Sub-fields of Library and Information Science in Turkey: A Visualization Study[1]

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ABSTRACT

This study aims to determine the LIS sub-fields studied in Turkey and compare them with world LIS literature through keywords and abstracts of 460 peer-reviewed articles published in two LIS journals in Turkey (*TL* and *IW*) using *VosViewer* visualization software. Results of the study reveals that although sub-fields of LIS studied in Turkey similar with World LIS literature, it also has its own characteristics. While *bibliometrics* and *library science* are common sub-fields; LIS field in Turkey differs by the means of sub-fields named as *records management* and *reading habits*.

INTRODUCTION

Library and information science (LIS) is an interdisciplinary field that combines the various subjects such as information technology, libraries, management and education. It has been experiencing significant transformation on its main subjects on the occasion of recent developments in digital technology. The main problem for this huge transformation is creating gap between developed and developing countries. Researchers who work in the developing countries have information retrieval problems according to their countries' geographical location, political isolations, limited funds or embargos (Johnson, 2007, p. 65; Tella & Issa, 2011, p. xx; Uzun, 2002, p. 22-23). These kinds of restrictions effect information behaviour of researchers. Under these circumstances, it becomes vital to reveal countries' information environments for each discipline. To reveal them, bibliometrics and social network analyses are the commonly used methods in the literature.

The main aim of this study is to determine the LIS sub-fields studied in Turkey and compare them with world LIS literature. To achieve this aim, two research questions below are addressed:
- What are the main subject clusters for Turkish LIS literature and how they connect to each other?
- Do Turkish LIS literature converge to international LIS literature in the meaning of subject clusters identified?

METHOD

Two refereed LIS journals of Turkey -*Turkish Librarianship* (*TL*) and *Information World* (*IW*)- are selected to analyze the field. *TL* is a quarterly journal of Turkish Librarians'

Association published since 1952 (*Turkish Librarianship*, 2016). *IW* is published since 2000 and appears twice a year (*Information World*, 2012).

265 peer-reviewed articles published in *TL* between 1996-2015 (*TL* began to publish peer reviewed articles in 1996) and 195 peer-reviewed articles published in *IW* until 2015 are chosen for evaluation. All required information such as titles, abstracts, keywords, etc. gathered through a database designed. *VosViewer* that is tool visualize bibliometric networks (VosViewer, 2016) is used for visualizing sub-fields of LIS literature in Turkey.

RESULTS

To determine sub-fields of LIS in Turkey, keywords and abstracts of the 460 articles indicated in the methodology analyzed. Table 1 shows keywords occur in at least six articles, that comes from more than half of the articles (246 articles). According to the keywords of articles, studies on records management, libraries (university, public or school), bibliometrics including citation analysis, reading habits have an important role in Turkish LIS literature. On the other hand, studies on scholarly communication including open access, user studies and information literacy have an effect in the field.

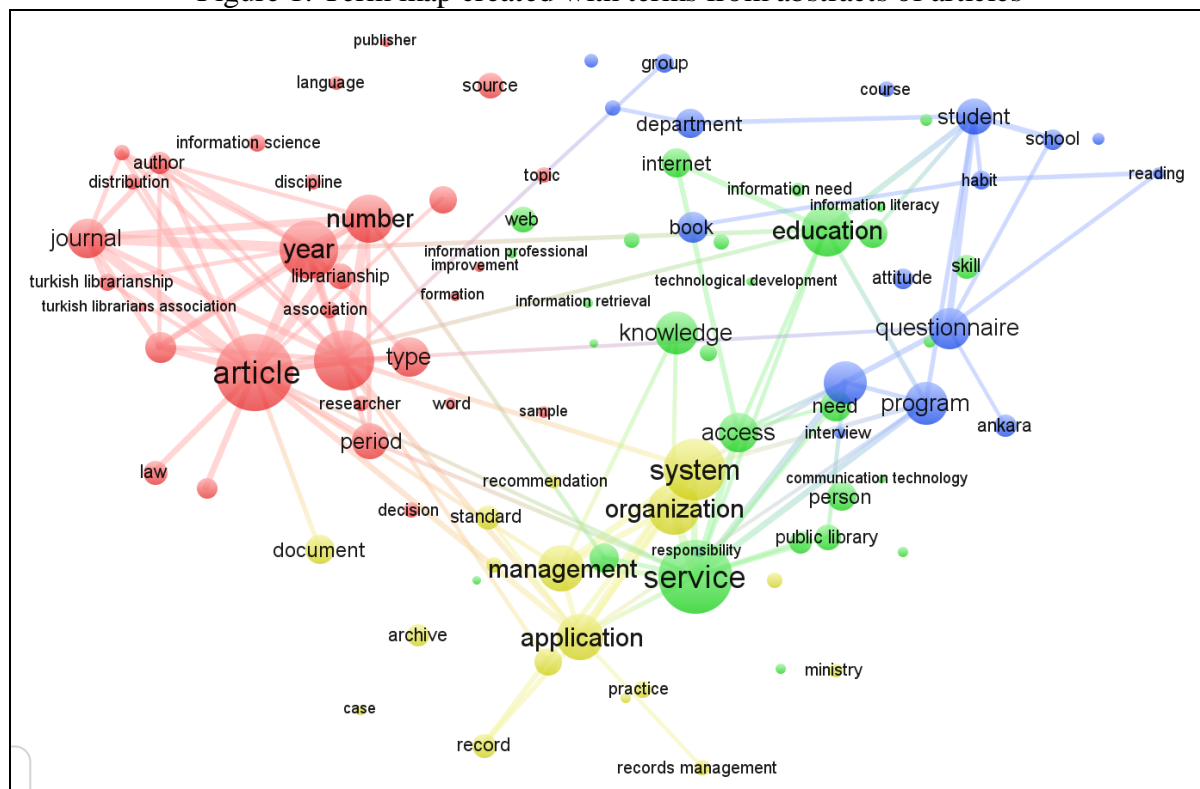Table 1. Keywords that occur in at least 8 articles

Keyword	n
Turkey	26
records management	20
public libraries	19
university libraries	18
bibliometrics	17
libraries	16
information literacy	12
reading habits	11
citation analysis	10
knowledge management	10
open access	9
scholarly communication	8
user studies	8

Figure 1 contains 92 noun phrases having highest relevance score in 6147 noun phrases extracted from abstracts of 460 articles. Each of the four clusters represents a sub-field of LIS in Turkey. The largest cluster colored red at the upper left part of the map is well-separated from other three clusters refer to "bibliometrics/citation analysis" as prominent noun-phrases are "article", "analysis", "year", "number", "journal", "publication period" and "database".

Three clusters colored yellow, green and blue at the right part of the map are not well-separated from each other, especially two of them (blue and green clusters) at the right part of the map are connected to each other. Yellow cluster at lower middle part of the map is more likely to be the "records management" sub-field of LIS; with prominent noun phrases "system", "organization", "management". Green and blue connected clusters at upper right part are considered as "library science" (green cluster) and "reading habit" (blue cluster) sub-fields of LIS. Prominent terms for "library science" cluster colored green are "service", "education", "access" and "knowledge". It is an interesting result that a special subject of

LIS, "reading habits", appear as a sub-cluster of LIS studies in Turkey that means large study area of this subject in the country. The findings of Figure 1 coincide with keyword frequencies shown in Table 1.

Figure 1: Term map created with terms from abstracts of articles

The previous studies find out that LIS field has three main subject clusters as "library science", "information retrieval" and "bibliometrics" (Åström, 2002, p. 190; Van Eck & Waltman, 2011). The other study reveal that the mostly preferred subjects in LIS are "information storage and retrieval" and "library and information service activities" (Järvelin & Vakkari, 1993). According to the results, although "records management" doesn't have an influence in the world, it has its own subject cluster for LIS in Turkey. On the other side, "information retrieval" is not as prominent for Turkish LIS literature as it is in the international LIS literature, that it has been clustered in "library science" cluster. Another point different for Turkish LIS field is a separate "reading habit" cluster.

CONCLUSION

Parallel with the world literature, LIS subjects studied by Turkish authors are mainly bibliometrics and library science. However, reading habits and records management are also prominent subjects for Turkish LIS literature. It seems that, although it has its' own fields of interests, LIS field in Turkey converge to world LIS field.

References

Åström, F. (2002). Visualizing library and information Science concept spaces through keyword and citation based maps and clusters. In *CoLIS4 Proceedings of the Fourth*

International Conference on Conceptions of Library and Information Science (Bruce, H., Fidel, R., Ingwersen, P. & Vakkari, P. Eds.) pp. 185-196. Colorado: Libraries Unlimited.

Järvelin, K. & Vakkari, P. (1993). The evolution of library and information Science 1965-1985: A content analysis of journal articles. *Information Processing and Management*, 29(1), 129-144.

Johnson, C.A. (2007). Library and information science education in developing countries. *International Information & Library Review*, 39(2), 66-71.

Information World. (2012). Retrieved March 4th, 2016 from: http://bd.org.tr/index.php/bd

Tella, A. & Issa, A.O. (2011). *Library and information science in developing countries: contemporary issues*. Hershey, PA: IGI Global.

Turkish Librarianship. (2016). Retrieved March 4th, 2016 from: http://www.tk.org.tr/index.php/TK

Uzun, A. (2002). Library and information science research in developing countries and eastern European countries: A brief bibliometric perspective. *International Information & Library Review*, 34, 21-33.

Van Eck, N.J. & Waltman, L. (2011). Text mining and visualization using VOSviewer. *ISSI Newsletter*, 7(3), 50-54. Retrieved March 4th, 2016 from: https://arxiv.org/ftp/arxiv/papers/1109/1109.2058.pdf

VosViewer. (2016). Retrieved March 4th, 2016 from: http://www.vosviewer.com/