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Impact of Information Literacy Skills of Librarians on Research Productivity of Faculty Members of University of Agriculture, Faisalabad

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Abstract:

This study has investigated the impact of Information Literacy Skills of Librarians to enhance the research productivity of Faculty Members of the University of Agriculture Faisalabad, Punjab, Pakistan. The main goal of the study was to measure the levels of Information Literacy of faculty members and professional librarians of the university, to investigate the programs offered by library staff of the university, and to explore the role of Librarians' Information Literacy skills for research productivity of faculty members in the university. To achieve the objectives of the study, the Sequential Explanatory design of Mix method approach was employed and questionnaire was distributed to every participant of the population of faculty members, and interviews were taken from the professional librarians by researchers to get an in-depth understanding related to the study. There are 07 major faculties in the university and 39 departments working under the umbrella of these 07 faculties and 579 teaching faculty members are working in these departments with various designations of Lecturers, Assistant Professors, Associate Professors, and Professors in the university, and there are 05 professional LIS degree holders staff in the main library of the university working there. The required sample size was 231 and all questionnaires were received from the faculty members. The response rate is 100%. Data were analyzed through SPSS 20 version. Findings of the study revealed that LIS professionals and faculty members have moderate levels of Information Literacy skills and they can improve their competencies in Information Literacy by adopting some training courses and seminars. The library

staff conducts orientation sessions at the start of every year and the library has sufficient resources for faculty members and library staff is cooperative with the faculty members but the library staff does not conduct any trainings and workshops to improve the IL skills of faculty members.

Keywords: Information literacy; Information literacy skills; Impact of librarians; Faculty members, University of Agriculture.

Introduction:

The practice of Information literacy (IL) is very popular in every field of education and every field of the learning environment and almost every discipline of life we need to learn more and more for our learning as well others. This made different groups, experts and bigger entities (ACRL, IFLA, UNESCO, etc.) have devised a variety of useful models and standards of information literacy (Johnston & Webber, 2003). Paul G. Zurkowski, the former president in the Association of Information Industry, United States of America was the first to coin the term "Information Literacy IL" in 1974 and referred it to the aptitude of the users to recognize the information hubs to satisfy the literary needs by deploying the related technologies. (Zurkowski, 1974). Nowadays, it is a digital world and a man can acquire all his required information on his computer table with the help of the Internet and a computer, therefore every person has the right to acquire, judge, analysis its required information to use it to create information and ideas and manipulating productively to get the desired objectives. "Information literacy empowers the people of every field of life to seek, evaluate, use and create information effectively to achieve the goals. It is a basic right of human right in a digital world and promotes social inclusion in all nations." (Hollander & Mar 2009).

Information is an important entity now a day, due to the current explosion of information in the present age, an information literate person, researcher, and faculty members need Information Literacy Skills to acquire their required authentic and reliable information from the bulk of raw information. The Agricultural faculty members are deal with every sort of information for their research publications their lectures preparations as well. The storing organizing and re-finding of information is an essential aspect that Agricultural teachers and researchers need to know. The Agricultural faculty members are themselves the information manager of their personal information. But at the same time, they get benefits from the IL skills of the librarians. The

librarians not only give research services to their faculty members but also arrange different programs to enhance the skills of Information Literacy of their respective staff members. Due to these programs the practices of IL Skills of librarians to the Agricultural faculty members getting good results in the shape of production of the research and improve their searching techniques during research work, but still, this is the high concern area of the local researchers which needs to be focused, so that after investigation Library services, conferences, training of Information Literacy skills and some other sessions of IL skills and Information literacy programs can turn more fruitful as an output. LIS Professionals can upgrade professional practice by the superior capability to recognize ILS requisites of Agricultural faculties and to propose and systematic provision of appropriately designed services for them.

Association of College and Research Libraries (2000) describes "information literacy as a set of abilities requiring individuals to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information". A similar explanation for the IL definition was also given by American Library Association (2000). A study by Bruce (2004) showed the role of IL and its importance towards society: "Information Literacy skills learning is required to every field of life which can transform the information society of today into the learned society of tomorrow". There are various sources available in a variety of formats, for information seekers to approach them as per their ease as electronic/ printed (books, journals newspapers, magazines, newspapers), internet and on various channels. The teachers, experts, colleagues, friends, parents, and class fellows are also well sources of information for an information seeker. It is necessary for an information seeker to be able for selecting an appropriate and substantial source of information and must critically evaluated and communicate for its best use.

Statement of the Problem

The librarians and libraries in universities are the hub of knowledge and wisdom not only for their students but also for their faculty members as they fulfill their study and research needs in a well-directed way but at the same time, the librarians are still expected to do more for researchers and faculty staff at different levels and in variable research aspects. However, despite the required services rendered by the library professionals, a great number of faculty members still believe to find more services in research studies. Therefore, the IL skills of librarians play a very vibrant part to fulfill the study and research needs of their staff in a quick period (Klain Gabby &

Shoham, 2017). Several published studies on IL are available in literature but in Pakistan, no one deeply investigated the particular importance of the active key role of IL skills of librarians on enhanced productive research imparted by faculty members of the Agriculture University field. Researchers selected the field of agriculture for their research because in Pakistan the field of Agriculture is the backbone of our country and the outcome of this research can be beneficial for improved food security of the country.

Review of Relevant Literature:

The term Information Literacy carries the same comprehension as that of user education and trends in using libraries and it has attained expansion due to fast-tracked advances in digital technologies to satisfy the ever-increasing number of users and the information of their interest should reach through capable information professionals. This was required in response to prerequisites of the knowledge economy for community-serving medical practitioners (Andretta, 2005). According to various scholars and professionals IL can be viewed as "acquiring models of information systems, a set of skills, a combination of IT and information skills, learning skills, a process and way of learning, way of experiencing information use and information behavior" (Bruce, 1997). Different researchers, Scholars, and various organizations in the whole part of the world defined Information Literacy preeminently, But it has been observed that there vigorous attempts most of the time are made in and academic educational settings (Campbell, 2008). Zurkowski (1974) is recognized as the one who used the term "Information Literacy" first and after two years in 1976, Burchinal is reported to have stated that people should be equipped with emerging innovative skills to become information literate. Such skills include learning the art of locating and manipulating information with good proficiency to resolve confronting issues and making reliable decisions.

UNESCO (2005) comprehends information literacy as "encompasses knowledge of one's information concerns and needs, and the ability to identify, locate, evaluate, organize and effectively create, use and communicate information to address issues or problems at hand; it is a prerequisite for participating effectively in the Information Society and is part of the basic human right of lifelong learning." Currently, the education sector has recognized information literacy as a vital constituent. With the diversity increase in every field at different levels, a needful advancement in technology appeared that played a supportive role to refine information through

its continuous generation, organized storage, and easy accessing. All such inclusions attracted the individuals and people serving professionally to take into account the valid base for being information literate by learning to address such fundamental questions as to when, why, and whereabouts of information, comparative evaluation of available information and finally using and sharing the valuable one in true spirit (CILIP, 2004). IL is, therefore, a vast concept with many potent dimensions than that portrayed by librarians that the information seeking process is defining a topic for which proper resources are selected and used. Then the information is identified wisely and appraisal of resources is done. Finally archiving the research takes place (Moselen & Wang, 2014).

IL skills are very much significant in an information-rich environment because there is rapid growth in information and information resources which are available easily through multiple media electronic and print. IL skills are a set of competencies and capabilities requiring personal's to "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information." These skills are also gaining increased significance in the current atmosphere where fast track changes are appearing in technology which is pooling information hubs (American Library Association, 2000). Information literacy involves the polishing of IL skills also to help literate persons to the establishment in a better way. Concerning work on online skills, it was revealed about such capabilities which make people more proficient and efficient while completing a given task. People without information literacy skills may spend much time retrieving information, maybe due to the challenges they may encounter when trying to download information stored in electronic format (Madu & Dike, 2012). IL skills depend upon the basis for lifelong learning and cover all fields of life learning and educational environment and also to the level of education. (IL) Skills enable researchers, students, and a common individual to learn and how to learn his/her required information and how to ascertain these recourses and appraisal these resources, their quality and quality and create new ideas from their available information and their best use to complete their tasks and goals in their research or other fields of education.

Julien and Boon (2002) observed IL skills as the competency of an individual to make productive exploitation of information resources systematically, and requires from an information literate fellow to get equipped with enhanced skills of data searching through online sources in

such a blooming information age, and learning useful techniques and broad knowledge base to apply appropriate terminology, construct a wise and logical search tactic and precise evaluation of information. It is a set of highly refined skills acquired as information and knowledge to establish the decision when and how to seek information and the relevant source, its relative evaluation and integration, usage and passing on the information quite effectively keeping ethical in view. Briefly, information literacy discusses the aggregate of skills revolving around two-way communication of information through searching, using, and generating for others to use to continue this cycle. Hence, the library professionals should undergo regular capacity building for the promotion of skills that have to deal with a great number of users with a variety of subjects to explore. This handling requires efficient time management and is only possible when library professional keenly knows a good number of sources for each information and deploys information and communications technology supported with techniques to search and access e-resources. Their role is of information providers cum facilitators so are required to act as library managers understand the needs of the learning community and train and guide them accordingly to become more independent less relying on library staff for every matter which is one such basic motivation of information literacy (Choudhury, 2009).

Research Methodology

The sequential explanatory design of the Mix method approach has been considered appropriate for this current research and was chosen by the researchers. Mixed methods consist of both a method and methodology which is much helpful for a researcher for conducting research. It involves gathering, examining, and integrating quantitative and qualitative research in a single study. The combination of both quantitative and qualitative research provides a researcher a better understanding of the research problem or issue and solves the research problem, mixed method of research provides a researcher, a chance to a deep understanding of a certain phenomenon and solve the research problem. In Mix Method, a researcher gathers equally qualitative and quantitative data, mixes the data, (concurrently) or one after the others (sequentially). The permanent, contractual, TTS teaching staff and qualified librarians of Agriculture University Faisalabad were selected as the population of the study by the researcher. This included Lecturers, Asst. Professors, Associate Professors as well as Professors. The university professional librarians include librarians, Assistant Librarians, and Reference Assistant. The University of Agriculture

Faisalabad comprises seven main faculties and thirty-nine departments which are working under these faculties.

1. Agriculture
2. Agri, Engineering
3. Animal Husbandry
4. Food Sciences & Home Economics
5. Social Sciences
6. Sciences
7. Veterinary Sciences

There are thirty-nine departments in the university which are under the umbrella of these seven major faculties. Each faculty has various departments according to its capacity and according to the university management. There are five professional Librarians MLISc. Degree holder in the library of the University of Agriculture Faisalabad. It was necessary to equal participation of each faculty in data collection according to the numbers of their faculty members, Therefore, a Stratified sampling technique was applied according to the requirement of the study. There were a total number of 579 faculty members in these various departments of the university working on different designations such as; Lecturer, Asst. Professor, Associate Professor as well as Professors. The researchers determined the sample size from Google Calculator which is required for data collection from the population, which is (i.e. 231) and is appropriate and the confidence level was 95% and 5% confidence interval (margin of error). The researchers constructed strata of each faculty from the ratio of their faculty and according to the number of sample size given in the table below:

Table 1

Sr. #	Name of Faculty	Departments	Total Population	Sample Size
1	Agriculture	09	199	79
2	Agri Engineering	06	60	24
3	Animal Husbandry	01	26	10
4	Food Sciences	02	45	18
5	Basic Sciences	09	123	49
6	Social Sciences	05	65	27

7	Veterinary Sciences	07	61	24
Total		39	579	231

For collecting quantitative data, a tool of the questionnaire was developed while for gathering qualitative data, personal interviews were held. Gathered data were analyzed through SPSS Software and qualitative results were analyzed through themes. The descriptive statistics were applied

Data Analysis and Interpretation

Faculty-wise distribution of respondents

The University of Agriculture Faisalabad has seven faculties and thirty-nine departments and the total number of faculty members is 579. As per sample size calculated from Google calculator, the researchers contacted 231 faculty members and with personal efforts and relations, the researchers succeeded 100% responses from the faculty. With the reference to figure 1, 34.2% of the respondents belong to the agriculture faculty. 4.3% of the respondents belong to Animal husbandry. 21.2% of the respondents belong to Sciences. 11.7% of the respondents belong to the Social Sciences faculty. 10.4% of the respondents belong to Agri Engineering &Technology faculty. 7.8% of the respondents belong to Food Nutrition & Home Sciences faculty. 10.4% of the respondents belong to Veterinary Sciences.
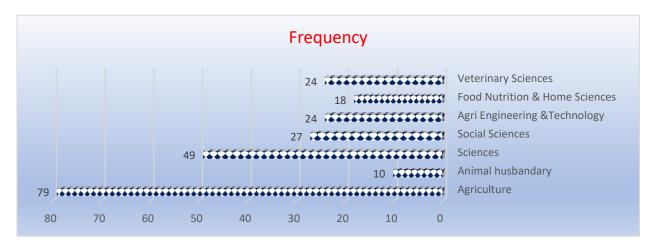

Figure 1: Faculty-wise frequency

Frequency of respondents by designations

There are four types of designations of faculty members at the University of Agriculture Faisalabad i.e. Lecturer, Assistant Professors, Associate Professors, and Professors. The majority of respondents (47.6%) in university belong to lecturers, followed by the Assistant Professors (38.1%) as illustrated in figure 2.
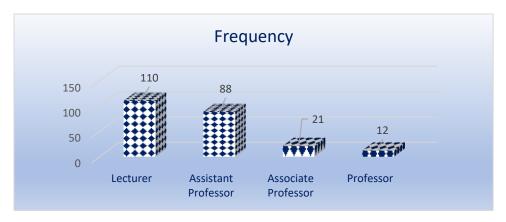

Figure 2: Designation wise frequency of respondents

Gender of the respondents

The demographic information of the respondent is illustrated in figure 3. The number of male faculty members was 156 (67.5%) and females were 75 (32.5%). Male respondents have dominated in university teaching faculty and female are less in accordance with their participation in university faculty.
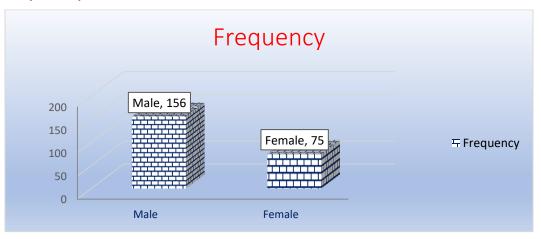

Figure 3: Gender of the respondents

IL Skills of Respondents:

In the below table the researcher calculated the descriptive statistics about the Information Literacy Skills. The highest mean and standard deviation of the statements was calculated by the

researcher. The highest mean of the statement "I can use UAF library's Online Public Access Catalogue (OPAC) for searching books" and its standard deviation 0.90349, and the lowest mean of the statement I am able to find what I am looking for at the UAF library " and its standard deviation 0.94968.

Table 2

IL Skills of the Faculty Members.

Sr.#	Information Literacy Skills	Mean	Standard deviation
1	I can use UAF library's Online Public Access Catalogue (OPAC) for searching books	2.49	0.903
2	I understand the ethical, legal, and socio-economic issues of information	2.47	0.795
3	I can use HEC national digital library to search required information or items	2.43	0.841
4	I can summarize and synthesize identified information to generate new ideas	2.4	0.721
5	I am able to examine and evaluate the reliability and accuracy of information source	2.38	0.809
6	I can acknowledge/cite the information used in my research work	2.35	0.76
7	I can use different databases to find out information/articles for research purposes	2.32	1.01
8	I can communicate my research productivity	2.24	0.799
9	I am able to find what I am looking for at the UAF library	2.08	0.949

Programs Offered for Information Literacy Skills by UAF Library

In table 3, the researchers calculated the descriptive statistics about the Programs Offered for Information Literacy Skills by UAF Library. The highest mean and standard deviation of the statements was calculated by the researcher. The highest mean of the statement "UAF Library provides sufficient resources for your research and academic needs" and its standard deviation 0.69135.and the lowest mean of the statement UAF, Library staff cooperates to learn new

searching techniques and Information Literacy Skills " and its standard deviation 2.22339. The results indicate that the library of the University of Agriculture does not conduct training and workshops for faculty members to enhance their IL skills but they have sufficient materials for their teaching staff.

Table 3

Programs Offered for Information Literacy Skills by UAF Library

Sr.#	Programs Offered for Information Literacy Skills by UAF Library	Mean	Standard deviation
1	UAF Library provides sufficient resources for your research and academic needs	2.31	0.691
2	UAF Library conducts orientation programs for new students and faculty members	2.04	0.931
3	UAF Library staff conducts session about Information Literacy skills to find, search or locate electronic resources/contents from the internet and digital databases	1.97	0.522
4	UAF Library staff organizes seminars, training sessions, and workshops to improve your information literacy skills	1.96	0.504
5	UAF, Library staff cooperates to learn new searching techniques and Information Literacy Skills	1.85	2.223

Research productivity and Information Literacy Skills.

In table 4, the researchers calculated the descriptive statistics about the Research Productivity and Information Literacy Skills (ILS). The highest mean and standard deviation of the statements was calculated by the researchers. The highest mean of the statement "Librarians' ILS are helpful for UAF faculty to learn the new searching techniques to save the time during research" and its standard deviation 0.86414, and the lowest mean of the statement "Information literacy skills ILS of a Librarians are important to extend research services to faculty members" and its standard deviation 1.60826.

Table 4

Research productivity and Information Literacy Skills

Sr.#	Research Productivity and Information Literacy Skills (ILS)	Mean	Standard deviation
1	Librarians' ILS are helpful for UAF faculty to learn the new searching techniques to save time during the research	3.23	0.985
2	Librarians' ILS are helpful to increase the research productivity of UAF faculty	2.92	0.864
3	Librarians' ILS are a source of learning for UAF faculty to improve their information literacy skills	2.64	0.837
4	Information literacy skills ILS of a Librarians are important to extend research services to faculty members	2.35	1.608

Hurdles while Acquiring Information Literacy Skills

In table 5, the researchers calculated the descriptive statistics about the Hurdles while Acquiring Information Literacy Skills by UAF Faculty. The highest mean and standard deviation of the statements was calculated by the researcher. The highest mean of the statement "Lack of information literacy trainings" and its standard deviation is 0.75670 and the lowest mean of the statement Reluctant attitude of library staff "and its standard deviation is 0.88894.

Table 5

Hurdles while Acquiring Information Literacy Skills.

Sr.#	Hurdles while Acquiring Information Literacy Skills by UAF Faculty	Mean	Standard deviation
1	Official issues like leaves, permission, work burden create hurdles to acquire ILS	3.97	0.662
2	Lack of information literacy trainings	3.84	0.756

3	Ineffective role of library organizations to conduct IL sessions for faculty	3.67	2.649
4	Lack of proficiency to use the internet	3.59	2.808
5	Unreliable power supply	3.56	0.925
6	Personal health issues	3.54	0.958
7	Lack of funding for IL trainings from institutes	3.47	0.898
8	Reluctant attitude of library staff	2.83	0.888

Recommendations to Improve IL skills of UAF Faculty Members

In table 6, the researchers calculated the descriptive statistics about the Recommendations to improve the Information Literacy Skills of UAF Faculty. The highest mean and standard deviation of the statements was calculated by the researcher. The highest mean of the statement "Training induction for Information Literacy Skills" and its standard deviation is 3.35870 and the lowest mean of the statement" Conduct seminar/workshops to use digital database " and its standard deviation is 0.91436.

Table 6

Recommendations to improve IL skills of UAF Faculty Members

Sr.#	Recommendations	Mean	Standard deviation
1	Training induction for Information Literacy Skills	4.21	3.358
2	Induction of information literacy course for faculty	4.12	0.661
3	To provide continuous power supply	4.07	0.785
4	Develop Librarians attitude to cooperate in learning information literacy skills	3.97	0.662
5	Conduct orientation programs (to use Library OPAC) and library use	3.96	2.717
6	Promotion of Internet and computer literacy	3.95	0.819
7	Provision of funding from institutions to conduct information literacy trainings for faculty	3.88	0.874
8	Conduct seminar/workshops to use digital database	3.67	0.914

Qualitative Data Analysis

For qualitative data, the following interview guide was prepared keeping in view the research questions:

1. What is the level of your IL skills? Why the information literacy skills of university librarians are important?
2. What programs are offered by the university library to enhancing the IL skills of Agriculture Faculty members and how you are playing your role in programs?
3. How do you relate your Information Literacy Skills with the research productivity of faculty members at the University of Agriculture Faisalabad?
4. What are the issues being faced by you for gaining Information Literacy Skills?

Q.1 What is the level of your IL skills why the information literacy skills of university librarians are important?

Analysis:

From the data, codes had emerged and with the help of codes, the librarians replied that they are well proficient to recognize and comprehend the **conception, nature, and magnitude of the information needed** to meet **specific goals and tasks**. They can also identify the type and scope of information needed and to achieve what goals they need the **required information**. They also know the **cost of information** and its benefit. They have also the proficiency to use this information for the **creation of new ideas** for their research work or to meet the task. They are also capable to know the institution **policies of the institutions** about the potential use of information. He is also capable of using the most **appropriate databases** for his required information. They can use his retrieved information in his research work and he also knows the **legal, ethical, and socio-economic issues** of his required information and materials. The professional librarians also know **how to use (OPAC)** catalog of his library. According to professional librarians, IL skills are significant for university librarians because, in this way, they **can help the students and faculty members** to search books, articles, and other searching material in a better way to fulfill their research and study purposes.

Q no.2 Which programs are offered by the university library to enhance the ILS of Agriculture Faculty members and how you are playing your role in programs?

Analysis:

The UAF library staff conducts **comprehensive orientation programs** at the start of every year for new students and faculty members to introduce **library services** and to use **the HEC digital library** and **its various databases** for their research work and also introduce the other **services of the library** i. e lending of books and other material for staff and faculty members of the university. According to librarians, they play every role which department of the library set for them in **conducting orientation sessions** for a student at the auditorium or at the main library department wise. But according to professional librarians, they think there should be conduct some **instructional IL skills programs,** improvement programs for faculty members, and also for university students to enhance their IL skills for the betterment of their **research productivity.** In this connection, the University of Agriculture administrations and Higher Education Commission should take some effective steps in conduction **IL trainings and workshops** for the **teaching staff, professional librarians, and researchers** of the university.

Q no.3 How do you relate your IL skills with the research productivity of faculty members at the University of Agriculture Faisalabad?

Analysis:

The librarians are always **the source of learning** for the faculty members and also for the students if they are willing to know something new **from the internet and its relevant services** for teaching staff and for research students of the university, therefore if they want to learn how to **use a different database** and other sources for their searching materials and they can also learn how to search their required material to use **various searching techniques** for their research and other material form professional librarians of the university. They said that they are willing to teach something new to the students and faculty members who do not know about IL skills and other searching techniques. If someone comes to them they are always welcome but they think they should come one step forward to help them to **conduct some effective trainings sessions and workshops** of IL skills and new searching techniques for their faculty members and also for students with the **collaboration with the administration** of the university and he also think that their IL skill can be helpful in some extent **to save the time of faculty** members and can **enhance the productivity** of their research.

Q no.4

What are the issues being faced by you for gaining Information Literacy Skills?

Analysis:

According to professional librarians, they think that there are **some major issues** which they faced while acquiring their **IL skills** such as**, Lack of Information Literacy training** is a major issue, the IL training sessions should be conducted on regular basis for them, Secondly **professionally library organization** should play their active role in this regard to conduct some trainings of IL skills for them. **HEC of Pakistan** should support the institutions in this connection to **conducting some workshops on IL skills** and searching techniques for professional librarians. **Lack of funding from the institution** is also a big hurdle for them**, Unreliable power supply**, **Lack of proficiency to use the internet**, **health issues of a personal**, **Official issues like leaves, permission, and work burden** are also major issues for them to acquiring the IL skills for them. **Institution policies** of the institutions about the potential use of information. They think there should be some **instructional programs of IL skills** to improve the IL skills of faculty members, professional librarians, and also for the students.

Discussion:

Regarding the first research question of the study, both data have aligned results as quantities data explored that the faculty member has moderate abilities to deliver information literacy skills to their students and for their research work. The same results were found in qualitative data. Regarding the use of the HEC digital library, the quantitative and qualitative data have the same results that the librarians and faculty members have good skills to access and uses of HEC digital library. Regarding the usage of (OPAC) catalogue both data have also aligned results as quantitative data explored that the faculty members have good skills to use the university Online Public Access Catalogue for searching their needed resources from the library. The same results are in the qualitative data because librarians have good skills to maintain and search material through OPAC of the university library. The results of quantitative data explored that the faculty members have known to function different databases to search out their required materials/articles and the results found in qualitative data show that librarians have also sound knowledge to explore their information and other materials through the internet and other various databases. It was also found through quantitative data that faculty members have the potential to use latent bases of information along with information need and defining its cost, advantage of this information desired and also can re-evaluate this information and the results of qualitative data shows that librarians have also capable of using potential sources of information and also know its

cost of information and its benefits for their research and its use. Both data have aligned results as quantitative results show that faculty members have the ability to summarize and synthesized identified information to generate new ideas while the qualitative data results also show that the librarians have the potential to summarize and synthesized identified information for the creation of new ideas in the research.

The outcomes of both, quantitative and qualitative data show that both librarians and faculty members have enough knowledge regarding the usage of information retrieved in their area of study and fulfill their goals and tasks. Regarding the research question of the study the legal and socio-economic issue the result of the study aligned results as quantitative data shows that the faculty members recognize the legitimate, ethical, and socio-economic disputes of information very well and the results of the qualitative data show that librarians have also sound awareness of legitimate, moral and socio-economic disputes of information from various instructions and their policies regarding its use. Regarding the 2nd research question of the study shows similar results and both faculty and librarians agreed that the faculty and staff training should be held on different platforms which have a positive impact on the academic as well as research activities of the library users. Both agreed that the seminar, workshops, training, and discussion on different topics should be arranged. Both librarians and faculty members are also agreed that the UAF library staff conduct some useful orientation program for faculty and students at the start of every year in the university auditorium but also in the main library departmental wise which is a very informative session for faculty members and also for newly enrolled students. It was also observed while data analysis that the staff of the library did not conduct any sessions for faculty members to improve their IL skills and to find electronic resources from the internet. The results also aligned in this question regarding the collection of the library, in both quantitative and qualitative data results indicate that most faculty members are also agreed that the library collection is sufficient for their research work and also for lectures preparation. Regarding 3rd research question regarding the impact of librarians' IL skills on the research productivity of faculty members, the results have some contradictions. Quantitative data indicates that the IL skills of librarians' do not have an impact on their research productivity but qualitative data shows that the IL skills of the librarians' can create a good impact on the research productivity of their users.

Regarding the 4th research question of the study, both data have aligned results as quantitative data explains that the teachers of the university have faced many obstacles while acquiring IL skills. The teaching staff feels that lack of IL skills training is on the top priority they think there should be conducted some effective IL skill training sessions and workshops to improve the IL skills of the teaching staff and qualitative data also affirms that the librarians have also thought that they seem there should be also instructional trainings for them to improve their IL skills which can be beneficial not only for them but also for institutions. According to results of quantitative and qualitative data, faculty members and professional librarians are also agreed that unreliable power supply is also an issue for acquiring IL skills for faculty because in developing countries like Pakistan electricity shortfall is very common these days and a researcher is highly disturbed when he/ she attend some productive seminar or training session. The results show that the library organizations of library science such as PLA (Pakistan Library Association) are not playing their part to conduct some training sessions on IL skills for faculty members and professional librarians to improve their IL skills these days. The results of quantitative and qualitative data show that the faculty members and professional librarians are agreed that lack of funding to conduct seminars and trainings is also a big issue to improve the IL skills of the faculty members and for the librarians, the institutions should provide adequate funds to conduct the trainings of their faculty and librarians.

The results of both data reveal that large numbers of faculty members and librarians are not proficient in using the internet and its relevant databases. The results of the quantitative and qualitative data affirm that the health issues sometimes are very vital in acquiring IL skills sessions, sometimes faculty members and professional librarians cannot attend trainings and seminars due to his miserable health condition and they are deprived of attending some productive training sessions of information literacy. The result of quantitative and qualitative data indicates that most of the faculty members and librarians are agreed that the official issues in their offices like leaves, permissions from higher authorities, and work burden also create hurdles to faculty members as well for librarians to improve their IL skills. The institution should be lenient to staff members of the University in this regard and allow them to learn new searching techniques and IL skills.

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