Bibliometric Review of Studies on Organizational and Administrative Dynamics in Higher Education

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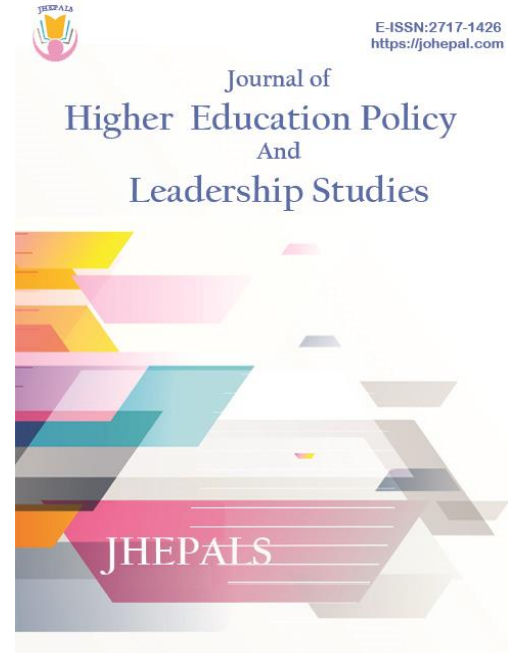
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Cite article as:

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Abstract

The purpose of this study is to perform bibliometric reviews of studies on organizational and administrative dynamics in higher education. A bibliometric review including 22139 studies published in journals indexed in Scopus between 1960 and 2020 was conducted. PRISMA was used to identify and select the studies in the sample. Data was analyzed using Scopus Analytic Tools, Excel functions, Tableau, and VOSviewer. There was an upward trend in the amount of the documents from 1960 to 2020. "Higher Education" was found the most influential journal on organizational and administrative dynamics in this period. Intellectual structure of knowledge base was based mainly on managerial issues, organizational issues, student outcomes, and sustainability. Further, limitations, interpretation, implications, as well as the recommendations were made based on the emerged findings of the present research.

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Keywords: Bibliometric Review; Higher Education; Sustainability; Leadership; Student Retention

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Organizational and Administrative Dynamics in Higher Education

Introduction

Organizations have specific characteristics like structure, culture, and people. Daft (2010) described an organization as a kind of social entity, which is structured in a planned way for achieving specified goals and is linked to external environment. From this point of view, organizations bring people together to realize certain goals. When human interactions combine with complex structures of the organization, administration of organizations makes more sense.

In order to keep up with the change, organizations need to search their environments, to develop plans, and to implement innovations while constantly renew themselves for all constituents. Jackson (2019) recommended change management including digital transformation technologies for organizations to become more competitive. Similarly, organizations need to follow changes in order to accelerate their development, to adapt, to benefit from developing technologies, and to compete (Güçlü & Şehitoglu, 2006). Keeping routines and following standards may increase performance for some organizations. However, success or achieving purposes has become highly dependent on managing changes for higher education organizations.

As an organization, higher education institutions have been challenging somewhere between adapting to a changing world or following standards. Mulà and her colleagues (2017) emphasized the importance of change in higher education for sustainable development. Higher education institutions are expected to change their environments while creating new knowledge. Dee and Leisyte (2017) concluded that organizational learning through knowledge sharing is influenced by organizational change. In these aspects, the critical question is based on how higher education institutions achieve their purposes. From organization and management perspective, higher education institutions can achieve their goals by transforming their administrative and organizational dynamics.

In the recent years, administration and governance of higher education has gained more significance. Bruckmann and Carvalho (2018) expressed that higher education institutions have changed by moving from traditional bureaucratic models to hybrid managerial model. Thus, managing higher education institutions from the view of organizational dynamics has become a necessity. According to Bastedo (2012), understanding higher education is closely related to comprehension of organizations and knowledge generation. The author also emphasized that higher education corpus included many studies on access, equity, and social justice whereas researchers in higher education field ignored organizational perspectives. By following this claim, the current study aimed to review and synthesize research on organizational and administrative issues in higher education.

Due to not only a need observed in the literature but also an attempt to interpret higher education in a more comprehensive way, the researchers of the current study focused on organizational and administrative sides of higher education. In this respect, the current study aims to review the research on organizational and administrative dynamics in higher education. In this aspect, the research questions may be listed as below:

- **RQ1:** What are the volume, growth trajectory, and geographic distribution of literature based on organizational and administrative dynamics in higher education between 1960 and 2020?
- **RQ2**: What journals, authors, and documents on organizational and administrative dynamics in higher education have evidenced the greatest citation impact over the past six decades?
- **RQ3**: What is the intellectual structure of the knowledge based on organizational and administrative dynamics in higher education?
- **RQ4**: What topical foci have pertinent to organizational and administrative dynamics in higher education attracted the greatest attention from higher education scholars between 1960 and 2020?

Organizational and Administrative Dynamics in HE: An Overview

Higher education institutions offer not only missions of research, teaching, and service but also organizational and administrative perspectives to perform these missions more properly. For this reason, researches (Birnbaum, 1991; Weick, 2012) in the literature propose the significance of "organization" and "administration" for institutions. Since Clark's (1972) 'Saga in Higher Education' was one of the earliest studies on organizational and administrative dynamics, a variety of organizational perspectives focused on improving organizational processes and structures. Among them, classical studies on organizational and administrative dynamics in higher education include organizational anarchy (Cohen & March, 1974), loose coupling (Weick, 1976), external influences (Hannan & Freeman, 1977), power (Baldridge, 1971; Salancik & Pfeffer, 1974), organizational structure (Mintzberg, 1979), old institutionalism (Selznick, 1949), and the new institutionalism (DiMaggio & Powell, 1991; Scott, 2008). We may claim that these publications are paradigmatic.

Recent studies that are built on classical perspectives cover a variety of approaches (Bolman & Deal, 2017). Some of these are college and university organization (Bess & Dee, 2012a, 2012b), organizational change (Greenwood & Hinings, 1996), organizational culture (Becher & Trowler, 2001; Bergquist & Pawlak, 2007), leadership (Bryman, 2007), and governance (Shattock, 2006).

More comprehensive recent studies include books (Manning, 2018; Huisman & Tight, 2015; Stensaker et al., 2012; Tight, 2012). We may claim that some of these works as near-paradigmatic.

Recent research on organizational and administrative dynamics in higher education in general has two lines of inquiry: The first line includes how shifting state policies results in change in the administrative and organization of higher education institutions. This area includes a broader focus of research on the topic since state mandates requires organizations adapt to these changes. A second group, although fewer in number focus on individual, institutional and administrative changes (Fumasoli & Stensaker, 2013).

Higher education research mostly stems from the problems encountered in the field and theoretical focus is conceptually evolving (Teichler, 2000). Studies conducted on organizational dynamics in higher education thus far are too limited to a certain number of

articles (20 or more). Therefore, more systematic & comprehensive reviews are needed (Fumasoli & Stensaker, 2013).

Research Methodology

The current study was performed through bibliometric analysis which can be defined as a technique to investigate process and structure of knowledge base in an academic field. According to Hallinger and Kovacevic (2019), bibliometric analysis has become popular in recent years since there is a chance to examine topographical trends within a body of knowledge. In addition, bibliometric analyses compensate the weaknesses of traditional literature review. In other words, bibliometric methods offer complementary perspectives to traditional literature reviews providing a holistic approach and bringing diversity in conceptualizations and modeling (Aparicio et al., 2020; Serenko & Bontis, 2013). In this way, bibliometric methods are beneficial to explore foundations, intellectual core, and directions for future research of a typical research field. Following sections describe the procedure related to how bibliometric analysis was conducted.

Determination

In determination of the studies, issues of research questions were considered. In order to examine research on organizational and administrative dynamics in higher education, Scopus database were selected. The reason of selection of Scopus was the fact that it provides an opportunity to generate databases for systematic reviews. This situation is declared by many scholars in the literature (Hallinger & Kovacevic, 2019, Kwiek, 2021; Mongeon & Paul-Hus, 2016) emphasized. The review was delimited to articles and reviews since they have rigorous peer review process. On the other hand, dissertations, reports, editorials, and magazine documents were excluded in the absence of peer review. Besides, proceedings and conference papers were excluded due to possibility for not having full text documents. Further, books and book chapters were excluded since there is probability of deficiencies in terms of access to hard-copy books.

Identification

PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-analyses) developed by Moher, Liberati, Tetzlaff, Altman, and PRISMA Group (2009) was followed to identify article or reviews. Steps of identification, screening, eligibility, and inclusion were considered to decide the studies to be analyzed. For identification step, the researchers of the current study pursued parameters of time period and source titles. Time period of 1960 to 2020 was included due to two reasons. Firstly, the genesis point of Scopus database was 1960-year in the review of literature. The second one was the fact that higher education literature received a corpus of studies and was referenced by many scholars in science mapping literature and only sources related to higher education literature were considered. In screening step, the key word combinations including "higher education", "management", "administration", "governance", "leadership", and "organizational behavior" were searched. As a result, 24,346 studies were screened. Eligibility check was performed in the third step by considering scope of documents. Thus, 2,207 documents which were far away

Ertem, H. Y., & Aypay, A.

from higher education focus and scope like clinical interventions and overspecialized topics were excluded. Finally, 22,139 articles or reviews were included for bibliometric synthesis in the last step. Figure 1 revealed PRISMA flow diagram.
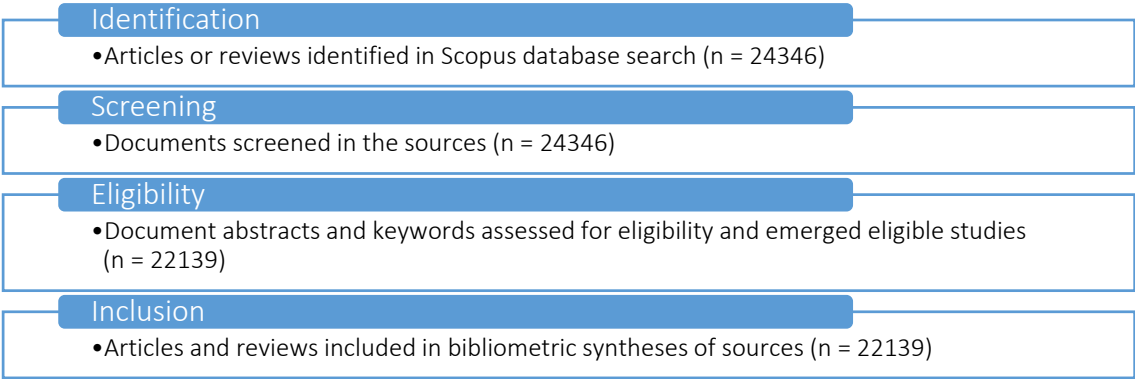
Identification
- Articles or reviews identified in Scopus database search (n = 24346)

Screening
- Documents screened in the sources (n = 24346)

Eligibility
- Document abstracts and keywords assessed for eligibility and emerged eligible studies (n = 22139)

Inclusion
- Articles and reviews included in bibliometric syntheses of sources (n = 22139)

Figure 1. PRISMA flow diagram

Data Extraction and Analysis

For the bibliometric review, 22,139 articles or reviews were recorded to be synthesized and analyzed. Meta-data of each article coming from Scopus database were stored in a CSV Excel file. Metadata included authors with their affiliations, source, document type, document title, abstract, keywords, references, and values related to citation in addition to descriptive statistics like frequency of years, territory, and sources. The current study conducted with descriptive analysis, citation analysis, co-citation-analysis, and social network analysis to disseminate results of the review. In order to conduct these analyses, Scopus Analytic Tools, Excel functions, Tableau, and VOSviewer were used. VOSviewer is a software creating visual representations of network maps of relationships of variables. VOSviewer was performed to form maps showing relations among structure in the current study. Scopus Analytical Tools together with Excel were functioned to present descriptive analysis results such as citation number, author affiliations, and growth in terms of years. Tableau was performed to construct heat map demonstrating geographical distribution of articles. Finally, VOSviewer was applied both to conduct citation analysis and co-citation analysis and to represent relationships among structures through social network maps.

Results

This section presents the findings of analyses mentioned above. Each sub-section responds relevant research questions.

What the volume, growth trajectory, and geographic distribution of literature based on organizational and administrative dynamics in higher education between 1960 and 2020 are:

A total of 22,139 documents were found as noted above such that period of 1960 and 2020 were distributed to four quarters. As the Figure 2 depicted, there was an upward trend in the number of the documents. The first quarter between 1961 and 1975 included 124 studies while there were 599 documents in the second quarter between 1976 and 1990. The third period between 1991 and 2005 and fourth period between 2006 and 2020

included 2853 and 18,563 documents on organizational and administrative perspectives in higher education, respectively. The reason for the unprecedented increase in the number of studies may be related to emphasis of communities on higher education studies in recent years. Within the effect of globalization, countries compete with each other over students, faculty, and knowledge production since higher education provided both human capital, intellectual, and economic capital. For example, there is an effort to synthesize a huge body of higher education studies that supports this argument in the literature (Budd, 1988; Daenekindt & Huisman, 2020; Kwiek, 2021). Access to higher education also increased over years. As a result, more researchers focused on organization and administration of higher education over years.
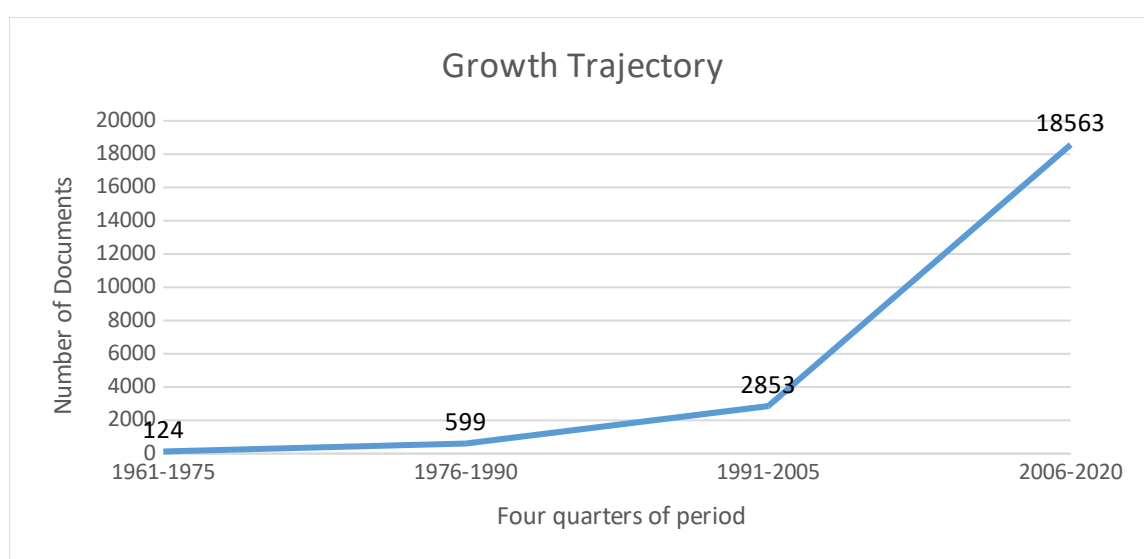

Figure 2. Graph of Growth Trajectory

Geographical distribution of the documents in terms of organizational and administrative dynamics in higher education was demonstrated via heat map. Heat map is a tool indicating intensity of countries in terms of number of published documents. Heat map was provided by free version of Tableau 2020.4 which was performed to discover geographical distribution of the studies. The map showed dominance of Anglo American countries, i.e., US, UK, and Australia produced 4,805, 3,323, and 1,549 documents, respectively. They accounted for 37.4% of the documents indexed in Scopus database. On the other side, only a few African countries had little or no studies while 158 countries had at least one document. In addition, there were 45 countries that had more than 100 publications. This may be considered as an indicator for diversity in studies in terms of the countries. Figure 3 represented geographical distribution of HE literature based on organizational and administrative dynamics in higher education.
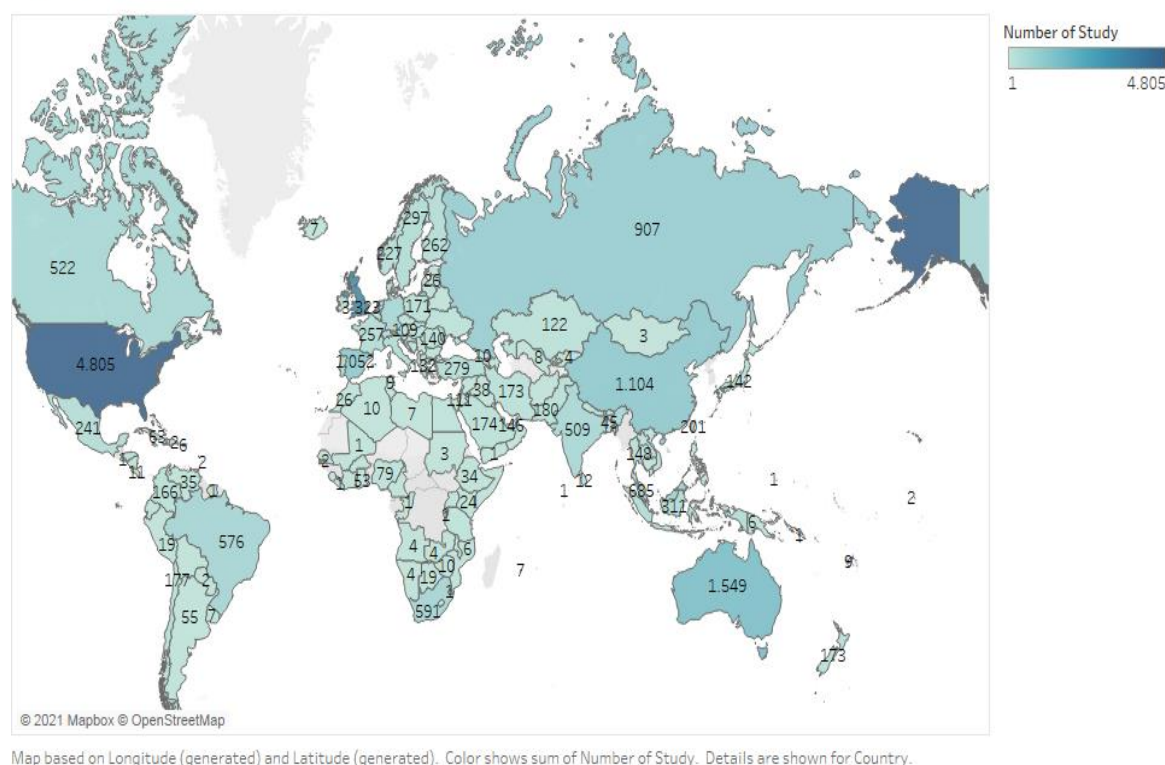
Sheet 2

Map based on Longitude (generated) and Latitude (generated). Color shows sum of Number of Study. Details are shown for Country.

Figure 3. Geographical Distribution of HE Literature on Organizational and Administrative Dynamics

Blank spots or spots with low number studies of countries may be considered as an evidence for the development level of the countries. Distribution of these studies may be considered vis-à-vis with development level of the countries. In other words, developed countries invest in more resources to higher education than developing countries. Table 1 displays this differentiation among countries.

Table 1.
Countries in terms of Number of Publication

Countries having most studies		Countries having the least studies	
Country	Studies	Country	Studies
United States	4,805	Bahamas	1
United Kingdom	3,323	Bhutan	1
Australia	1,549	Burundi	1
China	1,104	Congo	1
Spain	1,052	Cote d'Ivoire	1
Russian Federation	907	Democratic Republic Congo	1
Malaysia	685	El Salvador	1
South Africa	591	Federated States of Micronesia	1
Brazil	576	Democratic Republic, DDR	1
Germany	525	Gibraltar	1
Canada	522	Haiti	1
India	509	Honduras	1
Portugal	380	Lesotho	1

Organizational and Administrative Dynamics in Higher Education

Netherlands	349	Liberia	1
Indonesia	311	Liechtenstein	1
Italy	309	Maldives	1
Sweden	297	Mali	1
Turkey	279	Martinique	1
Finland	262	Nicaragua	1
France	257	Sierra Leone	1
Hong Kong	248	Solomon Islands	1
Mexico	241	Somalia	1
Norway	227	Suriname	1
Taiwan	201	Swaziland	1
Ireland	185	Yemen	1

What journals, authors, and articles on organizational and administrative dynamics in higher education have evidenced the greatest citation impact over the past six decades:

The current study takes articles and reviews on administrative and organizational dynamics in higher education into account. First of all, minimum number of documents of a source and minimum number of citations of a source were adjusted respectively to 10 and 5 such that 24 sources appeared. For each of 24 sources the total strength of citation links with other sources was calculated. The first 10 sources with the greatest total link strength were sorted in Table 2. The most influential source was "Higher Education". "Quality Assurance in Education" and "Studies in Higher Education" followed, respectively. Most of the documents were articles or reviews published in the journals included in Social Science Citation Index.

Table 2.
The Number of Articles in Journals

Rank	Journal	Number of relevant articles (1960-2020)	Citations	Total Link Strength
1	Higher Education	118	7,959	113
2	Quality Assurance in Education	46	3,367	88
3	Studies in Higher Education	75	4,518	80
4	International Journal of Educational Research	40	2,265	65
5	Journal of Higher Education Policy and Management	47	2,363	59
6	Higher Education Quarterly	27	1,488	57
7	Quality in Higher Education	19	1,006	36
8	Tertiary Education and Management	23	1,067	35
9	Higher Education Policy	20	1,027	26
10	Higher Education Research and Development	18	1,008	23

Additionally, authors of the documents were examined by considering citations and co-citations. To begin with, citation analysis was performed via VosViewer which showed authors with number of publications, number of citations, and total link strength. Threshold including minimum number of documents of an author and minimum number of citations of an author were adjusted respectively to 5 and 10 such that 14 authors emerged. the total

strength of citation links with other authors was calculated for each of 14 authors. The first 6 authors with the total link strength more than two were sorted as the Table 3 depicted. The first three authors were respectively Deem, R., Stensaker, B., and Whitchurch, C. in terms of total link strength.

Table 3.
Highly Influential Authors in Citation Analysis

Rank	Authors	Documents	Citation	Total Link Strength
1	Deem, R.	8	1,213	10
2	Stensaker, B.	13	620	5
3	Whitchurch, C.	7	452	5
4	Enders, J.	6	660	3
5	Mok, K. H.	7	381	3
6	Marginson, S.	7	653	2

Following that, a co-citation analysis for authors was performed. An "author co-citation network" represents the frequency with which two authors are cited together in another document. Threshold including minimum number of citations of an author were selected as 100 such that 36 authors emerged. For each of 36 authors the total strength of co-citation links with other authors was calculated. Analysis showed that the first five authors were respectively Clark, B.R., Marginson, S., Parasuraman, A., Zeithaml, V. A., and Berry, L. L. considering total link strength. The former two are scholars in higher education field while the last ones are scholars in organization field. Considering co-citation analyses, the most productive 10 scholars were listed in Table 4.

Table 4
The Most Productive Scholars in terms of Co-Citation Analysis

Rank	Authors	Citation	Total Link Strength
1	Clark, B. R.	166	1,337
2	Marginson, S.	213	1,280
3	Parasuraman, A.	168	1,250
4	Zeithaml, V. A.	150	1,232
5	Berry, L. L.	149	1,219
6	Deem, R	210	1,162
7	Kogan, M.	126	1,154
8	Slaughter, S.	131	999
9	Teichler, U.	123	979
10	Rhoades, G.	104	977

Lastly, documents having the most citation and co-citation were investigated. In the beginning, document citation analysis was performed by adjusting threshold of minimum number of citations of a document to 100 such that 250 documents appeared. The number of citation links was calculated for each document. The document with the largest number of links was sorted. Citation analysis showed that "The McUniversity: Organization, management and academic subjectivity", "New managerialism and higher education: The management of performances and cultures in universities in the United Kingdom", and

Organizational and Administrative Dynamics in Higher Education

"Management as ideology: The case of 'new managerialism' in higher education." were the most cited documents with the citations over 300. Further, administrative issues, change, and sustainability were the topics emerged. Table 5 summarized the documents having the greatest impact.

Table 5
The Documents with the Greatest Impact in Citation Analysis

Rank	Authors	Document	Citation	Link
1	Parker, M., & Jary, D. (1995).	The McUniversity: Organization, management and academic subjectivity.	333	8
2	Deem, R. (1998)	New managerialism and higher education: The management of performances and cultures in universities in the United Kingdom.	387	5
3	Deem, R., & Brehony, K. J. (2005)	Management as ideology: The case of 'new managerialism' in higher education.	387	5
4	Winter, R. (2009)	Academic manager or managed academic? Academic identity schisms in higher education.	195	5
5	Chandler, J., Barry, J., & Clark, H. (2002)	Stressing academe: The wear and tear of the new public management.	145	5
6	Lozano, R., Ceulemans, K., Alonso-Almeida, M., Huisingh, D., Lozano, F. J., Waas, T., ... & Hugé, J. (2015)	A review of commitment and implementation of sustainable development in higher education: results from a worldwide survey.	268	4
7	Thomas (2004)	Sustainability in tertiary curricula: what is stopping it happening?.	154	4
8	Hesselbarth, C., & Schaltegger, S. (2014)	Educating change agents for sustainability– learnings from the first sustainability management master of business administration.	123	4
9	Ferrer-Balas, D., Lozano, R., Huisingh, D., Buckland, H., Ysern, P., & Zilahy, G. (2010)	Going beyond the rhetoric: system-wide changes in universities for sustainable societies.	119	4
10	Stephens, J. C., Hernandez, M. E., Román, M., Graham, A. C., & Scholz, R. W. (2008)	Higher education as a change agent for sustainability in different cultures and contexts.	254	3

Finally, a "document co-citation network" was performed such that the frequency with which two documents are cited together in another document. Minimum number of citations of a cited reference was determined as 10 such that 10 documents appeared. The total strength of the co-citation links with other cited references was calculated for each cited references. The cited references with the greatest total link strength were sorted as the Table 6 presented. "Defining Quality", "Linking student satisfaction and service quality perceptions: the case of university education", "Academic identities and policy change in higher education" were the most influential documents co-citation analysis was used. The topics received attention among documents were quality, student satisfaction, change, sustainability, and public management.

Ertem, H. Y., & Aypay, A.

Table 6
Highly Influential Documents in Co-Citation Analysis

Rank	Authors	Document	Citation	Link
1	Harvey, L., & Green, D. (1993)	Defining quality.	14	4
2	Athiyaman, A. (1997)	Linking student satisfaction and service quality perceptions: the case of university education.	12	3
3	Henkel, M. (2000)	Academic identities and policy change in higher education	15	3
4	Ferlie, E., Ashburner, L., Fitzgerald, L., & Pettigrew, A. (1994)	Characterizing the 'new public management.	10	2
5	Parker, M., & Jary, D. (1995).	The McUniversity: Organization, management and academic subjectivity.	12	1
6	Ramsden, P. (1998).	Learning to lead in higher education. London: Routledge	11	1
7	Cortese, A. D. (2003)	The critical role of higher education in creating a sustainable future.	12	0
8	Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989)	User acceptance of computer technology: a comparison of two theoretical models.	11	0
9	Deming, D. J., Goldin, C., & Katz, L. F. (2012)	The for-profit postsecondary school sector: Nimble critters or agile predators?	12	0
10	Snyder, T. D., & Dillow, S. A. (2014)	Digest of education statistics.	14	0

What is the intellectual structure of the knowledge base of organizational and administrative side of higher education?

Intellectual structure of higher education knowledge base on organizational and administrative dynamics was examined within "author co-citation analysis". VOSviewer was performed to generate co-citation map which visualized similarities of research by scholars in higher education field. Threshold including minimum number of citations of an author were selected as 50 such that 120 authors were displayed. As Figure 4 depicted, the maps classified authors into clusters and there were five clusters. Density of links connecting scholars was proportional to both the number of times a scholar was co-cited with another scholar and inter-connectedness of knowledge base. Deem, R., Marginson, S., and Clark B. R. showed largest nodes such that this finding was consistent with the results presented in Table 4. Moreover, Harvey, L., Parasuraman, A., and Ramsden, P. had a boundary spanning role integrating concepts of each clusters while Lozano, R. and other scholars constructed a distinctive circle.

In order to name clusters, "Schools of Thought" approach was followed such that common theoretical perspectives derived from intellectual structure were comprised by this approach (Börner et al., 2003; Hallinger & Kovacevic, 2019; van Eck & Waltman 2017). As Figure 4 indicates, seven clusters emerged in the network map represented some sub-fields. The cluster in the bottom-left region (red) included a sub-field or school of thought related to scholars on higher education policies (e.g. Clark, B. R., Scott, P., Teichler, U., Stensaker, B., & Kogan, M.). The cluster located in upper-left side (green) had a school of thought consisting of management and leadership scholars (e.g. Deem, R., Parker, M., Middlehurst, R., Barnett, R., and Wilmott, H.). The cluster in the region from centre to the bottom-right side included studies related to organizational quality and culture (e.g. Parasuraman, A., Harvey, L., Hofstede, G., Yorke, M, & Fornell, C.). The cluster in the central and dispersed region (yellow) included scholars studying internationalization (e.g. Marginson, S., Slaughter,

Organizational and Administrative Dynamics in Higher Education

S., Altbach, P. G., Mok, K. H., & Rhoades, G.). The cluster in the bottom-right side (turquoise) had scholars focusing on student retention (e.g. Tinto, V. Pascarella, E. T., Austin, A. W., Kuh, G. D., & Hurtado, S.). Cluster in the upper-right side (orange) included scholars studying topics related to teaching and learning (e.g. Ramsden, P., MArton, F., & Gibbs, G.). Finally, region at the upper-right and not connected to other clusters of the map included scholars concentrating on the sustainability (e.g. Lozano, R., Ferrer-Balas, D., & Wright, T.). By summarizing and synthesizing these clusters, intellectual structure of organizational and administrative dynamics in higher education may be characterized as managerial, organizational, student outcomes, and sustainability perspectives. The former three clusters were inter-related to each other while the last one was distinctive from the others. In conclusion, these clusters imply communities of scholars in the same topic that builds each other's work as it was underlined in "Invisible Colleges" (Crane, 1972). The content and the development of the publications are influenced from a social structure within disciplines and they create norms in specialized fields. Individuals adhere to and thus the literature expands and develops.
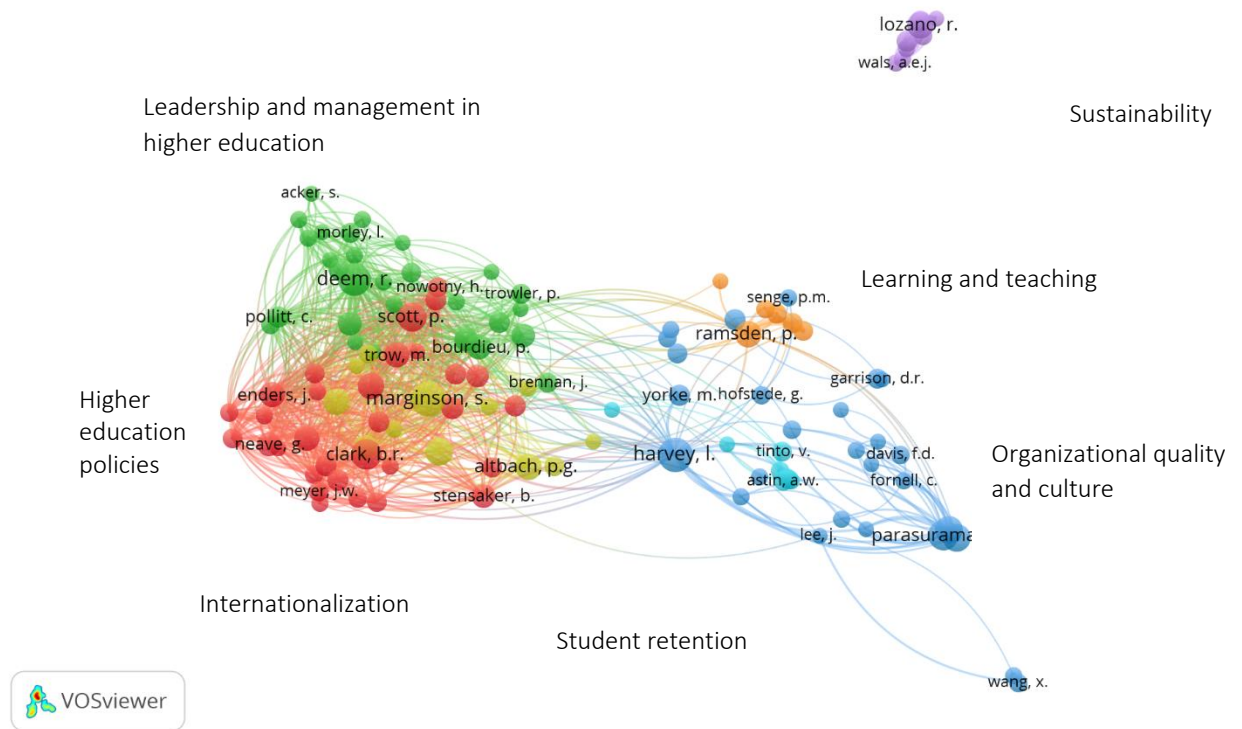

Figure 4. Intellectual Structure of Knowledge Base

Ertem, H. Y., & Aypay, A.

What topical foci have pertinent to organizational and administrative dynamics of higher education appealed the greatest attention between 1960 and 2020?

In order to identify topical foci in the literature of higher education based on organizational and administrative issues, co-occurrence analysis that is a kind of co-word analysis was performed to identify trends in topical foci studied by HE scholars. Through VOSviewer, comprehensive picture of knowledge base was presented. Further, co-word analysis indicated the close associations among concepts behind words which were frequently co-occurred in the documents (Zupic & Čater, 2015). Minimum number of occurrences of a keyword was adjusted to five such that 210 keywords were revealed out of 4,054 keywords. The total strength of the co-occurrence links with other keywords was calculated for each of 210 keywords. As the Figure 5 depicted, the most commonly three co-occurring keywords were higher education (n = 495), universities (n = 92), and education (n = 60).
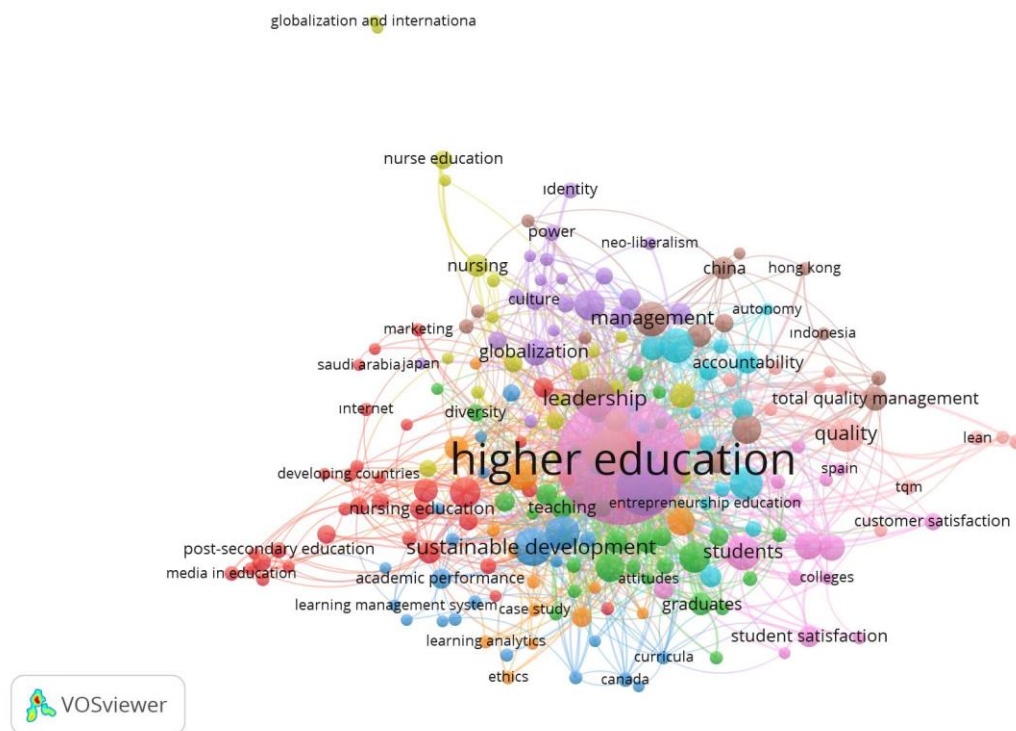

Figure 5. Keyword Co-Occurrence Map

The co-word analysis map showed ten clusters which were named as student outcomes (left side, red color), community support services (upper-left side, yellow), globalization (middle to upper, purple), management and leadership (dispersed region in the centre, brown), higher education policies (centre to right side, blue), sustainability in higher education (centre to bottom, dark blue), quality and satisfaction (the right side, lilac), organizational change and culture (centre to bottom, green), learning and teaching (dispersed region to the bottom, orange), and performance measurement (right side, pink). On the other hand, topical analysis was again performed to check trends in the recent years. Temporal analysis was adjusted to depict articles and reviews published in Scopus-indexed journals between 2007 and 2015. Klavans and Boyack (2017) offered this procedure as a

Organizational and Administrative Dynamics in Higher Education

research front which is a kind of indicator for trends emerged in recent documents. Temporal or topical analysis represented a dispersion of research front in research from "sustainability" to "mobile learning". Common characteristics of these topics may be shown as evidence to support the fact that institutional and technological issues were emerging trends in higher education. Figure 6 highlighted the relative emphasis of recent topics such that yellow nodes are more novel topics for organizational and administrative dynamics in higher education.

Figure 6. Temporal Overlay for Keyword Co-Occurrence Map on Articles from 2009 to 2017

Discussion and Conclusion

In the present study, corpus of the research on administrative and organizational dynamics in higher education indicated an upward trend. There were five times more studies published in the most recent quarter (2006-2020) than the quarter preceded it (1991-2005). Among the reasons behind this unprecedented increase may be the expansion of higher education and the concerns raised over administrative and organizational issues. To illustrate, Kanji, Malek, and Tambi (1999) stated that higher education institutions in UK combined institutional performance with business excellence by considering total quality management.

Topographical analysis of studies depicted a skewed geographical distribution such that most of the studies were conducted in Anglo-American countries like US, UK, and Australia. Additionally, China and Spain drew attention with the studies over one thousand.

Ertem, H. Y., & Aypay, A.

Similar conclusions for these countries may also be found in other studies (Dehdarirad et al., 2015; Hallinger & Kovacevic, 2019; Sönmez, 2020). Another explanation may be the development level of the countries. OECD (2020) report confirms this idea such that GDP (Gross Domestic Product) of these countries were much higher than OECD average. One argument may be the cultural imperialism. Languages of these five countries which are English, Chinese, and Spanish are among the most spoken five languages of the world (Statista, 2021).

Considering journals publishing documents, *Higher Education, Quality Assurance in Education,* and *Studies in Higher Education* were the most influential journals. Common characteristics of these journals were indexed by reputable indexes like SSCI and ESCI. Study by Kwiek (2021) placed *Higher Education* and *Studies in Higher Education* among the elite journals. In addition, the current study acknowledged the contribution of pioneer HE scholars such as Rosemary Deem, Simon Marginson, A Parasuraman, and Bjorn Stansaker. These authors also emerged in another bibliometric review studies. To illustrate, Brika et al. (2021) found that A. Parasuraman, L. Harvey, and B. Stansaker were the most cited authors in the studies focusing on quality in higher education. When the most-cited and co-cited documents were examined, the common scope of the topics appeared as management, sustainability, and change. This trend is consistent with other studies in the literature. Hallinger and Chatpinyakoop (2019) examined higher education for sustainable development and concluded that managing for sustainability in higher education was the one of the knowledge base in the field. Similarly, documenting these studies described *canonical texts* (White and McCain, 1998) such that they took an interdisciplinary approach and made contributions by synthesizing management, organization, and higher education. In conclusion, these findings asserted that identification of the most influential authors and documents may serve to enhance the evolution of higher education field.

Intellectual structure of knowledge base on administrative and organizational dynamics in higher education was examined via author co-citation network. Intellectual structure of knowledge base was found as leadership and management in higher education, sustainability, teaching and learning, organizational quality and culture, student retention, internationalization, and higher education policies. As a result, these topics represented the constructs in the cognitive structure of administrative and organizational aspects of higher education. This result is consistent with the ideas in the literature since the researchers in higher education field showed dominance of these topics in higher education. For example, Esen, Bellibaş, and Gümüş (2020) investigated evolution of research on leadership in higher education and concluded that leadership models or types were the most studied topic in higher education literature. In addition, Kahu (2013) reviewed the literature on student engagement and classified research perspectives which were psychological, behavioral, socio-cultural, and holistic. Thus, the intellectual structure of organizational and administrative dynamics in higher education exhibited four dimensions: managerial, organizational, student outcomes, and sustainability. Interestingly, sustainability emerged as distinct category from former three dimensions. This finding may be explained by the fact that the links between research on sustainability and in higher education have not been established sufficiently yet. This literature mostly included studies emphasizing the importance of higher education for sustainable development (Hallinger & Chatpinyakoop,

2019). To conclude, although the literature presented an intellectual structure of knowledge base, there is still room for further research in this area.

Finally, topical foci were examined with co-occurrence analysis such that co-word analysis offered ten clusters: leadership and management, student outcomes, community support services, globalization, higher education policies, sustainability in higher education, quality and satisfaction, organizational change and culture, teaching and learning, and performance measurement. It is obvious that topical foci pertinent to administrative and organizational dynamics in higher education were inclusive since it also included intellectual structure of knowledge base. On the other hand, temporal analysis of topical foci showed a dominance of institutional and technological issues in research front of administrative and organizational dynamics in higher education. This finding was compatible with the finding presented earlier, which indicated the need for more studies focusing on the institutional side and sustainability in higher education.

Discussion of the results permits us to present several implications. Firstly, Scopus database is an effective tool to perform bibliometric analyses. Thus, scholars not only in higher education field but also in other fields may benefit from taking advantages of Scopus in bibliometric reviews. Secondly, the researchers of the current study implied that volume and growth of the research discovered the popularity and significance of administrative and organizational perspectives in higher education. However, "blank spots" in geographical distribution of research could be filled with the endeavors of scholars from different cultures. Integrative reviews of literature including influential authors and documents may provide an opportunity for novice researchers to comprehend and synthesize the trends in the field. Hallinger and Kovacevic (2019) emphasized that readers or scholars may synthesize ideas behind the literature so that knowledge accumulation and fresh insights may generate new opportunities to resolve challenges in practice of higher education. This review also identified "canonical texts" (White and McCain, 1998) such that interdisciplinary approaches based especially on organizational perspectives were promoted since studies related to both in higher education (e.g. Gurin et al., 2002) and in other related fields such as management and organization (Antonio, 2001) were documented by considering knowledge base.

The current study is limited to bibliometric analysis of studies in Scopus database such that it could not be substituted for synthesis of research or meta-analysis. Additionally, some documents like conference papers were excluded and this bibliometric analysis did not include the entire higher education literature. Thus, the results cannot be generalized to the whole knowledge base. Moreover, the results of the current study were mostly limited to Anglo-American societies. Clearly, this dominance may have prevented broader applicability of findings to other cultures. It is also important to keep in mind that only documents in English were included in the analysis. Therefore, new questions may be raised as to whether the trends emerged in the study were really applicable or there might be trends that are unnoticed in other languages/cultures. Lastly, the current study did not include demographics of authors like age, ethnicity, or gender so that another limitation related to methodology may influence the conclusions about administrative and organizational side of higher education.

The following recommendations for researchers, practitioners, and policy-makers are in order. Researches in the future may conduct studies in different contexts to eliminate

limitation related to generalizability. Thus, researchers may present opportunities to explore and fill "blank spots" so that cross-cultural comparisons may be possible. In addition, this diversity may assist to draw a more comprehensive global picture of administrative and organizational perspectives in higher education. Further, findings of other databases like Web of Science could be compared and contrasted. Significant issues related to management and organization of higher education may be recommended to the practitioners. They may consider what and how mostly cited documents and authors may make contribution on the development of higher education. Interdisciplinary perspectives may be followed by practitioners. Further, constituents of higher education may concentrate on intellectual structure of knowledge base in decision-making procedures. To illustrate, student retention is a crucial factor for improving management and organization of higher education. Higher education administrators may discover alternative approaches for increasing student retention. Lastly, policy-makers could focus on not only the administrative but also the organizational side of higher education. For instance, policy-makers may improve policies around teaching, research, and service missions of higher education by considering both administration and organization of higher education. In other words, multi-dimensional approaches may be more useful for implementing new policies. Policy learning may be advised among countries. Thus, policies may address to the needs of different contexts.

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