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## USE OF ACADEMIC SOCIAL NETWORKING SITES FOR SCHOLARLY COMMUNICATION IN PSCST CHANDIGARH: A STUDY

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### ABSTRACT

*Academics social networking sites (ASNS) are playing an important role for dissemination of information in scholarly communication. ASNS such as, Research gate, Academia.edu, Linked In, Mendeley and Google Scholar are becoming very popular among general and scientific community. These ASNS allow their users to create personal profile, upload papers, share personal content, downloads other's article etc. This study investigates the usage of ASNS by Punjab State Council for Science and Technology (PSCST) employees along with the main purpose of using ASNS. Furthermore, common benefits of using ASNS and the major problems faced in connecting with the ASNS are also looked at. A questionnaire was used to collect data from PSCST employees.*

**KEYWORDS:** *Academic Social Networking Sites (ASNS), PSCST, Research Gate, Academia.Edu, Linked In, Mendeley and Google Scholar*

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### 1. INTRODUCTION

With the advent of the internet and information and communication technology, the living standard of people are changing rapidly. The web 2.0 enables the users to interact with each other and allow collaboration through social media. Now social media sites have been established itself as a power fool communication tool (Dutta, 2017). Day by day these social media sites are gaining more and more popularity and became widely used by general and specific user community. These social networking sites (SNSs) allows their users to create their personal profile to connect personally with others. (Cain, 2008). Berger at all (2014) defines SNSs as websites aimed explicitly at the academic community which allow users to create a profile and make connections with others. In their study they divided SNSs into two categories: user-oriented sites (Facebook, Linked in) and Content-Oriented Sites (Twitter, YouTube, and Flickr). SNSs such as Facebook, WhatsApp, Snapchat, Skype, Orkut and Twitter provide platforms to create profile, share personal content, react on other contents and help the others to be connected bases on his/her interest. These applications have become powerful estate of users' day to day life as they are used to stay in touch (Ali, 2020). Although SNSs are much more popular to communicate and collaborate with each other and can be used by academic community or professionals, studies show that there are many problems and limitations to use these SNSs as these sites are not rightful platform for scholarly communication. In other word, these sites are totally for entertainment purposes and not suitable for research and scientific sharing

Academic social networking sites (ASNS) are offering exactly same characterizes as that of other SNSs except for these are intentionally crafted to meet the academic community's needs (Asmi, 2015). The ASNS are more specific to academicians and professionals to share their research publications, their activities, assessing other research-oriented activities and to network with other

experts in their respective fields (Mumtazimah,2018).ASNS provide the relevant platform of finding relevant communities, the ability to disseminate information to a broader audience and provide facility to get statistics views of publication, downloads and citation of their work(Fatima, Espinoza, Caicedo 2015). According to G, Stephen (2020) ASNS are the modify version of traditional pattern of scholarly communication, in which user can disseminate his/her own research output to others and to discover research output of others. ASNS provide accessible platform to all scholars where they are bringing together from different discipline. Kelly and Delasalle (2012) revealed that ASNS are seen by scholars as a modern way of being more visible and to make their research more discoverable so it can be easily discovered by peers.

On general, all most all the ASNS have same features and services for their clients. They allow upload and publish research output reports, follow other scholars and be followed by peers. They help to improve Collaborative Scientific and research activities of researchers and scholars. In spite of having same features in all the ASNS, some sites have some special features. For example, Academia.edu is a professional platform for sharing academic research. Statics shows that more than 22 million papers are uploaded every month on academia. It is a commercial social networking site which allow the users to view analytics of their papers (Stephen, 2020). Academia allow its users to know what keywords are used by people to find you on google. Research Gate is the professional networks of scientists and professionals which allow the users to connect through Facebook, LinkedIn and twitter. Research gate has more than 17 million users from all over the world (Research Gate, 2020). It provides facility to share, publish, access publications, collaboration with others, citation counts, ask questions and get answers with finding suitable job facilities. LinkedIn is a business and employment-oriented networking site where employers post their job requirement and employees post their biodatas. Apart from this, users can share their posts and blogs. In 2013 LinkedIn provide additional feature by giving the option to adding the publication list in their profile (Thelwall, 2014).

Google scholar and Mendeley are slightly different from other ASNS. Google scholar is a search engine used for searching scholarly articles. Users can create their profile, save their publication and import their citation. It automatically ranks and weigh the documents and provide facility to know about how often and how recently your paper is cited by others. According to Ortega (2015) google scholar citations is primarily for scholars, researchers and faculty members as it presents a list of their publications that are indexed in Google Scholar. Mendeley on the other hand, is a reference manager tool with combine features of ASNS. Users can create academic profile, upload their research output, and collaborate with others by sharing publications and research findings. It is basically a tool to manage, organize, discover and share and generate bibliographies for scholarly publications. Your research (Mendeley, 2020). It automatically extracts metadata from pdf articles.

**STATISTICAL INFORMATION OF FAMOUS FOUR WIDELY USED ASNS**

<b>Statics</b>	<b>Research gate</b>	<b>Academia</b>	<b>Mendeley</b>	<b>Linked in</b>
Site rank	171	331	4.643	55%
Daily time on site	2.33%	2.28%	3.19%	10.48%
Page view per visitor	2.11%	1.85%	2.67%	8.51%
Search traffic	83%	64.5%	15.1%	21%
Bounce rate	57.9%	66.4%	40.9%	19.3%

Above mentioned statistical information about the most popular ASNS are taken through Alexa

website. Alexa website calculated the rank of particular ASN using appropriate methodology that combine a site estimated average of daily visitors and estimated average of page views over the past three months (Alexa, 2020). The table presented that search tariff of Research gate is quite higher i.e. 83 percent followed by 64.5 percent of academia. On the contrary, LinkedIn has the highest rate of average time on site (10.48%) than academia (2.28%) and research gate (2.33%).

## **2. LITERATURE REVIEW:**

Several existing studies have addressed the use of social networking sites for the purpose of education and teaching, similar research that investigates the use for scholarly communication is relatively small. A comprehensive literature explores some empirical studies that investigated the use of ASNS for scholarly communications. Gruzd and wilk (2012) investigated intention of academicians of the American society of information science and technology to use ASNS for scholarly communication and research practice with united theory of acceptance. Rowland et al (2011) surveyed 2000 researchers to discover the use of ASNS. The study revealed that researchers use at least 2 social networking tools in their research lifecycle. Lupton (2014) use thematic analysis for online survey. Making connection, sharing, self-promotion and research support was identified as benefits of his study. Ali and Richardson (2016) study revealed that around 72 percent respondents use ASNS for scholarly communication. Hammarfell et al. (2016) contextualized their study in terms of bibliometric indicators and suggested some alternative indicators for future research in his study. Mohammad et al (2016) have examined Mendeley for bookmark publication for later reading. Jeng et al (2015) investigated that keeping up with user's research domain and following the topics that the community is paying attention to, are the top two motivation for joining a group on Mendeley.

A few studies highlight additional incentives for scholars to engage with ASNS. Relojoand pilao (2016) investigated that researchers use ASNS to maintain and build meaningful and long-lasting relationship. Another study revealed that researchers use multiple ASNS to update their Knowledge. Ward et al 2016 revealed that researchers felt risk to upload their work on ASNS. Tal & Pieterse (2017) indicated 4 gratifications that motive users to visit ASNS. These are self-promotion, acquisition of professional knowledge, belonging to peer community and interaction with peers. Jordon (2019) found five themes within the literature review. These themes are identified as open access publishing, metrics, interaction with others, user perspective and platform demographics and social structure.

Of the research publish to date, it is clear that no study has been done on the use of ASNS by users of Punjab State Council for Science and Technology (PSCST). Thus, the current study aimed to investigate the use of academic social networking sites by the users of PSCST.

## **3. OBJECTIVES OF THE STUDY:**

The study focused on the following research objectives

- 1) Which is the most popular ASN used by PSCST users
- 2) For what purposes PSCST users uses ASNS
- 3) To identify the satisfaction of users regarding ASNS
- 4) To identify the obstacles for using ASNS.

## **4. METHODOLOGY:**

The first and the most important task of the study was to identify ASNS sites that include both social networking features and scholarly contents. For this purpose, ASNS profiles of scientists and engineers of PSCST are visited personally. On the behalf of this, the most popular sites,

Research gate, Academia.edu, Linked In, Mendeley and Google Scholar were decided to use for study.

This study was carried out by using survey method. Questionnaire tool were selected to collect the data from the respondents. The survey was reviewed for content, accuracy and clarity. Before distribution among participants, it was further pre tested and modified accordingly. The questionnaire was designed in three clusters. The first cluster of the questionnaire contain basic demographic questions. Second cluster was about the awareness and use of ASNS and the third cluster contained questions about the benefits and problems of using ASNS. This study used simple random sampling as a sampling technique. Participants were scientists and engineers from the biodiversity board, biotechnology cell, environment, climate change unit, patent information centre and industrial and engineering cell at PSCST. A total no. of 200 questionnaires were distributed among them. Out of the total, 182 questionnaires were received, but only 169 respondents completed the entire questionnaire. Hence, 169 responses (84.5%) are taken for analysis. Collected data was analyzed using excel spreadsheet and percentages to describe findings. To avoid mistakes table and discussion was presented within the same section.

5. RESULTS AND DISCUSSIONS

TABLE 1: DEPARTMENT WISE RESPONDENTS DISTRIBUTION

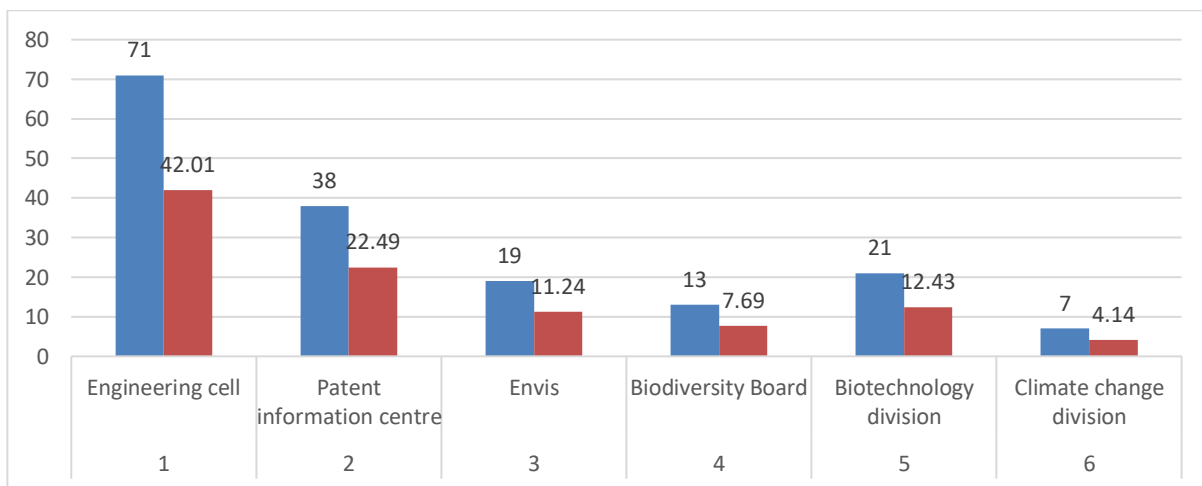


Fig. 1 shows that most of the respondents whom are actively using ASNS, are from engineering and consultancy (42.01%) cell, followed by respondents from patent information cell(22.49%), Biotechnology division (12.43%), Envis (11.24%) and Biodiversity board (7.69%). Further, only 4.14% respondents are from climate change.

TABLE 2: AGE AND GENDER OF RESPONDENTS

Age range	Age group	Respondents	Percentage
A B C	A 21-35	91	53.84
	B 36-45	59	34.91
	C 46-58	19	11.24
Gender	Men	103	60.94
	Women	66	39.05

Table 2 depicts that the majority of the respondents are from the age group of A which means that younger respondents are more likely to use technology including ASNS than the age group of B and C. table further indicates the dominance of males (60.94%) over females (39.5%) in the

institute. This distribution of gender is almost equal with the study of Ali and Richardson’s (2017) on usage of ASNS by Karachi social science faculty.

The Second part or cluster of a questionnaire begun with a question if they heard of any ASNS (Research gate, Academia.edu, Linked In, Mendeley and Google Scholar). All most all the respondents (that is 100%) are aware about ASNS. Then they were asked to give answers of the following questions

**TABLE 3: SOURCE OF KNOWLEDGE OF ASNS**

Sr. no.	Sources	No. of respondents	Percentage
1	Friends	71	42.01
2	Guidance from Librarian	38	22.49
3	Seminars & workshops	19	11.24
4	Email from Institute	28	16.56
5	Guidance from colleagues	13	7.69
	<b>Total</b>	<b>169</b>	<b>100%</b>

All the respondents (whom were asked to tell the sources of information about ASNS) indicated that they took variety of sources to know about these sites. Table indicated that friends are the most common source of delivering knowledge about ASNS. A similar result is presented in the study of Berry, (2015). The second prominent sources of providing information about ASNS is library. here, it is important to note that Libraries are not only providing resources, information support and training to researchers, but also expand their support in all phases of the scholarly communication. Email from institute, Seminars & workshops, guidance from colleagues are other important sources of knowledge about ASNS.

The use of ASNS have expanded along with the availability of advance computing devices and advance network connectivity. In this accordance, respondents were asked to know about access and connectivity. The findings revealed that majority of the respondents use smart phone device (83.43%, n=169) to use ASNS, followed by laptop (42 %, n=169) and desktop personal computer (11.24, n=169).

In terms of network connectivity, data revealed that majority of the respondents (89.34%, n=169) use 3G or 4G wireless connectivity to connect internet. Very few respondents (10.18%, N=169) indicating that they connect to internet by means of cable which require wiring facilities.

The respondents were asked about how frequently they visit the ASNS. Result shows that there were variations in the frequency of visiting sites.

**TABLE 4: VISIT FREQUENCY OF ASNS**

ASNS	Once daily (%)		Once in Week (%)		Monthly (%)		Less than three month (%)		Not visit (%)	
Google Scholar	39	23.07	14	8.28	67	39.64	16	9.46	33	19.52
Linked In	43	25.44	17	10.05	52	30.76	6	3.55	51	30.17
Academia	40	23.66	34	20.11	21	12.42	60	35.50	14	8.28
Research gate	43	25.44	73	43.19	23	13.60	19	11.24	11	6.50
Mendeley	9	5.32	25	14.79	49	28.99	29	17.15	57	33.72

Table 4 depicts that around one fourth of the respondents from PSCST visit all most all the ASNS (except Mendeley 5.32%) daily. Table also revealed that 43.19 percent respondents visited research gate weekly, followed by academia. Furthermore, it is clear from the table that the most frequently visited site was research gate (93.49) followed by Academia (91.71), google



scholar(80.47), linked In (69.32) and then Mendeley (66.27).Hence, it is clear from the table that ASNS became an important part of scientific and technical life of the PSCST staffs.

**TABLE 5. PRINCIPAL PURPOSE OF USING ASNS (MULTIPLE ANSWERS ARE ALLOWED)**

Purpose	Research gate	%	Academia	%	LinkedIn	%	Google scholar	%	Mendeley	%
To view other’s research output	129	76.33	92	54.34	67	39.64	54	31.95	7	4.14
sharing resources and reports with other professionals	80	47.33	101	59.76	51	30.17	0	0	13	7.69
to keep up to date	90	53.25	84	49.7	83	49.11	55	32.54	15	8.87
to accrue citation	109	64.49	51	30.17	43	25.44	134	79.28	149	88.16
To promote on research	134	79.28	149	88.16	89	52.66	79	46.74	51	30.17
to communicate with scientists and scholars	70	41.42	92	54.43	123	72.78	0	0	0	0

The ASNS are used to meet some purposes. For this, respondents are asked about their purpose of using ASNS the result is shown in table 5, which indicates that 79.28 percent respondents use research gate to promote their research activities, whereas 88.16 percent respondents use Academia to promote their research output. Data further revealed that most of the respondents used Linked In to communicate with other scholars and scientists. Both google scholars and Mendeley were used to accrucitation.

Apart from the above-mentioned academic purpose, respondents were asked to write most important social reason to use ASNS. Results indicated that most of the respondents with the percentage of 52 use these sites to make new friends and to find old friends. 44 percent respondents indicated that using ASNS helps them to track the impact of their paper. Very few participants mentioned that they are using ASNS to answering others questions and responding to other’s research. It is again important to note that social networking sites gives their users an instant feedback facility which may be positive or negative but gives an idea regarding the impact of paper (Jordan &weller, 2018).

**TABLE 6: COMMON BENEFITS OF USING ASNS**

Benefits of using ASNS	Results
Increase self esteem	89 (52.66%)
Interaction with experts	92 (54.43%)
Self promotion of research	122 (72.18%)
Easy location of resources	111 (65.68%)
Free access to prestigious and certified journals	94 (55.62%)
Tracking the reading and citation of my articles	144 (85.20%)
Downloading others’ articles	129 (76.33%)

Table 6 shows that tracking the reading and citation of my articles is the common benefit of using ASNS followed by downloading other’s articles.

**TABLE 7 SATISFACTION OF RESPONDENTS**

Research gate		Academia		LinkedIn		Google scholar		Mendeley	
Satisfied	Not	Satisfied	Not	Satisfied	Not	Satisfied	Not	Satisfied	Not
67%	33%	60.94%	39.05%	55.25 %	44.75 %	49.23%	50.76 %	37.73%	62.27 %

ASNS are used to meet different types of requirement. When these requirements of users are fulfilled, positive attitude develops. It leads to satisfaction. As shown in table 7, most of the respondents (67%) were satisfied using research gate, followed by academia, LinkedIn, google scholar and Mendeley. Table further indicated that around 62 percent respondents were not satisfied about Mendeley

**TABLE 8 OBSTACLES WHILE USING ASNS**

Obstacles	Respondents	Percentage
Shortage of time	13	7.69%
Other competitive SNS	0	0
Doubt or fear of being misused	101	59.76%
Fear of being a source of hacking	51	30.17%
Not adequate for my scientific needs	9	5.32%
The site is confined only to English language	0	0

The table 8 shows that the most common selected obstacle (59.76%) of using ASNS was doubt or fear of being misused, followed by fear of being a source of hacking and the lowest choice (5.32%) was not adequate my scientific needs. Therefore, it is necessary for the PSCST authority to increase the awareness of the staff to the ASNS and to motivate them to use these sites frequently.

## 6. DISCUSSION AND CONCLUSION

The paper explored the usage of ASNS among selected respondents from PSCST. The study investigated the visit frequency, purpose of using ASNS, satisfaction of respondents and obstacles of using ASNS. The study also investigated the reason for this cohort to upload their own publications.

The current study suggest that the use of academic social networking sites is gaining more and more acceptance and popularity among professionals and scholars of almost all the disciplines. An interesting finding from the study is that young respondents are more active on ASNS than the others. Men responded more than women in this study indicated the majority of male staff in the council. The majority of the respondents indicated that Friends (42%) are the most prominent source to know about ASNS, whereas around 22 percent respondent’s gives credit to librarian to know about ASNS.

Almost 83 % users use smart phone to use ASNS Promote one’s own research finding, accrue citation and finding related study are the major reasons for joining ASNS among respondents.

Study suggests that respondents realized the advantage of using ASNS for scholarly communication. In terms of frequency of visit of these sites ASNS such as Research gate, academia and Linked In were found to be most frequently visited and used while google scholar and Mendeley were used to accrue citation.

The majority of the respondents agreed that they are satisfied with the use of ASNS which indicated that these tools are enjoyable to use. The current study further suggests that ASNS helps to eliminate geographical barriers and establish new relation among scientific community.

Among obstacle and limitation associated with the use of academics social networking sites, shortage of time, security, privacy, lack of digital efficiency and lack of proper guidelines and training were considered. Hence, relevant steps should be taken to enhance the use of ASNS for scholarly communication.

Although, this study has helped to clarify the usage of academics social networking sites, it does have some limitations and pave the way for further research. Future research may explore department wise segregation of respondents, usefulness of ASNS, impact of ASNS on Users, strategies to enhance the use of ASNS, levels of adoption and diversity of benefits of ASNS tools for scholarly communications. The use of other research techniques such as online questionnaires, interviews or case study may useful for in depth study, increase the understanding level of users, their perceptions etc for the use of ASNS for scholarly communication.

#### **7. DECLARATION:**

I, Gurjeet Kaur the sole author of the research paper take the responsibility of the content and material as this is my genuine and original work and no part of it or similar version is published. It has not been sent for publication anywhere else. There is no plagiarism and copyright issues as it is my original work. I have read the manuscript carefully and hereby give consent to publish in your journal.

#### **REFERENCES:**

1. (Mangan, 2012; c.f. Maxmen, 2010)
2. (Mangan, 2012; c.f. Maxmen, 2010)
3. Academia.edu was founded by an Oxford University
4. Academia.edu was founded by an Oxford University
5. Ali, Muhammad & Richardson, Joanna. (2018). Usage of academic social networking sites by Karachi social science faculty: Implications for academic libraries. *IFLA Journal* 44(1) 2018. Available at 10.1177/0340035217744235.
6. Ali, Rashid; Kardar, Muhammad Sameem & Muhammad waseem (2020). Use of WhatsApp Messenger among LIS students of University of Karachi, Pakistan. *Library Philosophy and Practice (e-journal)*. 4139.
7. Asmi, Nowsheeba& Margam, Madhusudhan. (2015). Academic Social Networking Sites: What They Have to Offer for Researchers?. *Journal of Knowledge & Communication Management*.5 (1):1-11.Available at 10.5958/2277-7946.2015.00001.7. [https://www.researchgate.net/publication/280069078\\_Academic\\_Social\\_Networking\\_Sites\\_What\\_They\\_Have\\_to\\_Offer\\_for\\_Researchers](https://www.researchgate.net/publication/280069078_Academic_Social_Networking_Sites_What_They_Have_to_Offer_for_Researchers)
8. Berger, Katharina; Klier, Julia; Klier, Mathias; & Probst, Florian (2014) "A Review of Information Systems Research on Online Social Networks," *Communications of the*



Association for Information Systems. 35(1) Available at. DOI: 10.17705/1CAIS.03508

9. Berry, Duaa (2015). Awareness and Use of Academic Social Networking Sites by the Academic Staff at the South Valley University in Egypt. *Journal of Library and Information Sciences* December. 3(2): 115-132. ISSN 2374-2372 (Print) 2374-2364
10. Cain, Jeff. (2008). Online Social Networking Issues Within Academia and Pharmacy Education. *American journal of pharmaceutical education*. 72.
11. Dutta,p; de,c& adhikeri,c(2017) Impact of social media on student life: A blessings or curse. *International Journal of Multidisciplinary Research and Development*, 4(7) 479-86.
12. Fatima, k., Espinoza Vasquez., Caicedo Bastidas, C.E. (2015). Academic Social Networking Sites: A Comparative Analysis of Their Services and Tools. In *iconference 2015 Proceedings*. Available at [https://www.ideals.illinois.edu/bitstream/handle/2142/73715/380\\_ready.pdf](https://www.ideals.illinois.edu/bitstream/handle/2142/73715/380_ready.pdf)
13. G, Stephen. U, Pramanathan (2020). Awareness and use of academic social networking sites among library and information science professionals in north eastern region in India. *Library Philosophy and Practice (e-journal)*. 3891. Available at <https://digitalcommons.unl.edu/libphilprac/3891>
14. Gruzd, A., Staves, K. & Wilk, A. (2012). Connected scholars: Examining the role of social media in research practices of faculty using the UTAUT model. *Computers in Human Behavior*, 28: 2340–2350.
15. Hammarfelt B, Nelhans G, Eklund P & Åström F (2016). The heterogeneous landscape of bibliometric indicators: Evaluating models for allocating resources at Swedish universities. *Research Evaluation* 25(3): 292-305.
16. Jordan, Katy & Weller, Martin. (2018). Academics and Social Networking Sites: Benefits, Problems and Tensions in Professional Engagement with Online Networking. *Journal of Interactive Media in Education*. Available at 10.5334/jime.448.
17. L. Parabhoi& N. Kumari. (2018). Awareness and Use of Academic Social Networking Sites by Faculty and Students of Indian Institute of Technology (Indian School of Mines), Dhanbad : A Case Study," 2018 5th International Symposium on Emerging Trends and Technologies in Libraries and Information Services (ETTLIS), Noida, 2018: 174-178. Available at 10.1109/ETTLIS.2018.8485201.
18. Lupton, D (2014). Feeling better connected?: Academics' use of social media. *News & Media Research Centre, University of Canberra*.
19. Meishar-Tal, Hagit& Pieterse, Efrat (2017). Why Do Academics Use Academic Social Networking Sites?. *International Review of Research in Open and Distributed Learning* 18 (1). available at <https://files.eric.ed.gov/fulltext/EJ1136066.pdf>
20. Mohammad, Mumtazimah; M. lazim, Yuzarimi;&Rosle, Suharmili. (2018). Academic Social Network Sites: Opportunities and Challenges. *International Journal of Engineering & Technology*. 7(3.13):133-136. ISSN 2227-524X. Available at: <http://dx.doi.org/10.14419/ijet.v7i3.13.16339>.

21. Ortega, J. (2015). Disciplinary differences academic social networking sites. Online Information Review. 39(4). 520-536. Available at 10.1108/OIR-03-2015-0093
22. Philosopher as an academic social network site. Part of its rationale was to connect authors
23. Philosopher as an academic social network site. Part of its rationale was to connect authors
24. Rowlands, I., Nicholas, D., Russell, B., Canty, N., & Watkinson, A. (2011). Social media use in the research workflow”, LEARN PUBL,24(3):183-195. available at <http://dx.doi.org/10.1087/20110306>
25. Thelwall, Mike & Kousha, Kayvan. (2014). Academia.edu: Social Network or Academic Network?. Journal of the American Society for Information Science and Technology. 65. Available at 10.1002/asi.23038.