table 5.
The Top 25 Rankings Journals that Most of the Articles Published as Turkey-Address

Journal Rank	Journal Names	Publication Language	Journal Address	2018 JIF	The Number of Articles (A)	Contribution (%)	The Number of Citations (B)	The Number of Uncited Articles (C)	The Number of Citations exclude self (D)	The Average Number of Citation (B/A)	The Uncited Rate (C/A)	The Average Number of Citation Exclude Self (D/A)
1	Education & Science	EN	TR	0.607	931	11.91	2404	291	2016	2.58	0.31	2.17
2	Educational Sciences in Theory and Practice	TR + EN	TR	0.564	903	11.55	2520	244	2399	2.79	0.27	2.66
3	Hacettepe University Journal of Education	TR + EN	TR	0.284	528	9.64	1211	188	1093	2.29	0.36	2.07
					226*		106	162	97	0.47	0.72	0.43
4	Eurasian Journal of Educational Research	TR + EN	TR	0.315	198	6.24	580	37	543	2.93	0.19	2.74
					290*		259	170	229	0.89	0.59	0.79
5	Energy Education Science and Technology Part B-Social and Educational Studies	EN	TR	X	321	4.11	3446	63	784	10.74	0.20	2.44
6	Eurasia Journal of Mathematics Science and Technology Education	EN	EN	0.840	215	2.75	774	35	735	3.60	0.16	3.42
7	Journal of Baltic Science Education	EN	LT	1.024	192	2.46	420	70	375	2.19	0.36	1.95
8	Pegem Journal of Education and Instruction	TR + EN	TR	0.240	159*	2.03	65	112	62	0.41	0.70	0.39
9	Çukurova University Faculty of Education Journal	TR + EN	TR	0.091	142*	1.82	45	111	39	0.32	0.78	0.27
10	Pamukkale University Journal of Education	TR + EN	TR	0.051	142*	1.82	14	131	12	0.10	0.92	0.08
11	Journal of Qualitative Research in Education	TR + EN	TR	0.014	140*	1.79	8	133	7	0.06	0.95	0.05
12	Turkish Online Journal of Educational Technology	EN	TR	X	140	1.79	1110	12	1060	7.93	0.09	7.57
13	Journal of Higher Education	TR + EN	TR	0.257	104*	1.33	25	87	15	0.24	0.84	0.14
14	Computers & Education	EN	EN	5.627	95	1.22	2585	5	2551	27.21	0.05	26.85
15	Journal of Education and Future	EN	TR	0.073	94*	1.20	29	75	27	0.31	0.80	0.29
16	International Journal of Assessment Tools in Education	EN	TR	0.333	90*	1.04	22	64	16	0.27	0.79	0.20
17	International Journal of Instruction	EN	CH	1.125	86*	1.10	90	41	86	1.05	0.48	1.00
18	Croatian Journal of Education Hrvatski Casopis Za Odgoj I Obrazovanje	EN	HR	0.109	84	1.07	108	42	103	1.29	0.50	1.23
19	Turkish Online Journal of Distance Education	EN	TR	0.388	78*	1.00	112	34	110	1.44	0.44	1.41
20	Turkish Journal of Education	EN	TR	0.314	74*	0.95	40	48	32	0.54	0.65	0.43
21	International Journal of Science and Mathematics Education	EN	NL	1.027	68	0.87	344	10	330	5.06	0.15	4.85
22	Chemistry Education Research and Practice	EN	EN	2.285	67	0.86	427	11	389	6.37	0.16	5.81
23	Early Child Development and Care	EN	EN	0.713	64	0.79	70	35	65	1.13	0.56	1.05
24	International Journal of Mathematical Education in Science and Technology	EN	USA	0.412	58*	0.73	67	30	58	1.18	0.53	1.02
25	Education and Information Technologies	EN	USA	1.332	51*	0.65	53	32	51	1.04	0.63	1.00
Total					4322	70.71	16934	2273	13231	3.92	0.53	3.06

* It shows the data of ESCI indexed journals. CH= Switzerland, EN=England, ES=Spain, HR= Croatia, LT= Lithuania, NL=Holland, TR=Turkey, USA=United States of America.

4. RESULTS, DISCUSSION AND RECOMMENDATIONS

In the study, it was understood that the number of articles published as Turkey-addressed in SSCI and ESCI indexed journals in the E&ER thematic field tended to increase over the years. However, when both indexes were evaluated separately, it was seen that there was an increase in the number of articles published in ESCI indexed journals, while there was a decrease in the number of articles published in SSCI indexed journals. This may be due to some reasons. The first reason was that some existing Turkey-addressed journals fell from the SSCI index into the ESCI index in 2015 and the second was some Turkey-addressed journals were available in the ESCI index, but they were not included in the ESCI index before. This is supported the study findings of Tonta (2017a), examined Turkey-addressed journals, the total number of articles published in the social sciences field between 2006 and 2015 increased over the years, besides the number of articles published in C class journals increased mostly. The other reason was that nowadays the acceptance of published articles in the ESCI indexed journals for academic advances and the acceptance of the articles written in Turkish by these journals. This supports the statements of Tonta (2017a) that the requirement that to publish a single-author article in SSCI-indexed journals for academic promotions until 2015 has led to an increase in the number of articles published in these journals. Also, Tonta (2017b) revealed that there was a 5 times old increase in the total number of articles published in the social sciences field between 2006 and 2012. In the present study, an increase of approximately 2.5 times in the number of articles published in the E&ER field (from 403 in 2010 to 1106 in 2019, as seen in Graphic 1) indicates a slowdown in the rate of increase. However, the 5 times increase in the period of 2006-2012 may be caused by other sub-fields of social sciences. Nevertheless, Turkey's 1.5 times increase in five-year intervals clear that the increase of Turkey-addressed articles is insufficient, because the increase in the number of articles of the countries that publish the most articles is 2.2 to 3 times (Table 3).

On the other hand, it was seen that the average number of citations was higher in the articles published in SSCI indexed journals when the average number of citations was low in the articles published in ESCI indexed journals. Besides, it was revealed that the number of uncited articles was higher among articles published in ESCI indexed journals while the number of uncited articles was lower among articles published in SSCI indexed journals. This may be due to the preference of authors who use the journals has a high impact factor or recently a high quartile category in their references while preparing their studies. This is supported the statements of Correia, Paredes and Fonseca (2018) that well-known scientists and articles predominantly affect their field, and they are cited a lot. Another reason for the low number of citations in ESCI indexed journals is that articles published in Turkish causes to decrease the readability of these articles. This interpretation is also supported the findings of the study examining the citation numbers of articles published in regional languages in several countries (Pajic, 2014; Purnell & Quevedo-Blasco, 2013). Purnell and Quevedo-Blasco (2013) revealed that 80% of the citations to articles published in the regional language in Spain are made by articles published in the regional language. There are also studies revealed that the same situation occurs in Eastern European countries (Pajic, 2014; Teodorescu & Andrei, 2014). In addition, this is supported the statements of Doğan, DHYI and Al (2018) that the reason for the low citation rate or the impact factor of published articles as Turkey-addressed is that the language of the articles is Turkish. The articles published in Turkish cannot be read by foreign researchers, and naturally it causes to decrease the visibility of the articles. It can also lead to the emergence of misleading data in terms of the quality of articles published in Turkish.

In this study, it has been also determined that Turkey is ranked as 6 in the total number of articles in the E&ER thematic field when compared to other countries although Turkey-addressed articles have increased quantitatively and decreased qualitatively in the last decade. This may be due to Turkey-addressed journals have been started to scan in the ESCI index since 2015, the number of education faculties, academicians and graduate programs have increased in Turkey. Turkey ranked 25th in 98 years, 37th in 93 years in the world ranking considering all subject field (Tonta, 2017b). Turkey ranking 6 at the end of 2019 in the education field indicated that Turkey make more progress in education field than other fields.

In the present study, it seen that universities in the top 5 by article number are in the central part of Turkey and they are institutionalized universities, and they have also contributed more than 30% of total articles. These universities were established 38 to 74 years ago and the number of undergraduate and graduate programs supported the importance of institutionalization. The fact that these universities were among the universities with the highest number of publications in the 1999-2004 period (Ak & Gülmez, 2006) shows that the situation has not changed much since then. The main reason for the high number of publications in these universities is that the number of faculty members and faculties are high (Ak & Gülmez, 2006), and the number of postgraduate programs is higher than the other universities. Besides, the contribution of research centers to support scientific activities such as Techno-city and information transfer offices operating in these universities for many years cannot be denied. In addition, these universities, which rank at the top of the list of the universities published the most articles, and they were founded and institutionalized approximately 60 years ago.

According to the distribution of the journals which published Turkey-addressed articles, it was seen that the number of published articles in the Turkey-addressed journals was more than the foreign-addressed journals. In addition, it has been seen that more articles are published in journals which have low effect factor in SSCI indexed and in ESCI indexed journals. These findings are consistent by the previous studies findings that the impact factors of the journals in which the article is published as Turkey-addressed are low in various databases (Tekneci, 2013; Tonta, 2017a). In the emergence of this situation, it can be said that academicians in Turkish universities preferred Turkish addressed journals and foreign journals with low impact factor, primarily while publishing their scientific studies. This comment is supported the findings of the previous studies examined

Turkey-addressed publications in recent 30-year period at various time intervals (Binici, 2012; Tekneci, 2013; Tonta, 2017a). Binici (2012) in his study has examined WoS and national database between 1990-2009, has revealed approximately 2/3 of Turkey-addressed articles published in foreign addressed journals and described this situation as science immigration. The reason for the high rate of publication in foreign addressed journals in the relevant study is that the number of Turkey addressed journals quite few in WoS database before 2006. Tonta (2017a) expressed an against opinion because the articles by Turkish researchers are published at a very high rate in Turkey-addressed journals in WoS database and these articles are not cited internationally. Researchers criticized these journals as "locally international, but nationally global journals" because Turkey addressed journals in the indexed WoS database are publishing Turkey addressed researchers' articles very highly. These journals are criticized as "*journals local in international but global in national*" in the words of Pajic and Jevremov (2014). This qualification is supported that 86% of the publications in Turkey-addressed journals removed in WoS database are Turkey addressed (Tonta, 2017a). This qualification has taken place in the literature as a concept used for journals and articles with few international authors and low citation rates (Pajic & Jevremov, 2014). Every issue of the journal should be in a balanced way to include articles by foreign and Turkish researchers. On the other hand, researchers in Turkish universities should publish articles in various international journals rather than certain journals. This comment is supported statements of Tonta (2017a) and Pajic and Jevremov (2014) that "*The most accurate indicators of whether a scientific journal is an international journal is the multinational distribution of authors and readers*".

The fact that 15 of the 25 most published journals of researchers working at Turkish universities are Turkey-addressed and the articles published in these 25 journals constitute 71% of the total articles clear that researchers working at Turkish universities publish in journals in a certain and small pool. The fact that 11 of these 25 journals have SSCI index and the impact factor value of only 6 of them is above 1 shows that researchers working at Turkish universities prefer journals with low impact factor. When the findings obtained from the present study and previous studies are considered as a whole, it can be said that researchers tend to compromise on quality in order to meet the necessary criteria to rise academically and increase the number of published articles (Yurtsever et al., 2002), and choose the journals with low impact factors in the WoS database as *easy targets* (Önder & Erdil, 2017; Yurtsever et al., 2001). This causes the increase in the number of Turkey-addressed articles, on the other hand, causes to occur Turkey-addressed Journals that its citation average is low, or the number of non-cited articles is high and impact value is low.

The number of published Turkey-addressed articles has increased over the years, but the quality of the articles has not increased proportionally in the last decade. The uncited articles were stacked, and low impact factor Turkey-addressed journals were formed because academics' efforts to meet academic promotion criteria and Turkey-addressed journals have published more articles in Turkish. This caused a decrease in the number of quality articles and Turkey-addressed publications are concentrated on certain journals that has low impact factor. Based on the research data, it can be said that although the publications of our country seemed to be at a good international level quantitatively, we remained in a local state on a global scale according to the journal addresses of the published articles. As a result of the findings and discussions made in this study, the following suggestions were made to the researchers and journal editors;

Suggestions for journal editors:

- The journals should publish more foreign-addressed publications to increase their international traceability. It is found out that Turkey-addressed articles were published in Turkey-addressed journals. In this context, it is important for journals to introduce themselves to academicians working in the field both on social media and various international platforms.
- The related journals should publish the articles both in Turkish and English languages. One of the reasons for the low citation rate and average number of citations in articles published in regional languages is that the articles are not published in English accepted as an academic language in the world. Consequently, since the legibility of the published studies will increase more, the journal impact factor value will increase over time and the relevant journal will increase from the ESCI index to other indexes and to the higher quartile value, respectively.

Suggestions for authors:

- Since one of the reasons for the low number of citations of ESCI indexed articles is that the language of the article is Turkish, which reduces the readability of the article, the articles should be evaluated in English and top quartile journals in order to increase the visibility and citation probability of the articles.
- Since academic promotion criteria are effective increasing the quality of the article or journal in which the articles are published, the number of citations is also taken into account in both academic promotions and academic incentives, so authors should evaluate them in journals with high impact factor and open access rather than focusing on faster publication of the articles to benefit from this contribution.
- Authors in Turkish universities should send their studies to various international-addressed journals. It is understood that approximately 60% of Turkey-addressed articles were published in only 14 Turkey-addressed journals. Otherwise, the readability of Turkey addressed articles will decrease in following years

Research and Publication Ethics Statement

This study was carried out using the data obtained from the WoS database. Therefore, this study was not included in the studies that require ethics committee approval since data collection tools are not used from the participants that people and animals by using questionnaire, interview, focus group study, observation, experiment, and interview techniques.

Contribution Rates of Authors to the Article

The authors contributed equally to the preparation of this article.

Statement of Interest

We have no conflicts of interest to disclose.

5. REFERENCES

- Ak, M.Z. & Gülmez, A. (2006). Türkiye'nin uluslararası yayın performansının analizi. *Akademik Araştırmalar Dergisi*, 1(1), 22-49.
- Al, U. & Coştur, R. (2007). Türk Psikoloji Dergisi'nin bibliyometrik profili. *Türk Kütüphaneciliği Dergisi*, 21(2), 142-163.
- Al, U. & Tonta, Y. (2004). Atıf analizi: Hacettepe Üniversitesi kütüphanecilik bölümü tezlerinde atıf yapılan kaynaklar. *Bilgi Dünyası*, 5(1), 19-47.
- Bacanak, A., Değirmenci, S., Karamustafaoğlu, S., & Karamustafaoğlu, O. (2011). E-Dergilerde yayınlanan fen eğitimi makaleleri: Yöntem analizi. *Türk Fen Eğitimi Dergisi*, 8(1), 119-132.
- Binici, K. (2012). Türkiye'de yayın göçü: Web of science ve ULAKBİM ulusal veri tabanlarında indekslenen yayınlar üzerine bir inceleme. *Bilgi Dünyası*, 13(1) 165-181.
- Birinci, H.G. (2008). Turkish Journal of Chemistry'nin bibliyometrik analizi. *Bilgi Dünyası*, 9(2), 348-369.
- Borrego, A., Barrios, M., Villarroya, A. & Olle, C. (2010). Scientific output and impact of postdoctoral scientists: a gender perspective. *Scientometrics*, 83(1), 93-101.
- Boztoprak, T., Demir, O. & Çoruhlu, Y.E. (2016). Türkiye'de harita/geomatik mühendisliğinde yapılan doktora tezlerinin içerik analizi. *Yükseköğretim ve Bilim Dergisi* 6(2), 252-260.
- Chiu, W.T. & Ho, Y.S. (2007). Bibliometric analysis of tsunami research. *Scientometrics*, 73(1), 3-17.
- Correia, A., Paredes, H. & Fonseca, B. (2018). Scientometric analysis of scientific publications in CSCW. *Scientometrics*, 114(1), 31-89.
- Danişman, Ş., Yalçın, M., Çiftçi, Ş.K., Tosuntaş, Ş.B., Sölpük, N., Ay, Y., Karadağ, E. & Yücel, E. (2016). Türkiye'de eğitim bilimleri alanında yayımlanan dergilerin bilimsel yayın haritası: Dergi etki faktörleri üzerine bir inceleme. *Kuram ve Uygulamada Eğitim Yönetimi*, 22(4), 483-506.
- Diodato, V.P. (1994). *Dictionary of bibliometrics*. USA: The Hawthorne Press.
- Doğan, G., DHYI, S.M.M.A. & Al, U. (2018). Web of Science'tan çıkarılan Türkiye adresli dergiler üzerine bir araştırma. *Türk Kütüphaneciliği*, 32(3), 151-162.
- Garfield, E. (1972). Citation analysis as a tool in journal evaluation. *Science*, 178(4060), 471-479.
- Gumus, S., Bellibas, M. S., Esen, M., & Gumus, E. (2016). A systematic review of studies on leadership models in educational research from 1980 to 2014. *Educational Management Administration & Leadership*, 46, 25-48.
- Hallinger, P. & Kovačević, J. (2019). A Bibliometric Review of Research on Educational Administration: Science Mapping the Literature, 1960 to 2018. *Review of Educational Research*, 89(3), 335-369.
- Hotamışlı, M. & Eren, I. (2014). Muhasebe ve Finansman Dergisi'nde yayınlanan makalelerin Bibliyometrik analizi. *Muhasebe ve Finansman Dergisi*, 63, 1-20.
- İnönü, E. (2003). The influence of cultural factors on scientific production. *Scientometrics*, 56(1), 137-146.

- İnönü, E. & L. Kurnaz. (2002). Observations on the growth characteristics of the research output of Turkish physicists based on selective citation analysis. *Scientometrics*, 55(3), 437-444.
- Johnes, J. & Yu, L. (2008). Measuring the research performance of Chinese higher education institutions using data envelopment analysis. *China Economic Review*, 19(4). 679-696.
- Kao, C. & Pao, H. (2009). An evaluation of research performance in management of 168 Taiwan universities. *Scientometrics*, 78(2), 261-277.
- Karamustafaoğlu, O. (2007). Citation analysis of papers published by university-based Turkish physicists in journals listed in SCI. *Ad Astra*, 6, 1-8.
- Kaya, A.Y., Fışkın, R. & Nas, S. (2013). "Safety Science" dergisinde 2006- 2010 yılları arasında yayınlanan makalelerin içerik analizi. *Dokuz Eylül Üniversitesi Denizcilik Fakültesi Dergisi*, 5(1), 121-139.
- King, D. A. (2004). The scientific impact of nations. *Nature*, 430(6997), 311-316.
- Liu, W., Hu, G. & Gu, M. (2016). The probability of publishing in first-quartile journals. *Scientometrics*, 106(3), 1273-1276.
- Orbay, M. & Karamustafaoğlu, O. (2007). Chinese Journal of Chemistry's Hirsch Index: A Case Study of 1995-2005. *Chinese Librarianship: An International Electronic Journal*, 24. URL: <http://www.iclc.us/cliej/cl24OK.pdf>
- Orbay, M., Karamustafaoğlu, O. & Öner, F. (2007). What does Hirsch Index evolution explain us? A case study: Turkish Journal of Chemistry. *BIBLIOS: Librarianship and Information Science Electronic Journal*, 8(27), 1-5.
- Önder, Ç. & Erdil, S.E. (2017). Opportunities and opportunism: Publication outlet selection under pressure to increase research productivity. *Research Evaluation*, 26(2), 66-77.
- Özel, Ç.H. & Kozak, N. (2012). Turizm pazarlaması alanının bibliyometrik profili (2000-2010) ve bir atıf analizi çalışması. *Türk Kütüphaneciliği Dergisi*, 26(4), 715-733.
- Pajic, D. & Jevremov, T. (2014). Globally national-locally international: Bibliometric analysis of a SEE psychology journal. *Psihologija*, 47(2), 263-277.
- Polat, Ç., Sağlam, M. & Sarı, T. (2013). Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi'nin bibliyometrik analizi. *Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi*, 27(2), 273-288.
- Pritchard, A. (1969) Statistical bibliography or bibliometrics. *Journal of Documentation*, 25, 348-349.
- Purnell, P.J. & Quevedo-Blasco, R. (2013). Benefits to the Spanish research community of regional content expansion in Web of Science. *International Journal of Clinical and Health Psychology*, 13(2), 147-154.
- Şakar, G.D. & Cerit, A.G. (2013). Uluslararası alan indekslerinde Türkiye pazarlama yazını: Bibliyometrik analizler ve nitel bir araştırma. *Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi*, 27(4), 37-62.
- Tenekeci, P.D. (2013). Türkiye adresli spor alanındaki bilimsel yayınların bibliyometrik analizi. *Pamukkale Journal of Sport Sciences*, 4(3), 76-91.
- Teodorescu, D. & Andrei, T. (2014). An examination of "citation circles" for social sciences journals in Eastern European countries. *Scientometrics*, 99(2), 209-231.
- Tonta, Y. (2017a). Türkiye'de yayımlanan ve web of science'ta dizinlenen dergilerle ilgili bir değerlendirme. *Türk Kütüphaneciliği* 31(4), 449-482.
- Tonta, Y. (2017b). TÜBİTAK Türkiye Adresli Uluslararası Bilimsel Yayınları Teşvik (UBYT) Programının Değerlendirilmesi. Tubitak Ulakbim: Ankara
- Tonta, Y. & İlhan, M. (1997). Sosyal bilimlerde Türkiye'nin dünyadaki yeri. *Türk Psikoloji Dergisi*, 12(40), 67-75.
- Tonta, Y. & İlhan, M. (2002). Contribution of Hacettepe University Faculty of Medicine to the world's biomedical literature (1988-1997). *Scientometrics*, 55(1), 123-136.

Ulu, S. & Akdağ, M. (2015). Dergilerde yayınlanan hakem denetimli makalelerin bibliyometrik profili: Selçuk iletişim örneği. *Selçuk İletişim*, 9(1), 5-21.

Uzun, A. (1998). A scientometric profile of social sciences research in Turkey. *International Information and Library Review*, 30, 169-184.

Uzun, A. (2002). Productivity ratings of institutions based on publication in Scientometrics, Informetrics, and Bibliometrics, 1981-2000. *Scientometrics*, 53(3), 297-307.

Yalçın, H. (2010). Millî Folklor Dergisi'nin bibliyometrik profili (2007-2009). *Millî Folklor* 85, 205-211.

Yurtsever, E., Gülgöz, S., Yedekçioğlu, Ö.A. & Tonta, M. (2001). *Sosyal Bilimler Atıf Dizini'nde (SSCI) Türkiye: 1970-1999*. Ankara: TÜBA.

Yurtsever, E., Gülgöz, S., Yedekçioğlu, Ö.A. & Tonta, M. (2002). *Sağlık bilimleri, mühendislik ve temel bilimlerde Türkiye'nin uluslararası atıf dizinindeki yeri: 1973-1999*. Ankara: TÜBA.

Zan, B. U. (2012). *Türkiye'de bilim dallarında karşılaştırmalı bibliyometrik analiz çalışması*. Doktora tezi. Ankara Üniversitesi: Ankara.

Annex 1.

University Rankings

Rank	University	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
1	Hacettepe	43	63	92	90	62	53+22=75	36+39=75	37+31=68	26+38=64	40+48=87	543+178=721
2	Gazi	32	34	57	36	50	43+16=59	36+31=67	21+43=64	17+33=50	24+34=58	350+159=509
3	Middle East Technical	50	37	50	44	47	33+9=42	42+13=55	33+18=51	31+16=47	43+24=67	410+80=490
4	Anadolu	16	30	25	23	22	24+10=34	16+27=43	18+35=53	13+42=55	13+40=53	200+154=354
5	Ankara	17	29	27	29	31	21+19=40	19+16=35	24+21=45	7+27=34	14+41=55	218+124=342
6	Ministry of National Educ.	7	14	29	26	23	29+14=43	15+29=44	15+24=39	10+35=45	14+48=62	182+150=332
7	KTU + Trabzon	16	22	41	30	19	16+10=26	12+10=22	21+12=33	16+16=32	15+25=40	208+73=281
8	Marmara	18	21	23	28	9	14+10=24	13+7=20	15+14=29	9+16=25	15+20=35	165+67=232
9	Pamukkale	9	20	22	16	12	16+11=27	9+14=23	7+23=30	5+28=33	7+29=36	123+105=228
10	Dokuz Eylül	17	27	36	23	19	12+6=18	8+9=17	12+8=20	6+9=15	4+11=15	164+43=207
11	Sakarya	18	24	38	10	25	16+2=18	6+4=10	7+9=16	7+15=22	6+16=22	157+46=203
12	Atatürk	9	17	30	20	9	19+4=23	8+16=24	9+17=26	7+15=22	11+5=16	139+57=196
13	Abant İzzet Baysal	8	15	22	19	19	15+4=19	12+7=19	10+9=19	7+3=10	10+12=22	137+35=172
14	Muğla Sıtkı Kocaman	5	5	13	12	12	15+4=19	14+12=26	8+18=26	8+20=28	5+17=22	97+71=168
15	Eskişehir Osmangazi	12	17	13	11	19	13+8=21	11+10=21	5+8=13	4+17=21	3+18=21	103+61=164
16	Yakın Doğu	-	4	7	5	3	7+2=9	10+25=35	25+18=43	13+23=36	5+15=20	79+83=162
17	Yıldız Teknik	8	9	8	10	12	19+5=24	17+10=27	6+8=14	8+11=19	15+11=26	112+45=157
18	Çukurova	13	17	16	7	8	9+12=21	2+11=13	4+14=18	11+12=23	3+13=16	90+62=152
19	Selçuk	19	18	56	7	4	6+2=8	10+3=13	2+3=5	3+9=12	1+5=6	126+22=148
20	Akdeniz	6	12	18	13	12	10+1=11	4+4=8	6+8=14	3+11=14	9+19=28	93+43=136
21	Mersin	6	8	12	25	6	6+4=10	5+3=8	9+12=21	3+18=21	4+13=17	84+50=134
22	Uludağ	7	8	10	16	16	7+3=10	4+11=15	13+7=20	4+14=18	7+6=13	92+41=133
23	Boğaziçi	12	7	7	13	9	8+4=12	16+3=19	7+8=15	10+6=16	15+7=22	104+28=132
24	Necmettin Erbakan	-	-	9	11	18	13+6=19	14+7=21	5+4=9	7+13=20	6+19=25	83+49=132
25	Ondokuz Mayıs	6	10	15	13	8	10+1=11	6+5=11	5+6=11	6+12=18	3+13=16	82+37=119
26	Yüzüncü Yıl	5	9	11	8	9	16+2=18	13+4=17	7+3=10	4+12=17	4+9=13	85+32=117
27	Ege	9	7	17	7	13	8+3=11	10+2=12	7+3=10	2+9=11	5+11=16	85+28=113
28	Balıkesir	7	12	8	13	7	6+3=9	9+7=16	4+4=8	9+13=22	3+2=5	78+29=107
29	Kocaeli	7	7	15	11	7	10+3=15	6+5=11	2+4=6	6+11=17	5+8=13	76+31=107
30	İstanbul	3	10	13	12	7	4+5=9	4+4=8	4+11=15	1+10=11	5+7=12	63+37=100
31	Çanakkale Onsekiz Mart	8	7	9	15	5	5+2=7	5+4=9	5+4=9	4+13=17	4+8=12	67+31=98
32	İhsan Doğramacı Bilkent	12	4	5	11	13	10+1=11	10+5=15	4+4=8	7+1=8	8+2=10	84+13=97
33	Adnan Menderes	3	3	14	7	6	4+4=8	5+7=12	3+13=16	2+9=11	3+10=13	50+43=93
34	İnönü	5	2	11	9	9	5+1=6	5+11=16	3+3=6	1+10=11	3+13=16	53+38=91
35	Dumlupınar	6	6	15	4	3	8+8=16	7+4=11	1+9=10	4+12=16	0+2=2	54+35=89
36	Gaziosmanpaşa	2	5	5	12	10	8+1=9	6+5=11	6+9=15	5+6=11	3+6=9	62+27=89
37	Adıyaman	3	3	7	7	2	5+1=6	10+7=17	6+5=11	5+12=17	5+9=14	53+34=87
38	Fırat	5	8	14	5	1	1+6=7	3+8=11	2+8=10	5+7=12	2+12=14	46+41=87
39	Ahi Evran	1	7	11	10	5	1+1=2	2+6=8	6+3=9	8+8=16	3+13=16	54+31=85
40	Ömer Halis Demir	6	2	12	9	10	3+4=7	5+10=15	3+6=9	2+7=9	1+3=4	56+29=85
41	Uşak	-	3	9	4	3	6+4=10	4+9=13	8+9=17	7+9=16	2+8=10	46+39=85
42	Aksaray	1	6	14	6	6	7+6=13	3+4=7	5+3=8	1+6=7	5+10=15	54+29=83
43	Bartın	-	-	3	4	3	3+3=6	5+5=10	6+11=17	7+13=20	10+9=19	41+41=82
44	Gaziantep	2	9	8	7	11	3+4=7	7+4=11	1+6=7	0+9=9	3+8=11	51+31=82
45	Recep Tayyip Erdoğan	5	2	3	6	3	9+4=13	7+3=10	7+3=10	3+9=12	6+9=15	51+28=79
46	Mehmet Akif Ersoy	2	4	10	3	8	7+5=12	7+5=12	5+4=9	4+8=12	2+3=5	52+25=77
47	Bülent Ecevit	4	4	2	7	10	6+3=9	5+5=10	6+4=10	2+2=4	8+8=16	54+22=76

Rank	University	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
48	Kırıkkale	3	3	10	9	12	3+1=4	3+2=5	6+4=10	5+4=9	3+4=7	57+15=72
49	Giresun	-	3	9	2	4	8+1=9	6+7=13	11+2=13	5+6=11	4+2=6	52+18=70
50	Başkent	5	3	7	11	3	4+0=4	1+2=3	5+6=11	6+3=9	4+8=12	49+19=68
51	Dicle	2	1	6	3	7	4+3=7	2+11=13	5+8=13	1+9=10	0+6=6	31+37=68
52	Erciyes	3	2	14	10	4	4+4=8	5+2=7	0+3=3	3+5=8	3+6=9	48+20=68
53	Trakya	4	3	7	5	7	1+4=5	4+4=8	2+8=10	2+7=9	4+6=10	39+29=68
54	Kastamonu	-	2	4	6	6	2+4=6	0+3=3	5+6=11	3+5=8	9+11=20	37+29=66
55	Bahçeşehir	8	3	5	4	6	1+1=1	5+4=9	2+5=7	4+7=11	6+2=8	44+19=63
56	Afyon Kocatepe	2	5	7	2	4	5+2=7	4+8=12	0+7=7	1+9=10	1+4=5	31+30=61
57	Cumhuriyet	1	4	8	12	6	3+3=6	6+2=8	3+4=7	2+2=4	3+1=4	48+12=60
58	Amasya	2	2	3	3	3	3+2=5	3+3=6	3+6=9	3+7=10	3+11=14	28+29=57
59	Düzce	-	3	4	1	2	1+6=7	6+7=13	2+6=8	0+6=6	3+10=13	22+35=57
60	TED	-	-	3	9	7	3+1=4	5+1=6	5+4=9	5+2=7	6+3=9	43+11=54
61	Kahramanmaraş Sütçü imam	-	-	4	1	1	2+2=4	2+8=10	0+11=11	0+7=7	2+8=10	12+36=48
62	Nevşehir Hacı Bektaş Veli	-	-	4	3	8	4+2=6	0+3=3	3+3=6	2+5=7	4+7=11	28+20=48
63	Bozok	-	-	1	4	2	2+7=9	2+3=5	1+3=4	3+7=10	3+9=12	18+29=47
64	Süleyman Demirel	2	2	3	3	2	5+3=8	3+5=8	2+2=4	2+3=5	4+4=8	28+17=45
65	Mustafa Kemal	0	9	5	4	1	4+2=6	2+4=6	1+2=3	0+5=5	2+3=5	28+16=44
66	Artvin Çoruh	-	4	5	0	2	1+1=2	1+4=5	2+5=7	1+5=6	3+7=10	19+22=41
67	Atılım	2	2	5	3	6	3+1=4	1+1=2	3+0=3	6+0=6	5+2=7	36+4=40
68	Erzincan Binali Yıldırım	4	4	5	1	0	7+1=8	1+3=4	5+1=6	1+2=3	1+4=5	29+11=40
69	Kafkas	1	5	2	4	3	4+4=8	3+5=8	0+2=2	1+0=1	4+2=6	27+13=40
70	Ordu	1	1	1	2	0	1+1=2	2+5=7	1+3=4	1+8=9	4+9=13	14+26=40
71	İstanbul Aydın	-	-	1	3	4	0+2=2	4+0=4	7+4=11	3+1=4	1+7=8	25+14=39
72	Karamanoğlu Mehmetbey	-	1	13	1	1	3+0=3	0+1=1	1+0=1	4+6=10	4+4=8	28+11=39
73	Harran	-	2	3	0	4	3+0=3	4+2=6	5+2=7	1+5=6	5+2=7	27+11=38
74	Celal Bayar	-	2	1	5	7	2+0=2	3+5=8	1+2=3	1+0=1	2+5=7	24+12=36
75	İzmir Ekonomi	3	8	2	5	0	2	3	3	0	4	30
76	Kilis 7 Aralık	1	0	0	0	0	4+0=4	2+2=4	6+2=8	1+4=5	0+9=9	14+17=31
77	Siirt	-	-	1	1	1	1+0=1	2+3=5	1+3=4	3+4=7	3+6=9	13+16=29
78	Yeditepe	1	3	3	2	4	2+2=4	1+1=2	1+2=3	1+3=4	1+0=1	19+8=27
79	Ağrı İbrahim Çeçen	1	0	5	2	1	2+0=2	0+1=1	0+5=5	0+4=4	1+4=5	12+14=26
80	İstanbul Medeniyet	-	-	2	1	1	2+0=2	3+0=3	1+3=4	4+6=10	2+1=3	16+10=26
81	Bayburt	0	2	2	0	0	3+1=4	3+3=6	3+2=5	1+3=4	1+1=2	15+10=25
82	Hasan Kalyoncu	-	-	-	2	2	2+0=2	0+1=1	1+2=3	4+0=4	3+8=11	14+11=25
83	Karabük	2	0	3	1	3	2+2=4	1+3=4	1+1=2	1+3=4	1+0=1	15+9=24
84	Muş Alparslan	1	1	1	1	1	2+1=3	2+1=3	2+1=3	4+3=7	3+1=4	17+7=24
85	İstanbul Ticaret	1	3	2	1	0	10	2	2	1	0	22
86	Maltepe	1	4	0	1	4	2	3	3	2	2	22