

A CONTENT ANALYSIS OF THE STUDIES ON "SCHOOL MANAGER AND INNOVATION" UN ANÁLISIS DE CONTENIDO DE LOS ESTUDIOS SOBRE "GESTIÓN ESCOLAR E INNOVACIÓN"

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Abstract:

The aim of this study was to determine the distribution of researches on "innovation and school principals" published in the sources in Scopus database according to their publication years, publication sources, authors, affiliations, countries and regions, document types, subject areas, research approaches and participants in order to reveal the tendency that is common in studies. The terms "innovation" and "school principal" was searched on the Scopus database and 65 publications published between 1984 -2017 were identified. The data was analyzed via content analysis method. It has been found that most of the studies were carried out in the United States, the majority was article in terms of document type, and the number of works in 2011 was more than the works carried out in other years. It was found out that the utilization rate of the mixed method was very low compared to the qualitative and quantitative methods and that it is preferred by researchers to prefer school principals, assistant principals and teachers as participants.

Keywords: Innovation, school, school manager, content analysis.

Resumen:

El objetivo de este estudio fue determinar la distribución de investigaciones sobre "innovación y principios escolares" publicadas en las fuentes de la base de datos Scopus de acuerdo con sus años de publicación, fuentes de publicación, autores, afiliaciones, países y regiones, tipos de documentos, áreas temáticas, investigación enfoques y participantes con el fin de revelar la tendencia que es común en los estudios. Los términos "innovación" y "gestión escolar se buscaron en la base de datos Scopus y se identificaron 65 publicaciones publicadas entre 1984-2017. Los datos fueron analizados a través del método de análisis de contenido. Se ha encontrado que la mayoría de los estudios se llevaron a cabo en los Estados Unidos, la mayoría fue artículo en términos de tipo de documento, y el número de trabajos en 2011 fue más que los trabajos realizados en otros años. Se descubrió que la tasa de utilización del método mixto era muy baja en comparación con los métodos cualitativos y cuantitativos, y que los investigadores prefieren que los directores de escuelas, los subdirectores y los profesores sean los participantes.

Palabras clave: Innovación, escuela, director, análisis de contenido.

1. Introduction

1.1. Innovation

The word "innovation" that was derived from the word 'innovatus' in Latin implies the use of new techniques in social, cultural and administrative contexts (Kurt, 2016). According to Yavuz (2010), innovation includes technological products as well as products, processes, new marketing techniques and organizational change. Innovation involves a process and a result. Innovation is to create something that does not exist, or to transform or develop the existing one (Eraslan, 2014).

Innovation is an important element in organizations' ability to compete with the fast-developing world. The recognition of the importance of innovation has led to the spreading of the phenomenon of innovation over time, and many countries define innovation as national philosophy (Kurtulus, 2012).

It is an undeniable fact that the developments in the field of science and technology have a great influence on the organizations. The presence of creativity and innovation in an organization makes the organization different from other organizations (Bradley, 2015). Organizations that embrace innovation and achieve it successfully can easily adapt to their surroundings. Innovation is indispensable for organizations to be successful and sustainable (Erdogan, 2012). In order to achieve a successful innovation the collaborative work of researchers, designers and practitioners is of great importance (Štemberger and Cencič, 2016; Bicen & Uzunboylu, 2013).

1.2. Types of Innovation

In the literature, innovation is divided into categories according to its form. In the Oslo Guide (2005), it is seen that types of innovation are under four headings (as cited in Ciftci and Gunduz, 2016). *Product innovation* is improving a product or service to make it more usable (Farmer and Gunduz, 2016). *Process innovation* is the bringing of processes to a better state in terms of delivering more efficient, less costly, timely and accurate delivering techniques that present existing services in different ways to be more effective. It especially involves serious changes in equipment that provide production (Hobikoglu, 2015). *Marketing innovation* is a technique that includes changes to the product design, pricing and promotion. Innovations under this heading aim to increase the sale by meeting the needs of the service purchasers, by offering the existing service in a different way on the market, or by creating a market that does not exist (OECD, Oslo Manual, 2005). *Organizational innovation* aims to improve job satisfaction and productivity of employees in an organization by developing new techniques. The difference between this kind of innovation and the other types of innovation is that the organizational practice that takes place in the wake of the decisions taken by the managers is to be implemented for the first time in that organization. In other words, the implementation put into effect may not be something new to the country or the sector in question, but it is something new to that organization (Erdogan, 2011).

1.3. Innovation in Education

Administrators, teachers and all the individuals involved in the education system struggle for the success of schools. The student success is the most important indication that the schools fulfill their goals appropriately (Kale, 2016). Musluoglu (2008) stated that innovation in

education means educating individuals who have gained the 21st century skills, who have environmental literacy and who are aware of what is happening in the world and have creative ideas. Innovation in education includes developing a new curriculum at educational institutions, making use of information and communication technologies in e-learning and in communication with pupils and parents (OECD, 2009). According to Looney (2009), innovation in education covers teachers, students, buildings and sites where the teaching takes place, teaching materials, curriculum and evaluation methods. According to Towndrow et al., innovation in education has to incorporate education-related policies, administrative regulations, leadership, classroom practices, teaching materials, teacher competencies, curriculum and assessment and evaluation techniques (as cited in Kurtulus, 2012).

Innovation has an important role in the economic growth and social development of countries. Economists emphasize the importance of investing in educational innovation in order for a country's economic development and sustainability. In order for the innovation to be successful it is a must to improve individual creativity, level of knowledge and skills. Educating individuals is what makes this possible. Looney (2009) listed the factors that make innovation in education a necessity: changes in the individual's work life, social life and family life, the rapid development of technology, the increase in the need to motivate the students and attract their attention, and social and economic constraints.

Aksoy (2003) emphasized that today it is not arguable whether or not technological products should be included in the classroom in education, but how these products should be procured, how they should be used, how their effects can be inspected and evaluated, and how technology products can be utilized. While studies on innovation in education are planned, the aim should be to ensure student improvement and to make positive effects on their achievements. The goal here is not to make technology products popular. In order to improve innovation and creativity in students, besides the struggle of teachers and students, external agents and educational policies should be supportive, and factors that do not foster innovation need to be removed. The rapid progress of technology in our age, the emergence of differences between individuals, the physical condition of the school and its environment reveals the importance of innovation in education (Ciftci and Gunduz, 2016; Ozcinar, Ekizoglu & Kanbul, 2016). On account of this, there are important tasks for education managers and school principals within this scope.

1.3. School Principal and Innovation

In order to ensure that students are prepared for the constantly evolving science and technology, educational environments need to be regulated in line with the needs (Cabi, 2015). School principals and other administrators have an undeniable role in the process of innovation in schools. In this process, the knowledge, skills and abilities possessed by the principals play an important role. To follow scientific and technological developments, to establish healthy relations with the environment, to be a successful leader and to increase the motivation of the staff are the qualifications expected from the school principals in the process of innovation. It is assumed that the school administrators who have the mentioned qualifications should possess the ability to determine the points that need change in their institutions and make the changes that will benefit the institution with a successful plan (Agaoglu, Altinkurt, Yilmaz and Karakose, 2012). The school principal's plans for innovation indicate his competencies in innovation.

The principal has a great impact on the success of the innovation process. The principal's determination, perseverance, faith and readiness for innovation can affect all the individuals in the organization. It is the principal's duty to plan the initiation of the innovation process, to give clear instructions to the staff about his expectations of them during the process, encourage the

individuals involved in the process with a strong communication skill and motivate them. If the principal dares to take risks when it is needed and unless he sticks too much to the rules, he will help the innovation process to work correctly (Kurt, 2016).

Elci (2006) argued that principals need to display their ambition, determination and enthusiasm to the others, encourage and motivate them, prepare an environment where innovation is realizable, be self-confident in insisting on the process, define a vision, be optimistic, take risks and know how to manage them and believe in their staff in order to achieve innovation. Akis (2007) stated that an innovative leader is the one who knows how to take advantage of opportunities, obtains the necessary information by establishing connections, encourages staff to participate in the innovation process and provides them with opportunities.

In his study that aims to draw a general profile of the studies in Turkey which are on innovation between 2000 and 2015 Celik (2016) concluded that, the theses are mostly done at the Institute of Social Sciences and at the Department of Business Administration, “innovative performance” is the focus of many studies, and in the majority of studies the data were gathered via surveys. Gokce (2004) tried to determine school principals’ competence in managing innovation and found out that school principals are “good” at managing innovation. The findings of Sonmez’s study (2005), which was conducted to identify school administrators’ roles in innovation process, indicate that it was expected of school administrators to be more careful in providing resources, establishing a healthy communication network, motivating staff, being credible, and encouraging cooperation. Dil, Uzun and Akkanat (2012), in their research on innovation in nursing education, pointed out that e-learning is not used effectively in practice and student preferences are not taken into consideration when teaching, and they made some suggestions to the education administrators. Kurtulus (2012) tried to determine the degree of knowledge the students and teachers have about innovation. As a result of the interviews, it was clear that neither teachers nor students were informed about the concept of innovation, and the innovations that are carried out by the school administrators regards social activities, schools’ physical structure and teaching practices. The results also showed that it was a must to provide the necessary resources to realize innovation in schools. Titrek (2015) found out that school managers in Turkey were at the intermediate level of innovation management competence, and that they used innovative techniques to improve the school. Koch, Binnewies, and Dormann (2015), made a research on the role of school principals as sources of inspiration for motivating the staff to participate in the innovation process at schools.

When we examined the studies carried out in the field of education administration, supervision, planning and economics, we saw that there were not many researches that focus on the both innovation and school principal. Although there are studies on content analysis of various subjects (Demirok, Besgul & Baglama, 2016; Uzunboylu & Cumhur, 2015), Celik (2016) stated in his study that there was no content analysis of postgraduate thesis studies on innovation.

1.4. The Research Problem and Purpose of the Research

Content analysis of the published studies in the Scopus database is of importance in terms of contributing to the field, providing a new perspective to the researchers and serving as a guide to the studies to come. It is aimed that this research will present the distribution of the researches on innovation in the schools according to their methods, participants, subject areas, years, source, document types and countries. Within the scope of the study, answers to the following questions were sought:

1. When the keywords "innovation" and "school principal" searched on Scopus database what is the distribution of the documents published between 1984 and 2017 by years, sources, authors, affiliations, countries / regions, document types, subject areas?
2. What research methods are used in the studies?
3. Who are the participants of the studies?

2. Method

2.1. Research Design

In this research, 65 documents on "school principal and innovation" on Scopus database were analyzed via content analysis technique. Content analysis is a research method that involves categorizing and comparing documents, and extracting theoretical conclusions from them (Cohen, Manion and Morrison, 2007). According to Yildirim and Simsek (2006), content analysis is to gather similar data according to the determined concepts and themes, and to organize and interpret these concepts and themes in a way that is easy to understand.

2.2. Data Collection and Analysis

The concepts of "school manager and innovation" used as search terms on Scopus database. Since the first document on this subject dates back to 1984, the data for this study were obtained by examining the 65 studies published between 1984 and 2017. An expert was consulted about the selection of the keywords prior to the search.

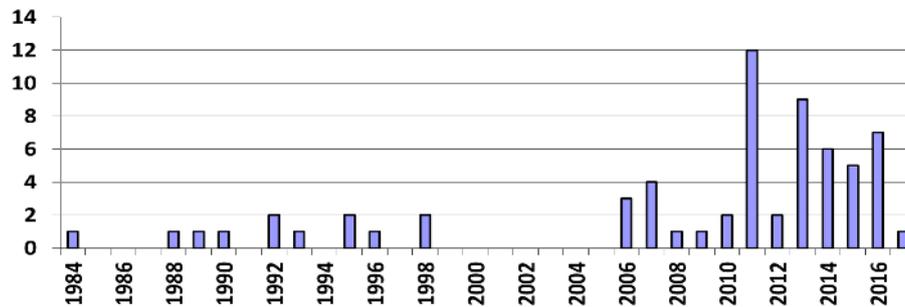
The documents, which were analyzed via content analysis, were organized, put into categories, compared with each other, and the obtained data were presented in graphics and the graphics are explained in detail. The articles were retrieved from the internet. Scopus is the largest database of peer-reviewed literature containing scientific journals, books and conference papers. It can be used to reach the researches published all over the world. Scopus is used around the world by more than three thousand institutions (www.elsevier.com). First, the abstracts of the documents reached as a result of the search were examined and the research questions were tried to be answered. Then, any missing information was reached by retrieving the full texts.

3. Findings

3.1.1. Timeline of the Documents by Year

In the Scopus database, the keywords "innovation" and "school principal" were searched and the results showed 65 documents published between 1984 and 2017. The distribution of these documents by years is given in Figure 1. Figure 1 indicates that the first document on this subject was published in 1984. 23 documents were published within 27 years, from 1984 to 2011. There were not any published documents between the years of 1999 and 2005. The number of studies increased from 2011 onwards and in 2011 the number of the studies reached its peak of 12. There were 9 documents in 2013, 6 documents in 2014, 5 documents in 2015, 7 documents in 2016 and 1 document in 2017. The figures indicate that there were not many published documents until 2011, and that there has been an increase in the number of the studies since 2011 compared to the past.

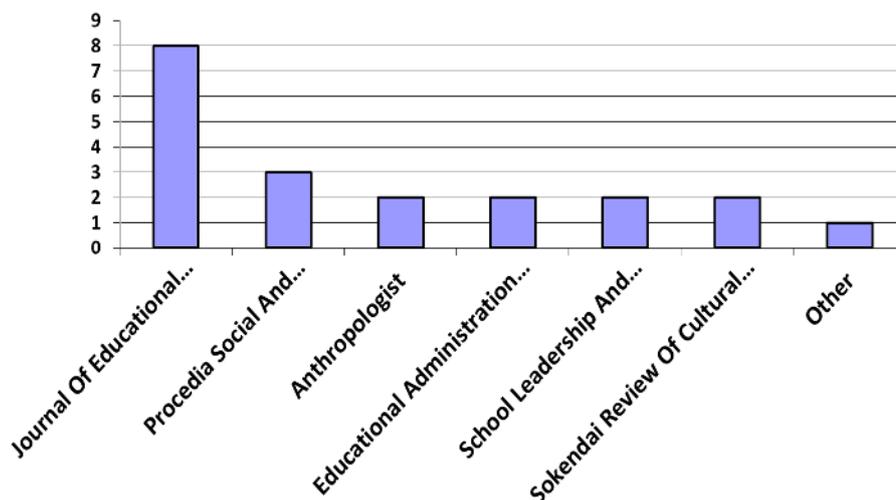
Figure 1: Graphical Representation of the Documents by Year



3.1.2 Distribution of the Documents by Source

In Figure 2, the distribution of the documents by the sources is given. According to the findings, there are 8 documents published in Journal of Education Administration, 3 documents published in Procedia School and Behavioral Sciences, 2 documents published in Anthropologist, 2 documents published in Educational Administration Quarterly, 2 documents published in School Leadership and Management and 2 documents published in Sokendai Review of Cultural and Social Studies. The rest of the sources have 1 document each. The majority of the studies were published in sources which focus on education and leadership.

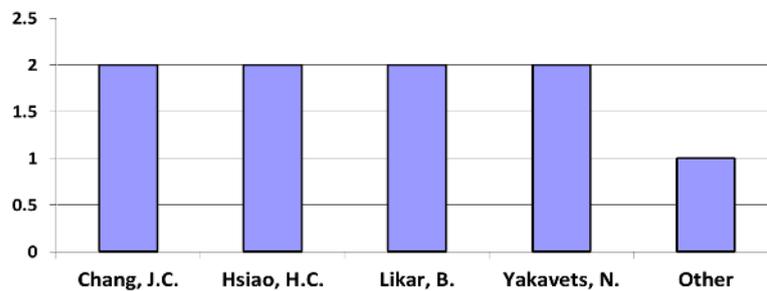
Figure 2: Graphical Representation of the Documents by Source



3.1.3. Distribution of the Documents by Authors

The distribution of the studies by their authors is presented in Figure 3. There were 2 studies by Chang, J.C., 2 studies by Hsiao, H.C., 2 studies by Likar, B., 2 studies by Yakavets, N., 1 study by Abd Rahman, H., 1 study by Ahmad, J., 1 study by Al-Iryani, B., 1 study by Al-Sakkaf, K., 1 study by Anderson, D.S., and 1 study by Anderson, L.W. When the studies done on this subject throughout the 33 years were examined, it was found out that 4 of the authors studied the subject twice whereas the others studied it only once.

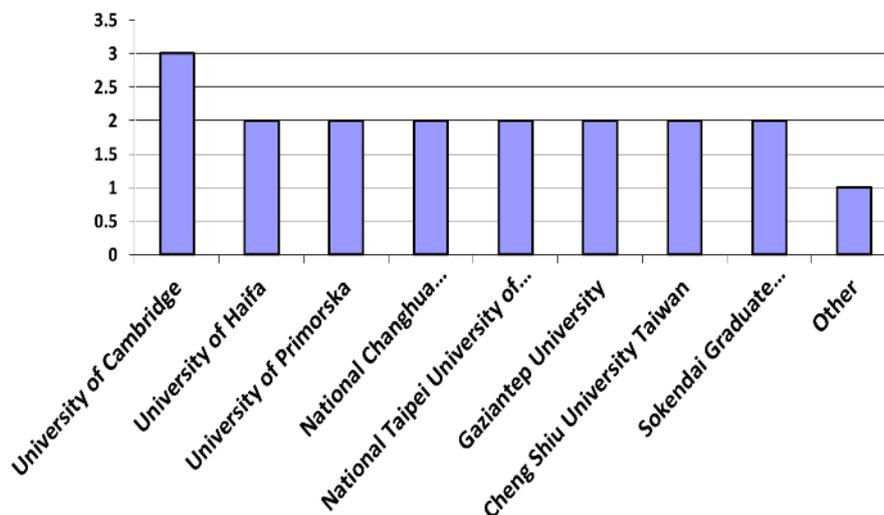
Figure 3: Graphical Representation of the Documents by Authors



3.1.4. Distribution of the Documents by Affiliation

Figure 4 shows the distribution of the documents by affiliations. 3 of the studies were carried out in affiliation with University of Cambridge, 2 studies were in affiliation with University of Haifa, 2 were in affiliation with University of Primorska, 2 studies were in affiliation with National Changhua University of Education, 2 studies were in affiliation with National Taipei University of Technology, 2 studies were in affiliation with Gaziantep University, 2 studies were in affiliation with Cheng Shiu University Taiwan, and 2 studies were in affiliation with Sokendai Graduate University for Advanced. Other institutions are affiliated with 1 document each. When the findings were examined, it was found out that University of Cambridge was affiliated with the highest number of the studies. 7 institutions were affiliated with 2 studies, and the rest of the institutions were affiliated with only 1 study each. As a result, the majority of the institutions were affiliated with only one study.

Figure 4: Graphical Representation of the Documents by Affiliation

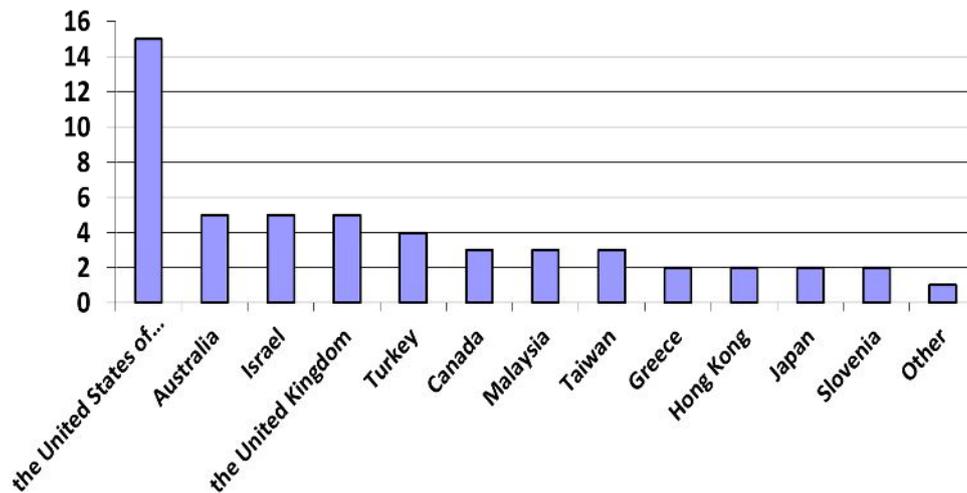


3.1.5. Distribution of the Documents by Countries / Regions

Figure 5 shows the distribution of the studies by country / region. 15 studies were conducted in the United States. Australia, the United Kingdom, and Israel conducted 5 studies each. There were 4 studies that were conducted in Turkey. Canada, Malaysia and Taiwan did three researches each. Greece, Hong Kong, Japan and Slovenia each had 2 researches on the subject. Each of the remaining countries where the subject matter was studied had only one published research. The findings shed light on the fact that the United States outnumbered the other

countries in terms of the quantity of published research. This may indicate that researchers in the United States attach importance to innovation in education. On account of the number of studies they conducted, it would also be right to say that researchers in Australia, Israel and the United Kingdom had a high opinion of innovation in education.

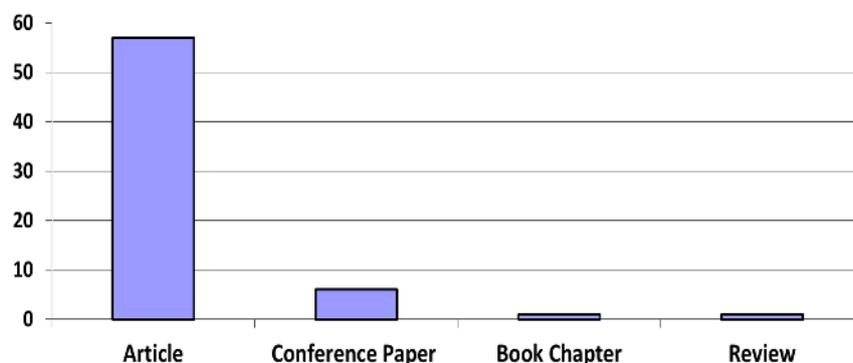
Figure 5: Graphical Representation of the Documents by Countries / Regions



3.1.6. Distribution of the Documents by Type

Figure 6 presents the distribution of the documents by their type. It can be seen that 57 of the documents were articles (87.7%), 6 of the documents were conference papers (9.2%), 1 of them was a book chapter (1.5%) and 1 of them was a review (1.5%). When the documents that cover the subjects of “innovation” and “school principal” on Scopus database were examined the data indicate that the vast majority of the studies were articles. The reason of the rate of the number of articles being so high could be explained by the fact that there are many journals to publish high-quality articles, universities’ expectation of the scholars to make researches, and article writing is not that time consuming.

Figure 6: Graphical Representation of the Documents by Type

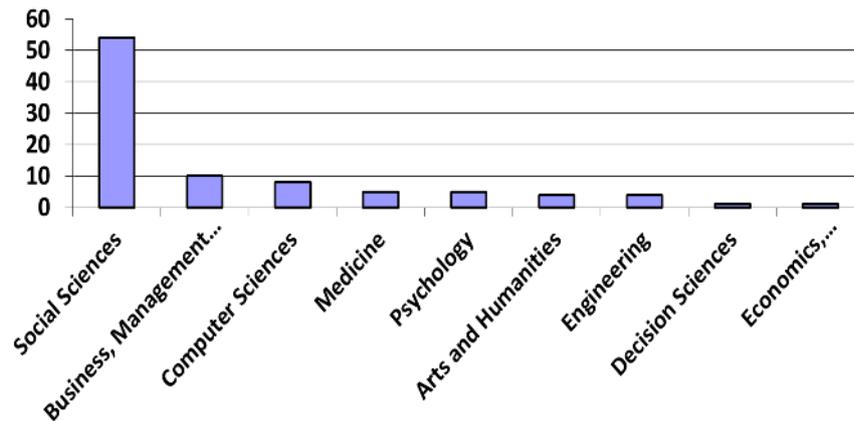


3.1.7. Distribution of the Documents by Subject Area

The distribution of the documents by subject areas is presented in Figure 8. There were 54 studies in Social Sciences (83.1%), 10 studies in Business, Management and Accounting, 8

studies in Computer Sciences (12.3%), 5 studies in Medicine (7.7%), 5 studies in Psychology (7.7%), 4 studies in Arts and Humanities (6.2%), 4 studies in Engineering (6.2%), 1 study in Decision Sciences (1.5%), 1 study in Economics, Econometrics and Finance (1.5%). There was also a study that was multidisciplinary (1.5%). It can be noted that most of the studies were conducted in Social Sciences. The quantity of the studies in a subject area depends on the relevance of the subject.

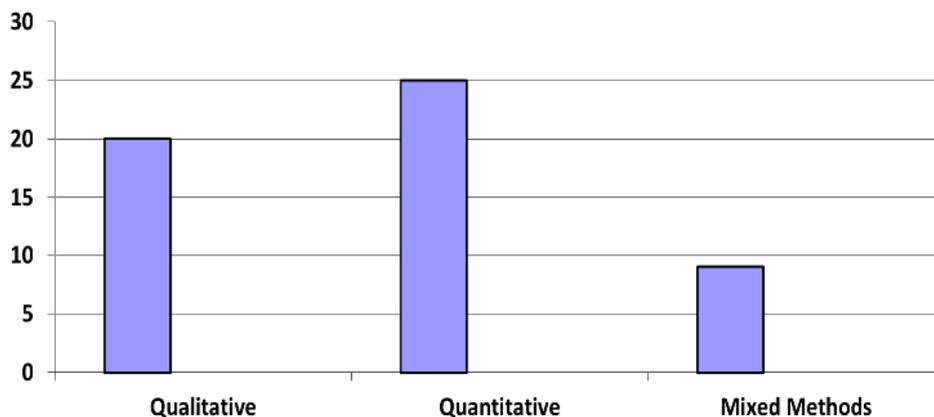
Figure 7: Graphical Representation of the Documents by Subject Area



3.2. Distribution of the Documents by Research Method

The methodology parts of 54 of 65 studies were accessed and the distribution of these studies by their methods is given in Figure 8. It can be seen in Figure 8 that 25 out of 54 studies were conducted via quantitative research techniques, 20 studies were conducted via qualitative research techniques and 9 studies were conducted via mixed method. The data indicates that 46% of the researches adopted quantitative research method, 37% of the researches adopted qualitative research method and 17% of the researches adopted mixed research method. It should be noted that researchers preferred quantitative research method a little more than qualitative research method, and that mixed research method was the least preferred one.

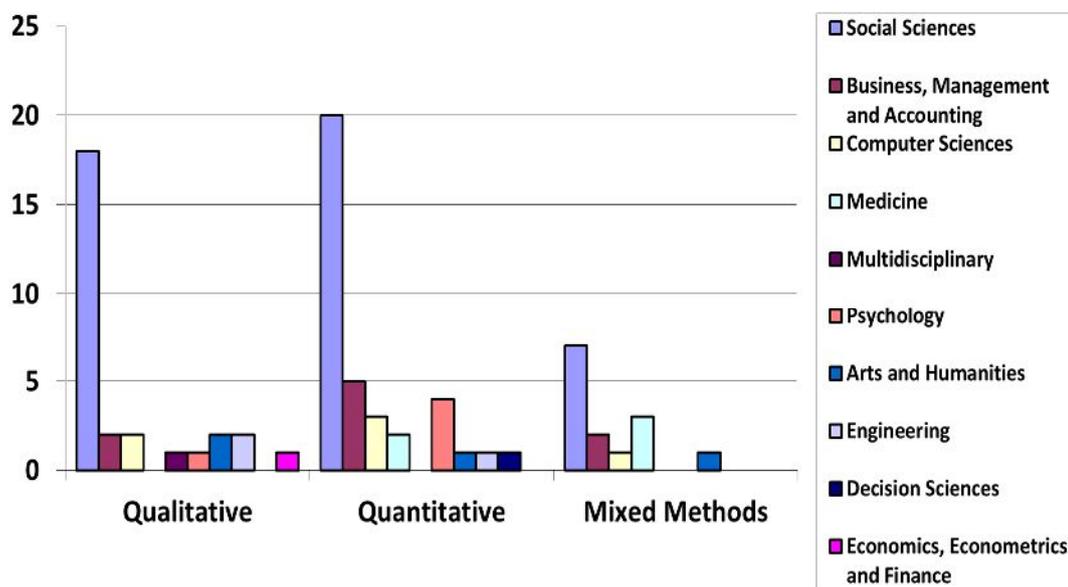
Figure 8: Graphical Representation of the Documents by Research Method



The distribution of the methods by subject area is shown in Figure 9. When the studies in Social Sciences were examined it was found that 20 of them were quantitative, 18 of them were qualitative, and 7 of them were mixed method studies. 5 quantitative, 2 qualitative, and 2 mixed

method researches were done in Business Management and Accounting. Computer Sciences had 3 quantitative, 2 qualitative and 1 mixed method studies on the subject. The researches in Medicine were constituted by 3 mixed method and 2 quantitative method studies. The multidisciplinary study was a qualitative one. 4 of the studies in Psychology were quantitative, and 1 of the studies in Psychology was in mixed method. Arts and Humanities had 2 qualitative, 1 quantitative and 1 mixed method researches on the subject. There were 2 qualitative and 1 quantitative studies in Engineering; 1 quantitative study in Decision Sciences; and 1 qualitative study in Economics, Econometrics and Finance. When we look at the methods of the studies in all the subject areas, we can say that most of the studies were conducted via quantitative method. Qualitative method was widely used in the studies, as well. Mixed method is preferred less compared to single method studies.

Figure 9: Graphical Representation of the Research Methods by Subject Area

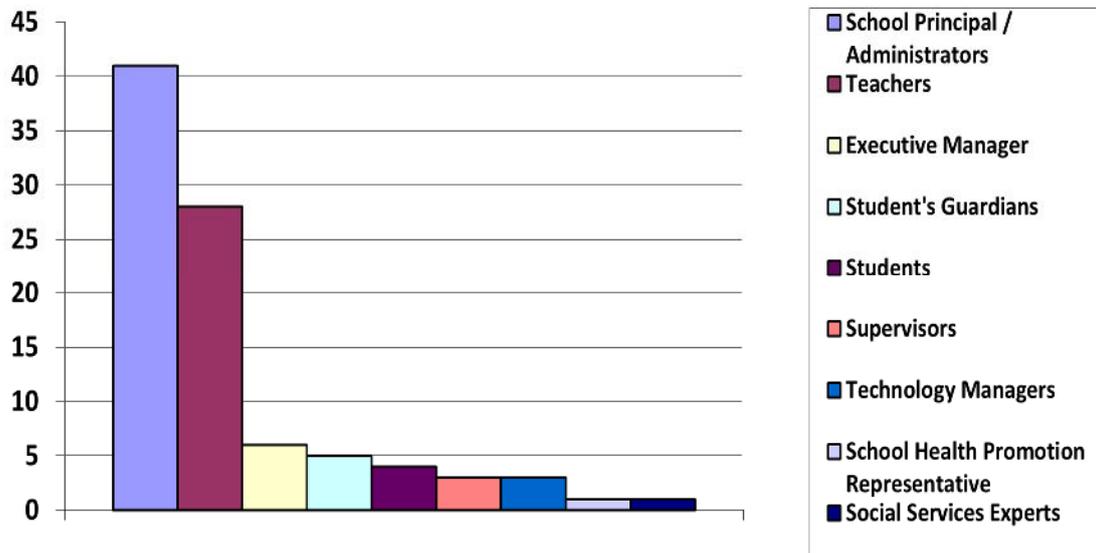


3.3. Distribution of the Documents by Participants

51 out of 65 studies' full-texts were accessible. The participants of these 51 studies' are presented in Figure 10. Figure 10 shows that in 41 of the 51 studies school principals, vice principals, and department heads were the participants. Teachers participated in 28 studies. 6 of the studies' participants were executive managers. Students' guardians were preferred as participants in 5 researches. Students were participants in 4, supervisors were participants in 3, technology managers were participants in 3, social services experts were participants in 1 and school health promotion representatives were participants in 1 of the researches.

The findings indicate that 80% of the researches were done with school principals, vice principals and department heads as participants. It is observed that teachers participated in 55%, executive managers participated in 12%, students' guardians participated in 10%, students participated in 9%, supervisors and technology managers participated in 6%, social services experts and school health promotion representatives participated in 2% of the studies. We can say that school principals, vice principals and teachers constituted the majority of the participants, because school administrators are the people who initiate, manage and evaluate innovation processes in schools, and teachers are the people who operate this process.

Figure 10: Graphical Representation of the Documents by Participants



Conclusion

It was observed that the oldest study that was reached upon searching the keywords "innovation" and "school principal" was dated 1984, 23 studies were carried out until 2011, and no studies were found in the period from 1999 to 2005. From 2011 onwards the number of studies has increased and the number of the documents published in 2011 was the highest compared to the other years. As Kurtulus (2012) stated in his study, scientific and technological developments, globalization, innovation processes in organizations that came along with the change have led innovation and innovative approach to come into prominence. We can attribute the increase in the number of the studies on innovation in recent years to this process.

According to the findings, Journal of Educational Administration published the highest number of documents on the subject matter, which was followed by Procedia School and Behavioral Sciences, Anthropologist, Educational Administration Quarterly, School Leadership and Management, and Sokendai Review of Cultural and Social Studies. It was concluded that most of the publication sources were education and education management focused. The reason for Journal of Educational Administration, which was founded in 1963, to rank first as publication source could be that it is the first peer-reviewed journal in education leadership and administration, and most of its articles have been on educational administration since its foundation (www.emeraldgroupublishing.com).

In conclusion, University of Cambridge was in affiliation with more studies (3) than all the other institutions. University of Haifa, University of Primorska, National Changhua University of Education, National Taipei University of Technology, Gaziantep University, Cheng Shiu University Taiwan and Sokendai Graduate University for Advanced were affiliated with 2 studies each. The majority of the institutions published 1 study on this topic.

It was determined that most of the studies were conducted in the United States (15), Australia, Israel and the United Kingdom rank second with 5 studies each. Ortas (2002) also revealed that the United States ranked first in scientific research. The results of this study revealed that Turkey had few studies on the subject and North Cyprus did not have any. It may

be suggested that researchers in these countries integrate the concepts of “school principal” and “innovation” in their studies.

When we analyzed the distribution of the documents published between 1984 and 2017 according to their types, most of the documents were found to be articles by 87.7%. This was followed by conference papers (9.2%), book chapters (1.5%) and reviews (1.5%).

In terms of subject areas, Social Sciences had most of the researches on the subject (83.1%). Business, Management and Accounting, Computer Sciences, Medicine, Psychology and Arts and Humanities had more researches compared to the other subject areas. This might be related with the fact that the number of studies on arts has increased recently (Allahverdiyev & Yucesoy, 2017). Engineering, Decision Sciences, Economics, Econometrics and Finance had only one research each.

The analysis of the methodologies of the researches revealed that quantitative research method was used most. There was a large ratio of qualitative researches, as well. Mixed method was preferred less. On account of this result, the conclusion could be drawn that researchers prefer to work with people to whom they can access easily. Driscoll (1995) stated that studies conducted in the field of education are open to be conducted via different research techniques, and that a single research technique should not be preferred excessively (as cited in Goktas et al., 2012). The reason for the researchers to prefer qualitative research methods as well could be this judgment.

When we examined the methods of the studies in relation with subject areas, researches in Social Sciences, Business, Management, and Accounting, Computer Sciences and Psychology were mostly quantitative. Qualitative research methods were the mostly preferred methods in Arts and Humanities, Engineering, Economics, Econometrics and Finance. Studies in Medicine mostly adopted mixed research method. Overall, since mixed method has not been preferred much in most of the studies, more studies with mixed method would contribute to the literature.

It was concluded that 80% of the studies included school principals, vice principals and department heads and 55% of the studies included teachers as participants. As Aydogan (2008) stated, in order for school administrators to achieve school’s goals, they have to utilize human and material resources efficiently, motivate staff, coordinate duties and evaluate practices in the school. This might be the reason for the researchers to prefer school principals, vice principals, and department heads as participants. It could be recommended to carry out more researches with technology managers, parents and supervisors.

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