

Topics of QQML

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Abstract: The paper gives an overview of topics that have been highlighted at the previous five QQML conferences. Based on the classification of conference papers, we will show how much interest there was in particular topics, the institutions that authors came from, etc. We will also give a historiograph presentation of how specific research topics appeared through time. We will use statistical indicators relating to the number and type of conference papers, topics, keywords and co-authorship to show and analyse productivity in the field of information sciences taken as a whole. In this context, we will particularly analyse institutions and countries that authors came from. Finally, we will especially single out those indicators that expressly show the conferences' impact over this five-year period. The aim of the paper is to show the significance of conferences in the development of the fields.

Keywords: bibliometrics, information sciences

1. Introduction

QQML Conference could be seen as a media of scientific communication and we can analyze its influence on the field looking at topics, authors and countries authors came from. Evaluation of scientific work is expressed through quantitative and qualitative assessment methods. Quantitative assessment is usually based on published research results as well as its echo in the relevant scientific community. Although scientific journals are a very important medium for scientific communication and usually the only criteria for evaluation of scientific work, conferences are indispensable as a scientific communication channel especially for social sciences, particularly in the field of information and communication sciences. This communication channel carries live scientific communication that contributes to the development of the field. The aim of this study is to determine how QQML conferences contributed to the development of the field through the analysis of topics, cooperation between the countries that participated in the conference, and the number of authors who participated.

2. Methods

The data for our analysis were collected from the QQML Web site for conferences held from 2009 to 2013 using abstracts authors submitted: QQML (2009), QQML (2010), QQML (2011), QQML (2012); QQML (2013).

The first step in data extraction was converting PDF files to plain text files for easier extraction. Title of the paper, authors, institutions, countries and keywords were extracted from the abstracts authors sent for the conference. Some abstracts were sent without keywords so we read the abstracts and made keywords for these abstracts. These keywords were placed separate from the keywords provided by authors. The data were placed into a database for easier searching. Some of the data will be presented in tables and some in figures. Data visualization was done using Gephi (Bastian (2009)).

3. Results

The analysis was done in few steps: countries authors came from, abstracts, and keywords.

3.1. Countries

Table 1 shows number of countries participating on the conference and Table 2 shows the top 7 countries according to number of articles that year.

Table 1. Participant countries

	2009	2010	2011	2012	2013
Number of countries	46	43	49	53	63
New countries (1)	46	10	16	19	17
New countries (2)	46	10	10	9	12

(1) – have not participated previous year

(2) – have not participated before

Table 2. Top 7 countries by articles (number of articles in parentheses)

2009 Chania	2010 Chania	2011 Athens	2012 Limerick	2013 Rome
USA (16)	USA (34)	Iran (22)	USA (71)	USA (82)
Greece (14)	Greece (16)	India (17)	Ireland (16)	India (26)
UK (14)	UK (10)	Greece (16)	UK (13)	Iran (22)
Romania (11)	Iran (9)	USA (12)	Malaysia (11)	Brazil (19)
Malaysia (10)	Italy (6) India (6)	Estonia (9) Turkey (9)	Croatia (9) Iran (9)	Italy (13) Mexico (13)
Estonia (9)	Poland (6)		Romania (9)	Turkey (13)

Iran (9)		UK (7)		
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3.2. Abstracts

Table 3 shows the number of abstracts per conference and percentage of abstracts for which authors have not provided keywords.

Table 3. Number of total abstracts and number of abstracts without keywords provided by authors (percentage enclosed in parentheses)

	2009	2010	2011	2012	2013
number of articles	165	153	181	255	392
with keywords	113 (68)	122 (80)	156 (86)	182 (71)	270 (69)
without keywords	52 (32)	31 (20)	25 (14)	73 (29)	122 (31)

Table 4. Number of countries per abstract (percentage in parentheses)

Countries /abstract	2009	2010	2011	2012	2013
1	159 (96)	148 (97)	177 (98)	244 (96)	376 (96)
2	6 (4)	3 (2)	4 (2)	11 (4)	14 (3.5)
3	0 (0)	1 (0.5)	0 (0)	0 (0)	2 (0.5)
4	0 (0)	1 (0.5)	0 (0)	0 (0)	0 (0)

Table 4 contains numbers of abstracts where authors from different countries co-authored the abstract. Figure 1 shows these collaborations between authors from different countries.

3.3. Keywords

Figures 2-6 show the most frequent keywords and their connections to other keywords authors provided for their abstracts for QQML conferences from 2009 to 2013. Subfigures (a) show only connections and keywords authors provided for their abstracts. For subfigures (b) we combined keywords provided by authors and keywords we extracted from the abstracts.

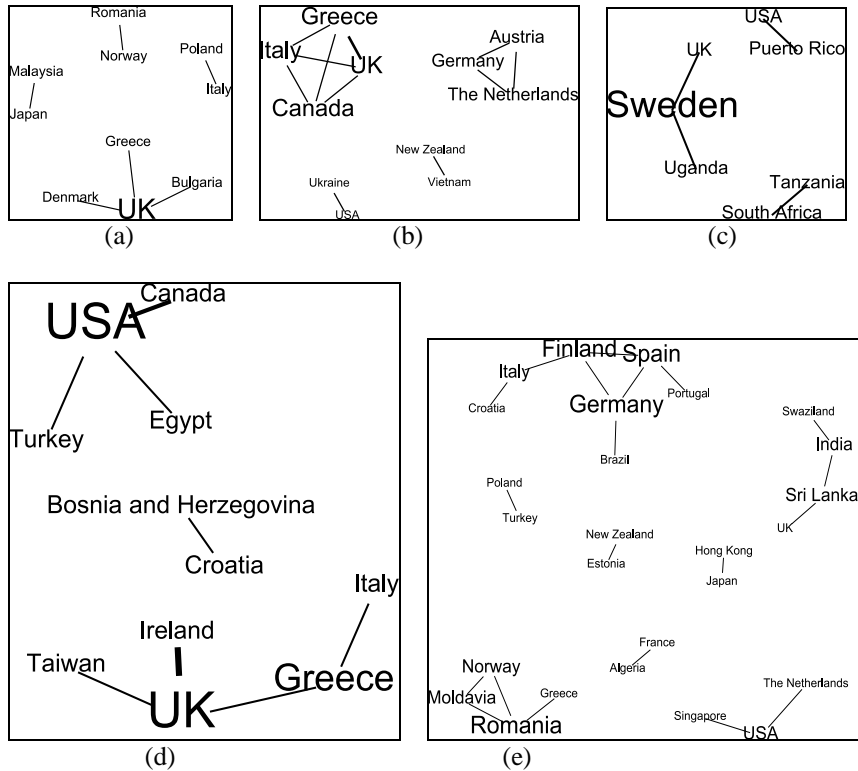


Figure 1. Collaborations between countries for (a) QQML09, (b) QQML10, (c) QQML11, (d) QQML12, (e) QQML13

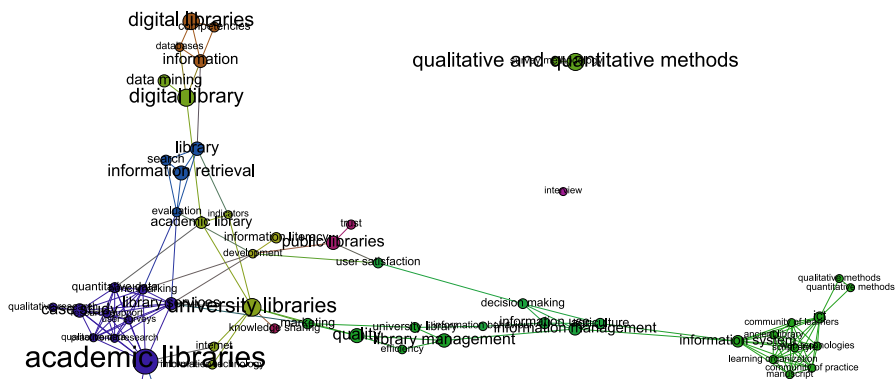


Figure 2a. Most frequent keywords for QQML 2009

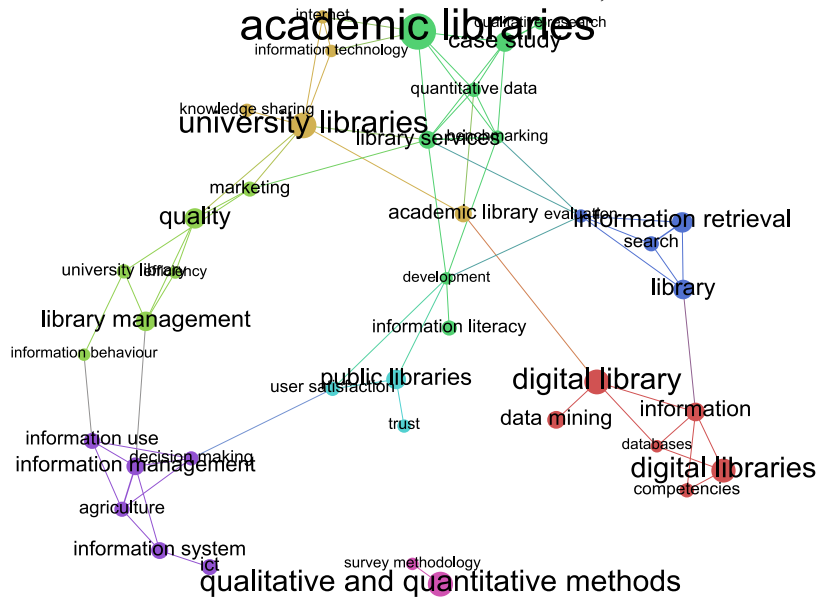


Figure 2b. Most frequent keywords for QQML 2009 with added missing keywords

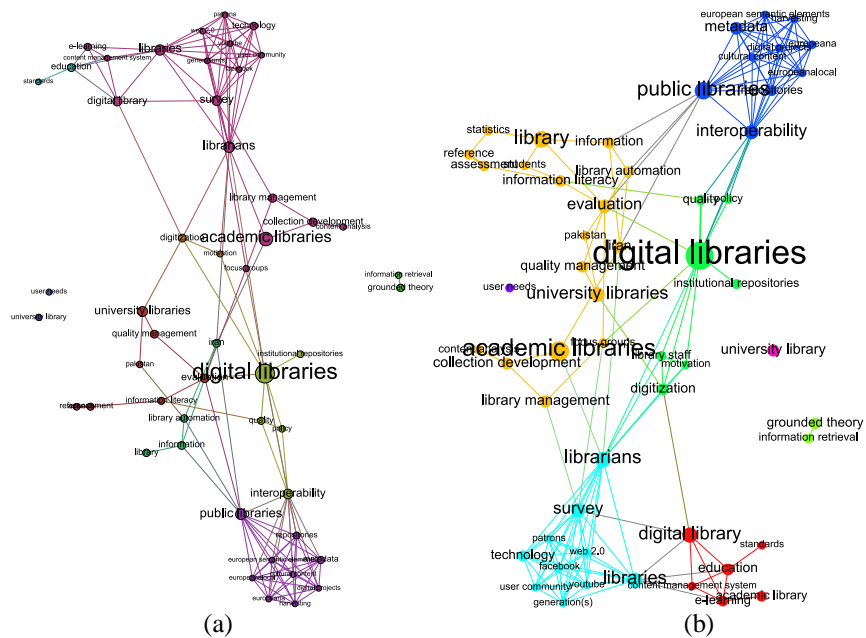


Figure 3a, b. Most frequent keywords for QQML 2010 and (b) with added missing keywords

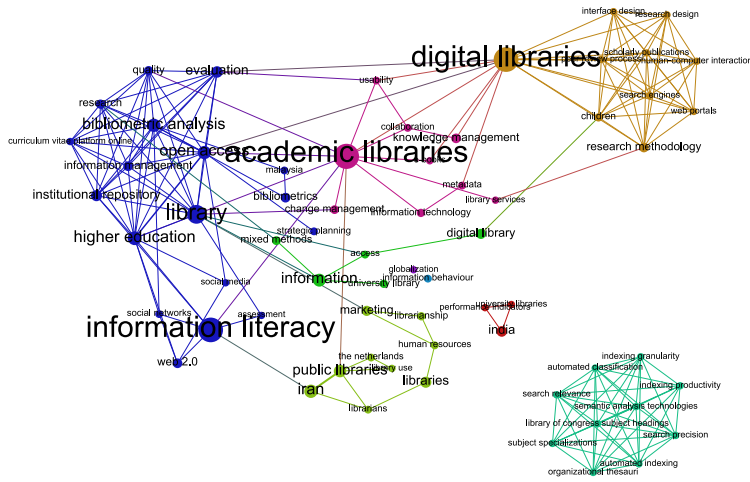


Figure 4a. Most frequent keywords for QQML 2011

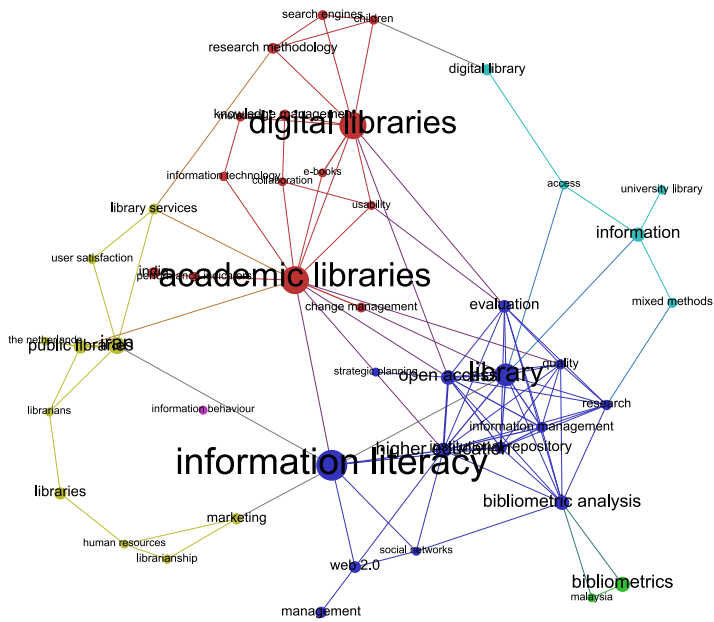


Figure 4b. most frequent keywords for QQML 2011 with added missing keywords

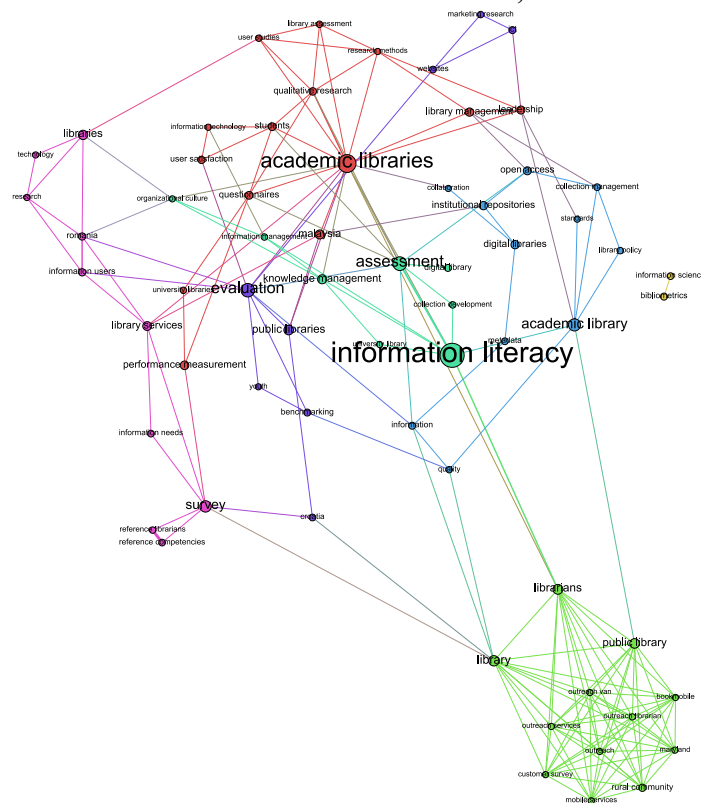


Figure 5a. Most frequent keywords for QQML 2012

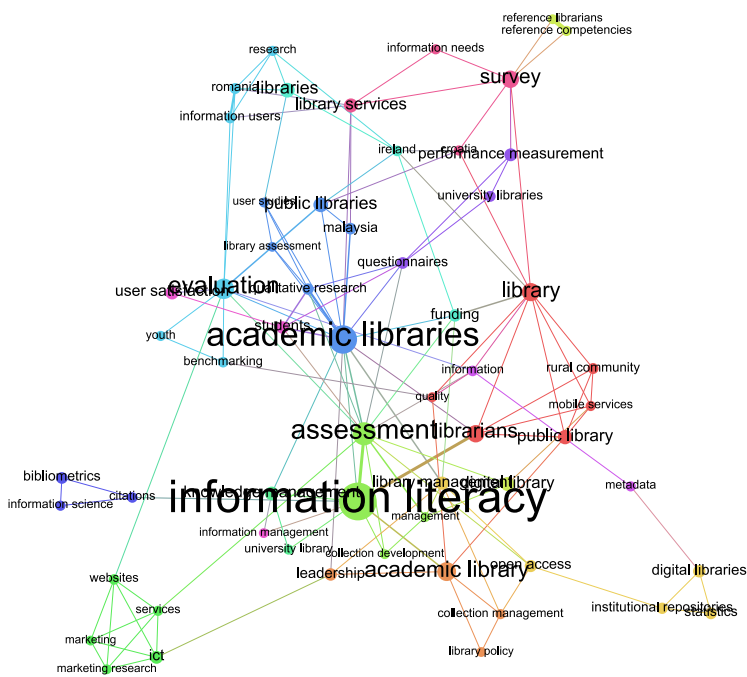


Figure 5b. Most frequent keywords for QQML 2012 with added missing keywords

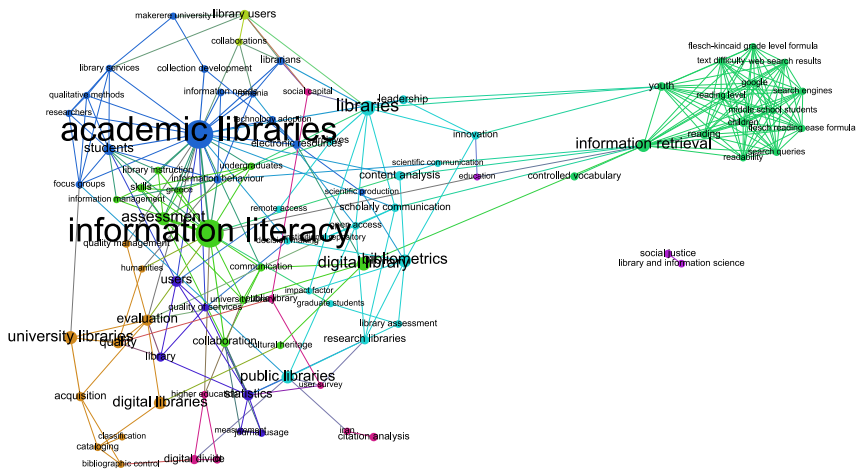


Figure 6a. Most frequent keywords for QQML 2013

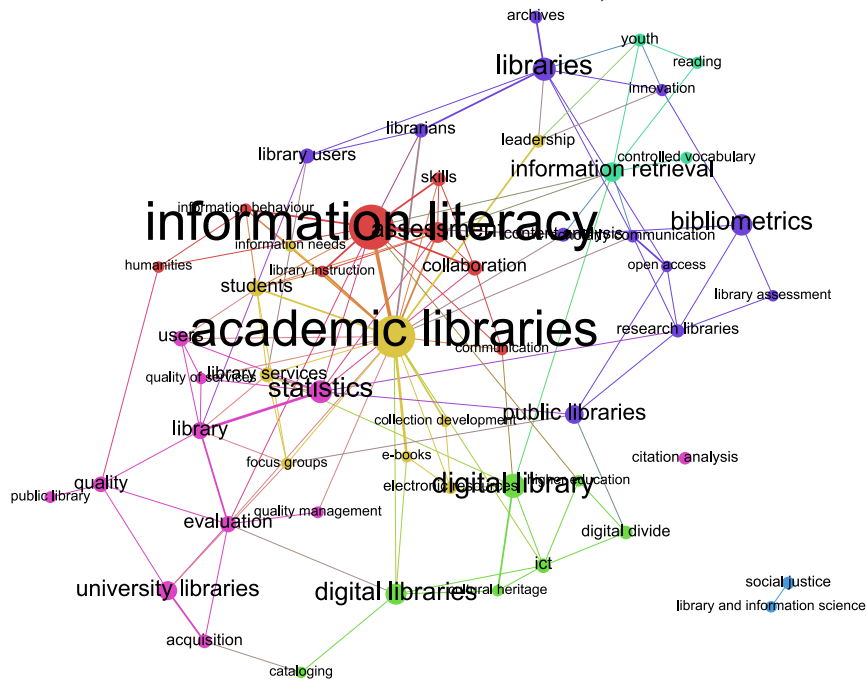


Figure 6b. Most frequent keywords for QQML 2013 with added missing keywords

4. Discussion

The data from Table 1 and 2 show us that there is still room for marketing QQML. And the best way is with cooperation between scientists from neighbouring countries (as seen from Figure 1) on mutual projects or with knowledge transfer from a developed country (EU frequently provides funding for speeding up development in the field). Table 4 shows number of articles with international cooperation. The number is growing but percentage is almost the same.

Table 2 and 3 show growth of participants and number of abstracts submitted for the conference. The only conference that breaks the pattern is QQML2011 held in Athens where participants from USA participated in small number. This can be attributed to protests in Athens and problems with government funding in USA at the beginning of 2011.

Figures 2-6 show that topics of the conference slightly change over the years. In the year 2009 researchers were interested in libraries, evaluation, management, searching techniques, information retrieval and qualitative and quantitative methods. First evident thing is that authors use both “academic library” and “university library” as a keyword. Second thing is that sometimes singular is

used and sometimes plural. Comparing subfigures (a) and (b) we can see that our choice of keywords for abstracts without them made no significant difference.

Year 2010 pushed digital library as a huge topic of scientific interest. Academic libraries stayed as a big topic to explore. But small number of authors started talking about one small topic that will explode in 2011.

Year 2011 was the year when researchers started exploring connections between libraries and information literacy. This connection also made a similar impact in following years pushing academic libraries and information literacy as the main topic of scientific research. Topics that are always here are statistics, bibliometrics, assessment and information retrieval. This could be a result of constant need for proving that research should be funded, especially nowadays.

Research in the year 2013 was focused on information literacy and its strong connection to academic libraries. But researchers started listening to library users and their needs and satisfaction with library services. This could also be result of proving that this service is needed and that it should be funded.

5. Conclusion

QQML is a conference where researchers in the field of library and information sciences meet and present their work. As a medium for scientific communication it facilitates cooperation between authors, enables them to quickly find mutually interesting topics. A future topic of interest is seen as a small topic at one conference and it will expand to a major topic of interest on the following conference, showing that there really was something to investigate and scientific community was informed of its emergence. Some topics will almost disappear on one but emerge on the next one with different ideas. Multinational conference, authors from all over the globe, different scientific fields but all focused on similar topics - this diversity of perspective enables fast knowledge exchange, exchange of ideas, and future cooperation.

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Qualitative and Quantitative Methods in Libraries (QQML) Special Issue 127
Bibliometrics and Scientometrics: 117- 127, 2015

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