Mapping Research Trend in the Area of Lifelong Learning

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Abstract: This study assessed the development of research publications in lifelong learning. The purpose of this study is to provide a preparatory wellspring of references for researchers interested in research mapping in this field. By using several bibliometric indicators, all research publications area related to lifelong learning in the online Scopus database were analyzed. The language of publication research area, year of publication, authors, countries, and document type's keywords were examined. The results of these analyses were underlined and discussed.

Key words: *education, lifelong learning, bibliometric*

INTRODUCTION

In recent years, lifelong learning has been increasingly cited as one of the key principles in the fields of education and development, shared the understanding of the term's usage at the global level [1]. However, all historical and development studies in this area can only be found in the form of narrative literature reviews instead of quantitative value and statistics of the publications. According to Tranfield, Denyer and Smart [2], narrative literatures are subject to bias and researcher manipulation in many research publication, hence, this study tried to fulfill this gap by using bibliometric approach to identify the research paper development (i.e. Quantitative statistics) in this area by looking into several bibliometric references (i.e., authorship, number of citations, journal sources, publishers, institutions, and countries year of publication, categories and author keywords) related to research publications of lifelong learning. This study would provide valuable references for research scholars especially in the mapping of related research. Besides, it would also indirectly provide some insights for universities, polytechnics, community colleges and other institutes of higher education.

THE CONCEPT OF LIFELONG LEARNING

Lifelong learning can be considered relatively continuous with a broad momentum that is maintained throughout life. According to Crick and Joldersma [3], lifelong learning is deliberate with respect to the people or associations. It is communicated in a few types of individual or authoritative methodologies whether formally or casually, which might be reappraised over time. Besides that, Hager [4] has reported that the origins and main understandings of lifelong learning and cognate concepts have been discussed from the 1970s. Moreover, the concept of lifelong learning is still relevant as "Lifelong Learning" has become a central theme in education and community development [5].

METHODOLOGY

A bibliometric analysis consists of applying statistical methods to determine qualitative and quantitative changes in given scientific research topic, establish the profile of publications on the topic, and detect tendencies within a discipline [6]. In addition, this type of analysis provides useful information for experts seeking to evaluate scientific activities [7] because a bibliometric analysis acts as a guide on the status of research in lifelong learning.

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This study used the Scopus Online Database, which housed scientific documents across all disciplines within the publication year limited to the period from 1985 to 2017. The fact that Scopus provides data on scientific research output enables the use of bibliometric analysis because Scopus offers data on output, dissemination, collaborations and impact [6]. This type of analysis constitutes a methodological innovation with respect to traditional literature reviews [6]. Based on education keyword, a total of 1,684,939 publications were found. However, these publications also contained not closely related documents. Hence, this result was refined by using several keywords such as "lifelong learning". As a result, 376 research documents were found to have been published.

RESULT AND DISCUSSION

The analysis of the Scopus database focused on lifelong learning research (bibliometric analysis took place in August 2017). To do so, this study analysed all documents in this area found in the Scopus. The resulting sample comprised 1,684,939 documents, including articles, proceedings, reviews, book reviews, editorial materials, book chapters, meeting abstracts, notes and letters. These articles used the term documents as opposed to articles to refer to any form of research output.

The bibliometric indicators used in this research were as follows:
  a) Language of research publications on lifelong learning
  b) Change in the number of lifelong learning research documents published between 1985 and 2017
  c) Authors with publications on lifelong learning
  d) Countries of research publications on lifelong learning
  e) Types of published documents on lifelong learning

Language
Most of the language used in the research on lifelong learning is English. Table 1 shows the number of lifelong learning publications by language, according to the data gathered from Scopus. The result showed the most common language was English (369 documents). The second most common language was Spanish (4

documents). Other languages that were used in research on lifelong learning was German (2 documents) and French (1 document).

Ranking	Language	N. Publication
1	English	369
2	Spanish	4
3	German	2
4	French	1

Table 1 Language used in research on lifelong learning

Research Area
Table 2 shows the number of documents published in different knowledge areas. Scopus had 267 documents in social sciences, 111 in psychology, and 49 in art and humanities. These figures revealed variation in the number of documents in lifelong learning. This finding implied that lifelong learning was a highly relevant topic in education.

Ranking	Subject Area	N. Publication
1	Social Sciences	267
2	Psychology	111
3	Art and Humanities	49
4	Medicine	34
5	Business, Management and Account	24

Table 2 Published research knowledge areas on lifelong learning

Years of Publication
A search for the concept of lifelong learning in Scopus Online Database revealed the existence of a lifelong learning article written in 1985. Besides that, Aspin and Chapman [8], also talked about the concept, theories and values of lifelong learning. Criticism of lifelong learning was discussed in 'Matheson et.al [9]. Table 3 shows the number of publications between 1985 and 2017. The data showed the interest in this area of knowledge has increased yearly. The first published education document was in 1985. From 2002 to 2017, there were more documents published. The highest number of documents was published in 2015. Even though the trend started to drop after 2015 but it is not the end since this topic is still relevant nowadays.

Figure 1: Years of Publications

Authors

Measuring the research performance at the micro level (i.e., at the level of individual scientists) can be somewhat problematic [10]. Table 4 lists the main authors in lifelong learning. There were about 47 documents written by various authors such as Stolk, J., Arbaugh, J.B, Anderman E.M. and others.

Ranking	Author	N. Publications
1	Stolk. J	6
2	Arbaugh, J.B.	4
3	Anderman, E. M.	3
4	Froiland, J.M.	3
5	Gilmore, A.	3
6	Kaur, G.	3
7	Martello, R.	3
8	Sirendia, G.D.	3
9	Soutter, A.K.	3
10	Yeung, A.S.	3

Table 4 Authors on lifelong learning

Country

Table 5 shows that, in United States, 173 documents were published on lifelong learning. The United Kingdom was the second highest country to publish documents on lifelong learning with 44. The study did not cover all remaining countries because they had fewer than 50 publications and were, therefore, irrelevant to the study.

Ranking	Country	N. Publications
1	United States	173
2	United Kingdom	44
3	Australia	35
4	Canada	23
5	Undefined	21
6	Greece	17
7	Germany	11
8	Israel	11
9	Spain	11
10	Finland	8

Table 5 Countries where authors published research on lifelong learning

Document Types

Based on table 4, "articles" in journal were the leading type of documents with 205 documents. This was followed by Book with 116 documents. Next was Review Articles with 22 documents. Then, Book Chapter had 18 documents followed by Conference Papers with 15 documents. The total documents were 376.

Ranking	Document Types	N. Publications
1	Article	205
2	Book	116
3	Review	22
4	Book Chapter	18
5	Conference Paper	15
	Total	376

Table 6 Document types published research on lifelong learning

CONCLUSION

This study managed to identify 1,684,939 research documents gathered from Scopus database. This result was refined by using several more keywords. In this respect, it showed that 376 were documents related to the field. Firstly, the most popular language for publication was English (396 documents). Next, the area with the most published documents was Social Sciences (267 documents). Furthermore, the term lifelong learning appeared since in 1985 but only after 2002 the concept really began to attract researchers' attentions. The number of publications continued to increase as 2015 became the highest. The country with the most lifelong learning research was United States (173 publications). The result also shows, the article is the most preferred type of publications found in this research. As the conclusion, this study revealed some findings that can guide researchers in the field of lifelong learning. The results of this analysis reflect the importance of articles in the literature reviews (i.e., quantitative confirmation of subjective categories) and provide some insights on the research landscapes in this area. Besides, it is also expected that these findings will bring more attention to research publications in this area.

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