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December 2018

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Alijani, Rahim; Mortazavipour, Seyedeh Fahimeh Mrs.; and Khasseh, Ali Akbar, "Visibility of Iranian LIS Departments in ResearchGate: An Altmetric Study" (2018). Library Philosophy and Practice (e-journal). 2085. http://digitalcommons.unl.edu/libphilprac/2085

## Visibility of Iranian LIS Departments in ResearchGate: An Altmetric Study

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#### **Abstract**

Using an altmetric study, this paper tries to investigate the visibility and activities of Iranian Library and Information Science (LIS) departments in ResearchGate. The research community of this study consisted of faculty members of LIS departments in Iran. Research data were analyzed by Altmetrics indicators from ResearchGate and then it is analyzed by SPSS software. Findings revealed that "University of Isfahan" with the mean score of 14.11 and standard deviation of 6.72 is ranked first and "Islamic Azad University of Hamedan" and "Tabriz University of Medical Sciences" ranked second and third, respectively. Also, the "University of Isfahan" ranked first in terms of research items, and "Shahid Beheshti University" and "Payame Noor University" ranked second and third, respectively. In terms of citations, "Farideh Osareh", "Alireza Esfandiari-Moghadam" and "Amin Erfanmanesh" are the mostcited researcher in ResearchGate. Furthermore, "Alireza Esfandiari-Moghaddam" with RG score of 28.28, "Ali Akbar Khasseh" with the score of 24.96, and "Hajar Sotudeh" with the score of 20.26 have gained the highest scores in ResearchGate. In terms of number of readings, "Rahim Alijani", "Asefeh Asemi", and "Ali Akbar Khasseh" have the highest readings. In general, the results of this study showed that faculty members of LIS departments in Iran are far from the desired position in case of presence and activity in ResearchGate. Accordingly, in order to reach the desired position, by continuity and encouragement of other members they can achieve a suitable position.

**Key words**: ResearchGate, Social Scientific Networks, Altmetrics.

#### 1. Introduction

Social networks are considered as a form of social media that provide access to a new form of communication and information sharing on the Internet. These networks not only have a profound impact on the social aspects of users in different societies, but also have many benefits in various fields, such as education and medicine. Moreover, in today's world where communication is the cause of the sharing of thoughts and the exchange of sciences, social networks can be considered as an effective platform in scientific activities, sharing of beliefs, and individual and social growth. Therefore, social networks are powerful tools in many activities (Nowkarizi and Narmenji, 2012).

Because of the emergence of social web and its impact on the communication of people and scientific activities of various societies, it has led to the creation of new research contacts among researchers. However, measurement of the impact of new research communications was not applicable by traditional citation indicators. For this reason, with the advent of the Web, attempts were made to use the information contained in this environment to assess the scientific impact which its resuld was emergence of new indicators such as Webometrics. In recent years, by growing technology and the possibility of an expansive survey, the ability to observe suggestions, conversations and online chats about documents and also free access to scientific resources, a term called Altimetrics is created that can measure and evaluate resources in the Web environment. It provides a new indicator in the social sciences network environment. Altmetrics means measuring through alternative and unconventional measurements. Altmetrics in general is defined as a measure of the use of scientific works in social media, and in particular means a measure by mentioning of scientific works on Facebook, Twitter, Wikipedia, blogs and citation management tools such as Mendeley, Zotero, CiteULike, and so on (Zahedi, 2014).

In Altmetrics, the amount of the presence and impact of researchers and their research in virtual social media is measured; thus it gives a new dimension to quantitative studies. While traditional measures such as scientometrics and bibliometrics are measured merely by the statistics and mathematics of scientific productions, in Altmetrics, the situation is completely different, and what takes attention is the amount of use of scientific production of researchers across the world that are visible and accessible in related media.

Accordingly, the present survey intends to study the presence of faculty members of Library and Information Science (LIS) departments in Iran based on altmetrics indicators in ResearchGate.

In line with the above purposes, this study seeks to answer the following questions:

- 1- How is the ranking of Iran's LIS departments based on RG score in ResearchGate?
- 2- Which LIS departments of Iran have more presence in the ResearchGate?
- 3- Which Iranian LIS departments have uploaded more scholarly resources in ResearchGate?
- 4- Which LIS departments of Iran have more members in the ResearchGate?
- 5- Who are the most cited faculty members of LIS departments in the ResearchGate?
- 6- Which faculty members have higher RG score than others in ResearchGate?
- 7- Which faculty members have uploaded the most research items on the ResearchGate?
- 8- Who are the most active faculty members in terms of number of reads in ResearchGate?
- 9- Who are the most active faculty members in terms of the number of followers and following in the ResearchGate?
- 10- Who are the most active faculty members in terms of the number of articles in the ResearchGate?
- 11- Who are the most active faculty members in terms of the number of books in the ResearchGate?

#### 2. Literature Review

Several researchers have used Altmetric indicator as one of the most important methods to evaluate scientific productions, researchers, and so on in various fields on scientific social networks particularly ResrearchGate. Some of these studies are briefly summarized as follows: The use of English-language publications published in Iranian international journals in Mendeley (Zahedi, 2014), universities and research institutes in the ResrearchGate (Erfanmanesh, Asnafi and Arshadi, 2014), evaluation of RG score and researchers rankings in ResearchGate (Janmohammadi, Rahmani and Rutan, 2016), attendance of faculty members of Shahid Beheshti University in ResearchGate (Asnafi, 2015) ), the presence of researchers from Ahvaz universities in ResearchGate (Asnafi et al., 2015), the presence of Iranian researchers in ResearchGate and Scopus (Rezaie-Sharifabadi, Ghaebi and Salim, 2016), the relationship between Web of Science and ResearchGate indicators of Iranian researchers (Batooli, 2017), the presence of surgeons in ResearchGate (Nikkar, Alijani, and Ghazizadeh, 2017), the study and analysis of scientific data in terms of citation Altmetric indicators (Peters et al., 2016), the role of ResearchGate in the development of scientific- scholarly activities among faculty members in Tehran's Engineering College (Asnafi and Rahmani, 2017), bibliometric and altmetric study of high citations to resources in top universities of a case study in computer science (Luo et al., 2018), researchers scientific performance in ResearchGate (Naderbeigi and Isfandyari-Moghaddam, 2018), altmetric analysis of top cited articles of University of Madras (Batcha, 2018), and the association between twitter and citation pattern for scholarly articles (Ravikumar and Khonglam, 2018).

As can be inferred from previous studies, research in almetrics is increasing. Therefore, this research intends to measure the visibility and activities of Iranian Library and Information Science (LIS) departments in ResearchGate.

#### 3. Research Methodology

The present study is conducted by using content analysis, with scientometric approach and also by using Altmetrics method. The research population of this study consisted of all faculty members of LIS departments in Iranian universities. Data in this study is collected, ordered and analyzed in three stages.

In the first step, the names of faculty members, telephone numbers of the professor's offices at the relevant faculty, mobile phones and their e-mail addresses are collected from their university websites. Then, through e-mails or phone calls to each of faculty members, names of LIS faculty members of the target university are clearly identified and then the necessary data is collected.

In the second step, all names of faculty members in their English form are searched on ResearchGate, and the data including RG score, number of reads, number of following and followers, number of research items, etc. are saved.

In the third step, by using SPSS software, all data are analyzed based on descriptive statistics such as frequency, percentage, mean and standard deviation.

#### 4. Results

**Question 1**: What is the ranking of Iranian LIS departments based on RG score in ResearchGate?

As the data in Table 1 shows, the "University of Isfahan" is ranked first with the average score of RG 14.11 and standard deviation of 6.72, and "Islamic Azad University of Hamedan", "Tabriz University of Medical Sciences", "Tabriz University of Medical Sciences", "Payame Noor University", "Shiraz University", "Tarbiat Modares University", "Shahed University", "Shahid Chamran University of Ahvaz" and "Isfahan University of Medical Sciences" are in second to tenth places, respectively. Due to the large number of universities with the LIS departments, only

top 10 universities are listed in the table. Moreover, findings revealed that "Zahedan University of Medical Sciences" and "Razi University" have no RG scores.

In this part of the research, in order to achieve a reliable and correct answer, the number of faculty members of the LIS departments in Iran who were present at ResearchGate are compared with RG, and then mean and standard deviation of them are calculated which the results are in table 1.

Table 1: Ranking of departments based on RG score

Rank	University	RG Mean	Standard	
Kalik	Oniversity	score	deviation	
1	University of Esfahan	14.11	6.72	
2	Hamedan Islamic Azad University	11.55	14.51	
3	Tabriz University of Medical Sciences	10.47	9.46	
4	Allameh Tabatabai University	9.89	4.47	
5	Payame Noor university	9.72	10.21	
6	Shiraz University	9.56	8.32	
7	Tarbiat Modares University	9.15	8.14	
8	Shahed University	8.92	4.32	
9	Shahid Chamran University of Ahvaz	8.13	9.10	
10	Isfahan University of Medical Sciences	8.08	4.97	

Question 2: Which Iranian LIS departments have more presence in ResearchGate?

As can be observed in table 2, "University of Isfahan" with the average of 109.67 items of research and standard deviation of 84.03 is ranked first, followed by "Shahid Beheshti University" with a mean of 44.50 and "Payame Noor University" with an average of 43.50.

Table 2: Presence of departments in ResearchGate

Rank	University	Research Item Mean	Standard deviation
1	University of Esfahan	109.67	84.03
2	Shahid Beheshti University	44.50	60.10
3	Payame Noor university	43.50	43.90
4	Shahed University	42.67	7.77
5	Shahid Chamran University of Ahvaz	40	33.96
6	Hamedan Islamic Azad University	37	50.48
7	Kharazmi University	35.33	11.60
8	Tarbiat Modares University	34	33.94
9	University of Medical Sciences	30	33.92
10	Tabriz University of Medical Sciences	23.33	21.73

**Question 3:** Which LIS departments in Iran have uploaded more scholarly resources in ResearchGate?

To answer the third research question, 36 universities with scientific resources uploaded on ResearchGate have been featured in detail. As the data in Table 3 shows, "Isfahan University" ranked first with 329 research items represent 13.66% of all research items uploaded by faculty members in LIS departments. Thereafter, "Payame Noor University" with 261 items and "Isfahan University of Medical Sciences" with 183 items ranked second and third, respectively.

Table 3: Iranian LIS scholarly resources in ResearchGate

Rank	University	No.	%
1	University of Esfahan	329	13.66
2	Payame Noor	261	10.84
3	Isfahan University of Medical Sciences	183	7.60
4	Shahed University	128	5.32
5	Shahid Chamran University of Ahvaz	120	4.98
6	Hamedan Islamic Azad University	111	4.61
7	Kharazmi University		4.40
8	Ferdowsi University of Mashhad		4.07
9	Allameh Tabatabai University	92	3.82
10	Tabriz University	91	3.78

**Question 4**: Who are the most highly cited faculty members in LIS Departments of Iranian Universities in ResearchGate?

Considering the large number of faculty members in LIS department, the results for top ten faculty members is reported in table 4. As table 4 shows, "Farideh Osareh" with 478 citations is ranked first. "Alireza Esfandiari-Moghadam" ranked second with 249 citations and "Amin Erfanmanesh" with 246 citations is ranked third. Also, "Asefeh Asemi" with 231 citations and "Rahim Alijani" with 209 citations are ranked fourth and fifth, respectively. In general, top ten faculty members received a total of 4267 citations in ResearchGate.

Table 4: The most active faculty members in citation

Rank	Name	No.	%
1	Farideh Osareh	478	10.95
2	Alireza Esfandiyari-Moghadam	249	5.71
3	Amin Erfanmanesh	246	5.64

4	Asefeh Asemi	231	5.29
5	5 Rahim Alijani		4.79
6	Sirous Pnahi	181	4.15
7	Maryam Sarafzadeh	168	3.85
8 Afsaneh Hazeri		160	3.67
9	9 Mitra Smiei		3.53
10 Hajar Sotudeh		135	3.09
	Total of Citations	4267	100

**Question 5**: Which faculty members ranked higher than others in RG in ResearchGate?

As data in table 5 clearly shows, "Alireza Esfandiari-Moghaddam" with a score of 28.28 ranked first. "Ali Akbar Khasseh" scored 24.96 that occupied the second place, while "Hajar Sotudeh" with the score of 20.26 ranked third.

Table 5: Top ten LIS faculty members in ResearchGate

Rank	Name and last name	RG score
1	Alireza Esfandiyari-Moghadam	28.28
2	Ali Akbar Khasseh	24.96
3	Hajar Sotudeh	20.26
4	Amin Erfanmanesh	19.71
5	Vahideh Zare Gavgani	18.39
6	Farideh Osareh	17.96
7	Rahim Alijani	17.43
8	Asefeh Asemi	15.95
9	Mohammad Hassanzadeh	14.91
10	Shahram Sedghi	14.4

**Question 6**: Which faculty members have uploaded most research items in ResearchGate?

According to Fig. 1, faculty members with their number and percentage of research items uploaded in the ResearchGate are reported. "Asefe Asemi" is ranked first with 195 document and "Amin Erfanmanesh" with 107 and "Rahim Alijani" with 106 document are ranked second and third, respectively. Also, Alireza Esfandiari-Moghaddam with 95 document and Amir Reza Asnafi with 87 document are ranked fourth and fifth respectively. Top ten faculty members have uploaded 2411 document on this network.

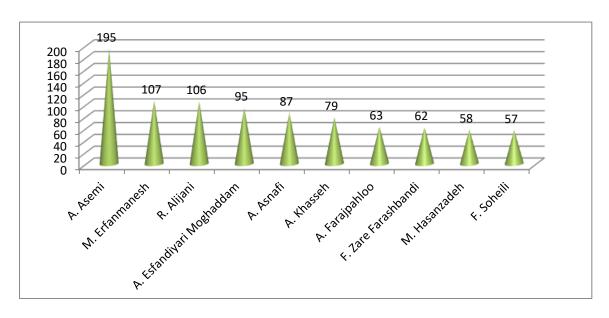


Fig. 1: Faculty members with highest research items in ResearchGate

**Question 7**: who are the most active faculty members in ResearchGate based on the number of reads?

Because of the large number of faculty members, in order to answer this research question, only top ten faculty members who have received the most readings are included in the Figure 2. Based on the figure, "Rahim Alijani" with 24545 reads is in the first place and "Asefe Asemi" with 22,986 reads and "Ali Akbar Khasseh" with 17,353 readings are ranked second and third. In general, top ten faculty members gained 156858 documents reads on this network.

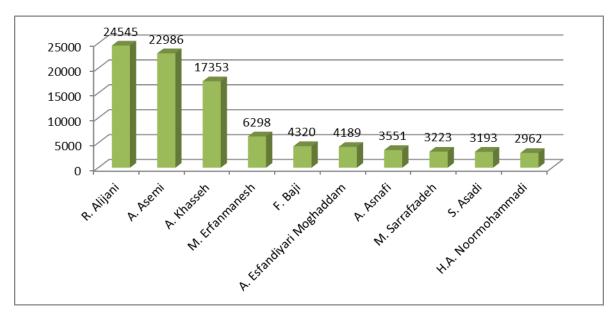


Fig. 2: Active faculty members based on the number of document reads

**Question 8**: Who are the most active faculty members based on the number of followers in ResearchGate?

In this part of research, faculty members totally have 5516 Fallowing which is reported in table 6. Based on the data in table 6, "Amir Reza Asnafi" is ranked first with 305 following and "Amin Erfanmanesh" with 265 and "Ali Sadat Mousavi" with 261 following in the second and third places, respectively. Besides, The number of 109 faculty members who has also been followed reported in the table. Again, "Amir Reza Asnafi" is ranked fist with 267 followers, "Maryam Sarrafzadeh" with 259 followers in the second place and "Amin Erfanmansh" with 178 followers is ranked in the third place.

Table 6: Active faculty member based on followers and following

Following				Follower			
Rank	Name	No.	%	Rank	Name	No.	%
1	Amir Reza Asnafi	305	5.53	1	Amir Reza Asnafi	267	5.90
2	Amin Erfanmanesh	265	4.80	2	Maryam Sarafzadeh	259	5.73
3	Ali Sadat Mousavi	262	4.75	3	Amin Erfanmanesh	178	3.93
4	Rasoul Zavareghi	254	4.60	4	Saeed Asadi	157	3.47
5	Abd Alrasoul Khosravi	245	4.44	5	Mahdi Alipour Hafezi	142	3.14
6	Fatemeh Baji	213	3.86	6	Abd Al Hossein Frajpahlu	132	2.92
7	Abd Al Hossein Frajpahlu	193	3.50	7	Rasool Zavareghi	115	2.54

8	Faramarz Soheili	148	2.68	8	Farideh Osareh	111	2.45
9	Hamzeh Ali Noor Mohammadi	146	2.65	9	Shahram Sedghi	111	2.45
10	Atefeh Sharif	132	2.39	10	Alireza Esfandiyari- Moghadam	106	2.34
Total		5516	100.00		Total	4524	100.00

**Question 9**: Who are the most active faculty members based on number of articles in ResearchGate?

Figure 3 shows top 10 faculty members of LIS departments who have uploaded their articles in ResearchGate. As it can be observed, these 10 faculty members have uploaded a total of 1822 articles on this network. "A. Asemi" with 101 articles ranked first, "A. Erfanmanesh" with 91 articles and "A. Esfandiari-Moghadam" with 89 articles are in second and third places, respectively.

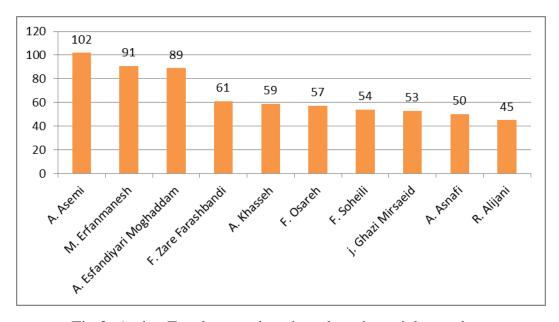


Fig 3: Active Faculty members based on the article numbers

**Question 10**: Who are the most active faculty members based on the number of books in ResearchGate?

Figure 4 shows top ten researchers who have uploaded books in the ResearchGate social and scientific network. These top faculty members of LIS departments have generally uploaded 123 of their books on this network. In this regard, "R. Alijani" uploaded 44 books and is ranked first, "A. Khasseh", with 15 books is in the second place and "A. Asemi" with 12 books is in third place.

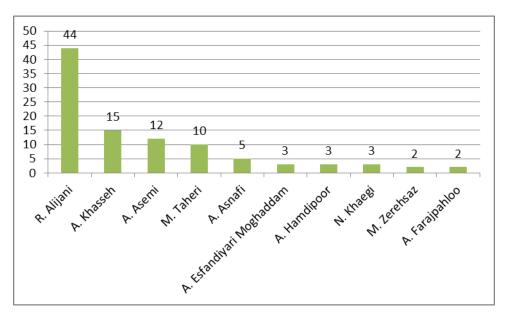


Fig. 4: Active faculty members based on the number of books

#### 5. Discussion and conclusions

The results of this survey shows that "University of Isfahan" with RG mean score of 14.11 and the standard deviation of 6.72 is ranked first and then "Islamic Azad University of Hamedan" and "Tabriz University of Medical Sciences" are respectively ranked second and third. Since RG score is an integrative indicator for assessing scientific validation of researchers in the ResearchGate, all activities that researchers will perform in ResearchGate will be among the factors that will promote their ranks. Calculation of RG is based on four factors: 1. Number of shared publications. 2. The researcher's activity in asking questions. 3. Answers to the others questions 4. Followers. Therefore, faculty members of LIS departments should be aware that their only presence on this network is not enough at all and they should be in interaction with other researchers, too.

Asking and answering questions is an active and important approach that faculty members can increase their followers. Also, it is important to share their full-text works, if possible, so that others can use it. These are items that they can promote their RG score and then the rank of their university and country will be enhanced. The results of this part of the study are consistent with the results of Batooli (2017), Luo et al. (2018) and Peters et al. (2016). These researchers focused on the importance of RG score and how to increase it and they have mentioned that interaction and activity in scientific social networks are the main factors on influencing RG score.

The results of this research on the part of which universities in the research items have the most presence on ResearchGate, shows that the "University of Isfahan" with

the mean of 109.67 research items and standard deviation of 84.03 is ranked first and then "Shahid Beheshti University" and "Payame Noor University" ranked second and third, respectively. Networks and scientific circles causes the development of science and the sharing of knowledge. Social networks epidemic, such as the ResearchGate, have changed the way researchers work. Scientific social networks have been able to create new patterns for scientific communication and interactions. Therefore, it is advisable that the faculty members of LIS departments not lose this pure condition and as soon as possible prove their presence by uploading their research items and interactions with other researchers beside begins their scientific and social collaboration without hesitation. The results of this part of the research are inconsistent with the results of Asnafi (2015), as he concludes that scholars at "Shahid Beheshti University" have not had a significant presence in ResearchGate. While in this study, faculty members of "Shahid Beheshti University" are ranked in second place.

According to the most active faculty members of LIS departments in Iranian universities based on the number of citations, "Farideh Osareh" with 478 citations is ranked first. "Alireza Esfandiari-Moghaddam" with the second rank of 249 citations and "Amin Erfanmanesh" with 246 citations is ranked in the second place. Considering the fact that ResearchGate collects only citations related to research works that have been uploaded in it, faculty members should be aware to submit their research works to take the citations individually. Also, the possibility of obtaining citations increases by activity in social science networks which helps the member to become more popular and consequently to be cited more. Therefore, it is suggested that faculty members consider all Altmetric features to benefit from it more. The results of this study are consistent with the results of Luo et al. (2018). They indicated that uploading articles in ResearchGate could be meaningful to have a better score in Altmetric. But this study does not fit with the research had done by Peters et al. (2016), as they found that there is no correlation between the number of citations and the total number of Altmetric scores. They believe that citation is just one of Altmetric factors and it does not have more priority than the other parameters.

Regarding faculty members who received the highest RG score, results showed that "Esfandiari-Moghaddam" ranked first with RG score of 28.28. "Khasseh" with the score of 24.96 ranked second and "Sotudeh" with the score of 20.26 ranked the third place. Taking higher RG score will be calculated by uploading some publications, asking questions, answering questions and the number of followers, it is suggested that faculty members should raise their RG score in these items. This study shows that may faculty members have a higher number of publications and readings, but their RG score is in a lower position due to their lack of attention to these important items. The results of Luo et al. (2018) and Peters et al. (2016) proved the results of this part of the research.

Based on research items, results uncovered that "Asemi" is ranked first by uploading 195 document and "Erfanmanesh" with 107 is in the second place and "Alijani" with 106 document is ranked third. By taking this point that one of the issues that increases RG score is the number of research items, it is better that faculty members of LIS departments, by paying attention to this matter, upload their research items not only to receive citation but also increase their RG score. The results of this part of research are in line with the results of Janmohammadi, Rahmani and Rutan (2016).

Results showed that "Rahim Alijani" with 24545 reads is in the first place, "Asefeh Asemi" with 22986 readings is ranked second and "Ali Akbar Khasseh" with 17353 reads is ranked third. Since faculty members are considered as pioneers in scientific advancements, other researchers would like to follow their scientific production and their new findings to be up to date about their research. These cases, although have a little effect on RG score but it shows the position and condition of the faculty member whose research items were noticeable. It seems that ResearchGate considers it important and should be effective in RG score. Researches which is done by Luo et al. (2018) and Peters et al. (2016), Ponte and Simoun (2011), Nikkar, Alijani and Ghazizadeh (2017) confirm the results of this section of the research.

In terms of the number of followers, findings indicated "Asnafi" is ranked first with 305, "Erfanmanesh" with 265 in second place and "Sadat-Mousavi" is ranked third with 261 followers. The results of Nikkar, Alijani and Ghazizadeh (2017), Batooli (2017) and Rezaie-Sharifabadi, Ghaebi and Salimi (2016) are consistent with the results of this research. So that the number of researchers following in scientific social networks can affect the number of citations and other indicators of altimetrics and in general, scientometrics. According to the follower's feature, 109 faculty members had followers that "Asnafi" 267 followers is ranked in the first place, "Sarrafzadeh" with 259 followers is in second place and "Erfanmansh" with 178 followers is ranked third. Due to number of followers are influential in RG score, faculty members by answering, questioning and interacting with other researchers should try to attract more followers. The results of Janmohammadi, Rahmani and Rutan (2016), Nikkar, Alijani and Ghazizadeh (2017), Batooli (2017) and Rezaie-Sharifabadi, Ghaebi and Salimi (2016) prove the results of this section of research. All of these studies have emphasized on interaction and activity in this social network and pointed to its importance.

The results of faculty members who have uploaded most of their articles on ResearchGate indicated that "Asemi" with 101 articles is ranked first, "Erfanmanesh" with 91 articles and "Esfandiari-Moghadam" with 89 articles are in second and third places, respectively. In this case, it can be argued that faculty members of LIS departments should become familiar with other items that can be uploaded on this

network, such as posters, PowerPoints, data, thesis, book chapters, and so on and do not neglect them. But it should be kept in mind that articles are one of the most important scientific sources and it should be prioritized because researchers use academic papers to use them in their resources.

In the case of the most active faculty members in terms of the number of uploaded books on ResearchGate, the results showed that "Rahim Alijani" is ranked first by uploading 44 books, "Ali Akbar Khasseh" with 15 books is ranked in the second place, and "Asefeh Asemi" with 12 books equivalent to 9.76% of all uploaded books is in the third place. Based on this part of research it can be argued that books are one of the most important and main sources of research that professional researchers use them a lot. Therefore, if faculty members are compiling, translating or writing a book, it is advised that they should at least upload the first pages or chapters of it to be used by researchers. According to the results of this research section, Rahim Alijani and Ali Akbar Khasseh, members of LIS departments of Payame Noor University, have been leading in this regard and have proven their importance in practice.

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