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Information Literacy Skills: A comparison of competency Level of Public and Private University Librarians

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Abstract

Purpose–The main purpose of the present research study is to compare the satisfaction level of public and private university librarians (ULs) in Pakistan concerning their information literacy skills (ILSs).

Design/methodology/approach – The convenience sampling method was practiced for data collection purposes from the respondent ULs.A self-administeredsurvey tool wassent online/offline to respondents. The response rate was 95%.The tool comprisedeight factors of ILSs. For data analysis purposes, an independent t-test was applied.

Findings– The study findingsillustrate that no significant difference occurs between the competency level of public and private UL's ILSs. The mean values of the eight subdivisions of ILSs confirm that both public and private ULs were moderately competent regarding their ILSs.Additionally, in most ofthe situations, public ULs were marginally morecompetent than private ULs.

Originality/value –The outcomes may be helpful for ULs to understand their present status of ILSs and fortified them to bridge the gap between present and required skills.

Keywords – Information Literacy Skills (ILSs), university librarians (ULs), competency level, comparative study, and Pakistan.

Paper type – Research paper

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1 Introduction

In the preceding century, information wasmostly existed in print form and placed/stored in information centers/libraries for doing research and augmenting individual knowledge. On the other hand from the 21st century, information is accessible 24/7, can be preserved through various channels,and accessed through appropriate formats(Nwosu et al., 2015).The ever-increasing production of information is creating complexity for researchers. The real dilemma is its profusion; consumers have to identify the ways to retrieve information and also learn current techniques to retrieve it effectively. The major challenge is to distinguish whether information is appropriate or not (Anwar, 1981).

Information literacy (IL) is a new figure or an innovative term to be used for library instructions, bibliographic instructions, library instruction, use of the library, library research instruction, and reader education(Anwar, 1981, John 2019). The IL is defined as the skill to effectively, find, categorize, assess, and successfully utilize the information for the accomplishment of an assignment (Bruce, 2003, Olakunle and Olanrewaju, 2019). Proceeding with this concept,Nakaziba et al. (2022)advocated that the purpose of locating, accessing, and disseminating information cannot be achieved without an effective ILS program. However, changes in Information and Communication Technologies (ICTs) have also influenced to reshaping the precedingamenities to incorporate the alteringneeds(Analoui et al., 2013, Bhatti, 2010).

Information literacy has become a fundamental aspect of our learning environment. Therefore, People should acquire information literacy skills(ILSs) in the early stage of their life as it is pivotal for socialization and learning (CILIP, 2006, Ekong and Ekong, 2018). ILSs widen and improve the capabilities afar from the traditional classroom environment and train individuals to make their own decisions in their practical lives (Rafique, 2014). IL is considered to be a key factor in the learning process and has become a critical part of knowledge and research. ILSs are considered vital for beginners and researchers to explore information to fulfill their research and educational needs(Berutu et al., 2019, Bruce, 2003). ILSs are imperative as they enable people to train themselves rather than surface thinking; transform them from dependent to independent learners, and make them confident and efficient information users. If there are no ILSs, there is the jeopardy that people will remain misinformed (Ozdamar-Keskin et al., 2015).

Information literacy is a basic skill that most university librarians(ULs) possess or want to improve. According to Weiner (2011), IL and its associated capabilities like thinking critically and lifelong learning are compulsory for ULs in the workplace environment. Ameen and Ullah (2016)have similar views as the ULs are required to be an authority on IL earlier than communicating it to researchers. The findings of Chanetsa and Ngulube (2016) exposed ULs carry out diverse assignments, and IL is a key responsibility among them. Therefore the present study is designed to gauge the competency level of public and private ULs regarding their ILSs.

2 Literature review

2.1 Information literacy

Initially, the meaning of literacy was the capability of a person to read and understand an easy text document. Nowadays, a comprehensive definition of literacy is the capability of a person to understand, utilize, and make verdicts to read and communicate in diverse situations (Sorensen et al., 2012). However, the term IL was first introduced by Zurkowski (1974) illustrated that individuals who can apply information resources to complete their tasks are information literate. On the other hand,Lupien and Rourke (2021) tied IL with democracy and proposed that information literate voters make intelligent decisions to cast votes. The IL is defined asthe ability of an individual to identify when the information is required and successfully explore, evaluate, and utilize the required information (AASL, 2007).Olakunle and Olanrewaju (2019)depicted IL as an array of skills that authorizes a person to access, inspect, scrutinize, and utilize information. They also discussed that learning, deep thinking, and learning regarding the concept of information is the strong concerns of IL.

Information literacy is the requirement of every discipline, each educational setting, and each extent of education. It empowers individuals to become masters of content and expand their power of exploration to become autonomous and independent learners (Etim and Nssien, 2007). Huddleston et al. (2019)has also analogous views. He disclosed that ILSs are the basic need of every individual in society; however, she empathized that these skills are required more by faculty members to fulfill their professional responsibilities. Kousar and Mahmood (2015)concluded the whole story and said to be successfully functioning in society, the IL capabilities of individuals are uniformly significant for whole professions.

Mokhtar and Majid (2008)disclosed IL is a capability that is essential for every phase of an individual's life. For example, it will help the students to become independent and genuine learners to solve their routine life problems by themselves instead of depending only on teachers. For the workforce, IL capabilities will furnish them with the most latest and authentic information which will help them to do their job-related tasks efficiently and effectively. As in the case of common people, ILSs will assist them in evaluating existing information and makingthe best use of it in their everyday decision-making. Brand-Gruwel et al. (2005)found differences in the problem-solving skills of individuals according to their education level. They explored that access to information without skill is not valuable. Therefore it is the fundamental need of every citizen to gain ILSs.

2.2 Information literacy skills

IL involves the intellectual aptitudes to use information, as discrete to other knowhow of technology to hold or deliver data(Webber and Johnston, 2017).IL standards of IFLA (2001) have divided the ILSs into three facets: Access, Evaluate, and Use. A similar definition has been presented byOlakunle and Olanrewaju (2019): ILS is the competence ofsomebody to access, judge, and use information assembled from diverse sources. Similarly, Mitchell (2013) also explained that ILSs are the capacity of a person to describe a mission; discover, access, and assess sources; and the capacity to manage, utilize, and communicate this information and its sources to others.

Bruce (2003)discoursed that ILS is the aptitude to connect information and conserve it for dissemination to solve a problem at hand or for making critical decisions. These skills will enable individuals to become lifelong learners. ILSs assist the researchers in instigating plans to obtain information; find and retrieve its sources; employ retrieved information; and synthesize and evaluate it.

Lock (2003)explained the concept of ILSs in a different way. He divided the ILSs into two steps. The first step is regarding the applied process of individuals, to their investigation or research. This ability enables the persons to effectively use the information resources for the progression of research knowledge. The first step comprised literature search skills and reference management skills. The second step is regarding the ability of a person to understand and take part in projects regarding the progression of ILSs. It may include the source of information, access, obtain, examination, and conservation for appropriate broadcasting to diverse information professionals.

An individual who can obtain and communicate meaning, and utilize their knowledge to accomplish a specific objective, using spoken or written language skills is called literate. The common perception of people is the "Google generation" possesses computer and internet skills so, they are information literate(Mathewson, 2015, UNESCO, 2008). However, the findings of research studies found that this claim was only a hazardous myth. Digital knowledge and IL could not be equated and no obvious evidence of improvement in the information skills of young individuals was found (Bates, 2013). Therefore,Sorensen et al. (2012) argued that individuals are not by birth information literate though, they have to obtain these capabilities during the various stages of their life through family, peers, mass media, schools, social contexts, etc. Cameron et al. (2007)has also the same arguments. In daily life, people can become information literate through the formal school systems and also through informal ways.

2.3 Information literacy skills of university librarians

Due to the shifting role of ULs, the expectations of the employers have also been changed and employers demand more skilled employees (Kennan et al., 2006). This gap between the ILSs of the working ULs and the expectations of the employers was also conferred by Cyphert and Lyle (2016). Therefore, the expertise of ULs regarding ILSs was vital at the time of recruitment as well as for promotion(Salehudin, 2016). The research outcomes of Ali and Richardson (2018)also second the exceeding declaration as 44% of respondents confirmed that improved ILSs be helpful for them to achieve up-gradation. The study of Khan et al. (2015), has also the same results as respondents claimed that their ILSs capability may guide improved job contentment, which means more opportunities for up-gradation.

In this arena of information and education, IL has an immense worth to ULs as compared to other professionals (Bawden and Robinson, 2009). Heinrichs and Lim (2009)are one step ahead and establish that future ULs are required that they should be skilled in using multimedia and develop web/databases. They are required to adopt proactive techniques to impart awareness regarding the importance of ILSs among researchers (Ullah and Ameen, 2015).

Anwar and Warraich (2013)explored that in Pakistan, the major cause of the poor performance of ULs is skill-mismatch, that is, the gap between the acquired and required levels

of digital skills. Correspondingly, Farooq et al. (2016) also conceived that the existing extent of digital skills of Pakistani ULs is low. The study by Ameen and Gorman (2009) portrayed the fact that ULs of Pakistan were outlying from the possibility of developing IL/Digital Literacy educational programs, and the cause is improper training and insufficient marketing.

2.4 Information literacy in Pakistan

Internationally, IL is an established term, but in developing countries like Pakistan, it is infancy phase (Ullah and Ameen, 2015). Bhatti (2010)explored there is a dire scarcity of IL literature in Pakistan. Though during the existing years, IL has become an imperative for scholars and researchers in Pakistan and research has been carried out to knob the diverse facets of it atthehigher education level(Ameen and Ullah, 2016).

The expansion of IL in Pakistan is similar to all other developing countries as Pakistani ULs were also executing IL with dissimilar names such as user education, reference services, bibliographic information, library orientation, etc. (Anwar, 1981, John 2019). However, in Pakistan, the concept of IL was initially introduced byAnwar (1981)in his article titled "Education of the Users of Information" (Anwar and Naveed, 2019). Conversely, after a break of 28 years, Ameen and Gorman (2009) published the first research article with the title: "Information and digital literacy" (Ameen and Ullah, 2016).

Various research studies disclosed that ULs in Pakistan have a low level of ILSs. Ramzan (2010)established that ULs inhabited in urbanized countries have obligatory ILSs however, ULs in Pakistan lacked these skills. On the contrary, Ullah and Anwar (2012)surveyed the probable competencies of medical ULs in Pakistan. They reported that the interest of ULs to inquire about IL was low. The major reason is that IL has not been acknowledged a lot of prominence in general or professional education, in Pakistan. The study findings of Ameen and Gorman (2009) have also analogous findings as they explained that Pakistani ULs have a low extent of ILSs, which has become a serious challenge for the LIS profession as well as for developing knowledge society and fiscal growth of the country. Therefore, it is required that ULs should be motivated to acquire knowledge of novel technologies for their personal, professional, and country growth (Ameen and Gorman, 2009). However, Khan and Rafiq (2013)advocated that ULs should be trained in ILSs so they can pass on these skills to students, faculty, and researchers at their workplaces.

3 Problem statement

Worldwide, few studies are available that determined the IL of the ULs however in the Pakistani context; a meager quantity is available on this topic. The study of Aharony and Bronstein (2013) discovered the perceived IL of Israeli academic librarians; Durodolu and Adekanye (2017) studied the perceptions of the University of Lago'sULs regarding their ILSs; Umeji et al. (2013) explored the ILSs /ICT level of the Madonna ULs; and Khatun (2013) disclosed the digital IL of Oslo public library professionals.

In the Pakistani scenario, the ILSs of investigation police officers, scientists, journalists, lawyers, and academicians were explored(Malik et al., 2022, Naveed, 2022, Naveed and Kamran, 2022, Naveed and Shah, 2023, Sadia and Naveed, 2024).Kousar and Mahmood (2015) and Batool and Mahmood (2012) illustrated the perceptions of teachers regarding the ILSs of

their students. The study ofAli and Richardson (2018) explored the ILSs of the ULs of Karachi; Khan (2020) exposed the digital literacy skills of ULs; and Ameen and Naeem (2022) examined the news literacy skills of ULs.In the same way,Ullah and Ameen (2015)investigated the perceptions of health ULs regarding the importance of ILSs for their users.

The literature review revealed that at the national as well as international level, no study is available that hasexplored the comparison of the competency level of public and private UL's ILSs. Now various ways and formats are available to approach the information. A huge number of faculty/researchers do not want to access information through old fashions like searching bookshelves, offline catalogues, reading the complete book, visiting the libraries physically, offline reference services, etc. Therefore, they want readymade online information via their mobile phones or laptops and also in their required time and format.

The above situation discloses that ILSs are of utmost importance for ULs. They cannot complete their current tasks without achieving competency in these skills. ULs would have more or less ILSs. Therefore, the study was conducted to measure and compare the competency level of public and private ULs (Pakistan) regarding their ILSs

The findings of the study may assist in determining the ILSs of other organizations' librarians. The outcomes may be helpful for ULs to understand their present status of ILSs and fortify them to bridge the gap between present and required skills. The findings may be imitative of training programs to upgrade the ILSs of the university and other institution's librarians.

4Objectives and hypotheses

The fundamentaldetermination of the recent work was to determine the ILSscompetency level of librarians working in the universities (private and public) of Pakistan.

H1 There is no significant variance exists between the competency level of public and private university librarians regarding 'information need'.
H2 There is no significant variance exists between the competency level of public and private university librarians regarding 'information availability'.
H3 There is no significant variance exists between the competency level of public and private university librarians regarding 'find information'.
H4 There is no significant variance exists between the competency level of public and private university librarians regarding 'evaluate results'.
H5 There is no significant variance exists between the competency level of public and private university librarians regarding 'exploit results'.
H6 There is no significant variance exists between the competency level of public and private university librarians regarding 'ethics of use'.
H7 There is no significant variance exists between the competency level of public and private university librarians regarding 'sharing findings'.
H8 There is no significant variance exists between the competency level of public and private university librarians regarding 'managing findings'.

5 Methodology

For this empirical study, a quantitative survey research method was exercised. The data was collected through a questionnaire. However, a suitable instrument was not available which couldgauge the competency level of the librarians according to the study requirements. Therefore, the statements were adapted from previous related studies and a self-administered questionnaire was developed.The content validity of the instrument was checked. A small number of ten librarians were used for the pilot testing of the tool. The recommendations made by the respondents were incorporated in the instrument and the final version was ready to collect data from the respondents.

The instrument comprised eight factors which were adopted from the Chartered Institute of Library and Information Professionals (CILIP, 2012). The eight factors consist of 45 statements:information need (6), information availability (5), finding information (5), evaluating information (6), exploiting information (7), ethics of use (6), sharing information (5), and managing information (5). The study used a five–point Likert scale comprised of very incompetent (1) to very competent (5).The reliability of the tool was gauged by applying the Cronbach's alpha coefficient test. The obtained scores of the test were from 0.75 – 0.89 which indicated that these values are larger than the suggested ones.

The study population consisted of almost 1,000 librarians from entire universities(public and private)in Pakistan. According to the table of Krejcie and Morgan (1970), the sample size comprised 278 respondents. The convenience sampling technique was exercised and data was assembled from librarians working in central libraries of main and sub-campuses of universities. The respondents were contacted through telephone calls and the tool was distributed through WhatsApp and e-mails. The questionnaire was distributed among 278 ULs from which 265 responded. They were categorized as 176 from Public and 89 from private universities with a response rate of 95%. One response from a private UL was discarded due to missing data. Therefore, the data of 176 public and 88 private ULs was analyzed.

Data was analyzedthrough Statistical Package for Social Sciences (SPSS, Version 19). The mean values of the ILSs factor's statements, their comparison, and the significant difference between private and public ULs was calculated by applyinganindependent t-test (after checking its assumptions).

6 Results

The results of the present research explored the association ofpublic and private university librarians (Pakistan) regarding their competency in ILSs. An independent t-test was usedto matchtheir ILSs.There are eight facets of ILSs: information need, information availability, finding information,evaluating information, exploiting information, ethics of use,sharing information, and managing information.

The outcomes of thet-testillustrated that no significant differenceoccurs between the competency level ofpublic and private university librariansconcerning 'information need'(Table 1). The mean values of the entire six statements from 3.92 to 4.15 indicate that the respondents were moderately competent regarding their 'information need'. The mean difference (MD) of

four items: I feel competent to formulate questions (MD = 0.119), consider the benefits of acquiring information (MD = 0.085), confer with peers to fulfill information needs (MD = 0.073), and identify diverse formats of potential sources (MD = 0.005) exposed that the level of competency of public ULs was meagerly high than private ULs. Conversely, the BDM of two factors: I feel competent to determine the extent of needed information (MD = 0.062), and identify key concepts describing information need (MD = 0.028) explored that the level of competency of private ULs was slightly higher than public ULs.

Table 1. Competency level of public and private ULs regarding information need

Sr. No	Statements	Public (n = 176)		Private (n = 88)		T	Sig. (2-tailed)	Mean diff
	I feel competent to……	Mean/Std. dev.		Mean/Std. dev.				
1	determine the extent of needed information	4.06	.718	4.12	.708	-.670	.504	-.062
2	identify key concepts describing information need	4.07	.740	4.10	.727	-.295	.768	-.028
3	formulate questions based on information need	4.05	.823	3.93	.723	1.155	.249	.119
4	confer with peers to fulfill information need	4.01	.759	3.94	.875	.707	.480	.073
5	identify diverse formats of potential sources	3.926	.821	3.920	.805	.053	.958	.005
6	consider benefits of acquiring needed information	4.15	.728	4.06	.894	.829	.408	.085

The findings of the study demonstratedthat no significant varianceexistsbetween the competency level of public and privateULs regarding ‘information availability’(Table 2). The mean scores (M = 3.92 – 4.26) of all fivefacets confirmed that respondents were moderately competentregarding‘information availability’. The MD of threefacets,I feel competent,understand, how to access information sources (MD = 0.062), keep up-to-date with concerned sources according to the need of researchers (MD = 0.051), and identify a variety of potential sources available for exploitation (MD = 0.034) illustrated that private UL’sMD was somewhat higher than their counterparts.However, the MD also showed that thepublicULs wereslightlymore advanced than their counterparts in selecting appropriate information retrieval systems to access information (MD = 0.142) andselecting information appropriate to the needs of researchers (MD = 0.039).

The outcomes of the t-test illustrated (Table 3) that no significant difference occurs between the competency level of public and private university librarians regarding ‘finding information’. The mean values of the entire five statements from 3.80 to 4.12 indicate that the respondents were moderately competent regarding ‘finding information’. The difference between

means (MD) of four items: I feel competent to, participate in professional groups to access information (MD = 0.176), understand, modifying search strategy may provide supreme results

Table 2. Competency level of public and private ULs regarding information availability

Sr. No	Statements	Public (n = 176)		Private (n = 88)		T	Sig. (2-tailed)	Mean diff
	I feel competent to……	Mean/Std. dev.		Mean/Std. dev.				
1	identify variety of potential sources available for exploitation	3.92	.884	3.95	.856	-.298	.766	-.034
2	understand, how to access information sources	4.19	.814	4.26	.750	-.603	.547	-.062
3	keep up-to-to-date with concerned sources according to need of researchers	4.14	.899	4.19	.828	-.447	.655	-.051
4	Select information appropriate to the need of researchers	4.15	.817	4.11	.808	.374	.709	.039
5	select appropriate information retrieval systems to access information	4.15	.696	4.01	.750	1.522	.129	.142

Table 3. Competency level of public and private ULs regarding finding information

Sr. No	Statements	Public (n = 176)		Private (n = 88)		T	Sig. (2-tailed)	Mean diff
	I feel competent to……	Mean/Std. dev.		Mean/Std. dev.				
1	formulate effective search strategies (Boolean operators, truncation, etc.)	3.97	1.00	3.87	.956	.748	.455	.096
2	search multiple subject headings to determine sufficient information	4.05	.753	4.11	.718	-.586	.558	-.056
3	participate in professional groups to access information (Academia, PakLAG, PLC, PLWO etc.)	3.98	.891	3.80	1.026	1.438	.152	.176
4	understand, information can be acquired by browsing sources	4.12	.753	4.00	.742	1.277	.203	.125
5	understand, modifying search strategy may	4.11	.757	3.97	.843	1.382	.168	.142

provide supreme results

(MD = 0.142), understand, information can be acquired by browsing sources (MD = 0.125), and formulate effective search strategies (MD = 0.096) exposed that the level of competency of public ULs was meagerly high than private ULs. Conversely, the BDM of factor I feel competent to search multiple subject headings to determine sufficient information (MD = 0.056) explored that the level of competency of private ULs was slightly higher than public ULs.

The findings of the study demonstrated that no significant variance exists between the competency level of public and private ULs regarding 'evaluating results' (Table 4). The mean scores (M = 3.73 – 4.10) of all sixstatementsexposed that respondents were moderately competent regarding 'evaluating results'. The MD of fourstatements, I feel competent to, check the authenticity of information (MD = 0.102), assess the relevance of information (MD = 0.073), check the purpose of information (MD = 0.034), and use resources through comparison with others (MD = 0.017) demonstrated that public UL's were somewhat competent than their counterparts. However, the MD also illustrated that the private ULs were slightly more competent than their counterparts in checking the currency of information (MD = 0.056. Conversely, checking the biasness of informationwas the only factor where the MD was zero means that both the respondents possess equal competency (MD = 0.000).

Table 4. Competency level of public and private ULs regarding evaluating results

Sr. No	Statements	Public (n = 176)		Private (n = 88)		T	Sig. (2-tailed)	Mean diff
	I feel competent to……..	Mean/Std. dev.		Mean/Std. dev.				
1	assess the relevance of information	4.10	.680	4.03	.749	.804	.422	.073
2	check the authenticity of information	4.00	.855	3.89	.935	.888	.376	.102
3	check the purpose of information	4.05	.797	4.02	.757	.333	.740	.034
4	check the currency of information	3.82	.909	3.88	.779	-.501	.617	-.056
5	check the biasness of information	3.73	.887	3.73	.837	.000	1.000	.000
6	use resources through comparison with others	3.94	.836	3.93	.841	.156	.876	.017

The findings of the t-test illustrated that no significant difference occurs between the competency level of public and private university librarians regarding 'exploiting results'(Table 5). The mean values of the entire seven statements from 3.76 to 4.01 indicate that the respondents were moderately competent regarding 'exploiting results'. The difference between means (MD) of four items: I feel competent, summarize main ideas extracted from gathered information (MD = 0.113), use critical thinking to synthesize main ideas to construct new

concepts (MD = 0.102), interpret information (MD = 0.056), and use appropriate software to evaluate data (MD = 0.011) exposed that the competency level of private ULs was meagerly high than public ULs. Conversely, the BDM of three factors: I feel competent to,recognize interrelationships among concepts (MD = 0.176), apply initial criteria for evaluating information and its sources (MD = 0.096), and decide whether the initial search query should be revised (MD = 0.045) explored that the level of competency of public ULs was slightly high than private ULs.

Table 5. Competency level of public and private ULs regarding exploiting results

Sr. No	Statements	Public (n = 176)		Private (n = 88)		T	Sig. (2-tailed)	Mean diff
	I feel competent to……	Mean/Std. dev.		Mean/Std. dev.				
1	apply initial criteria for evaluating information and its sources	3.93	.836	3.84	.814	.892	.373	.096
2	interpret information (i.e. graphs, tables, diagrams etc.)	3.80	.948	3.86	.972	-.455	.650	-.056
3	use appropriate software to evaluate data	3.86	.928	3.87	1.026	-.090	.928	-.011
4	recognize interrelationships among concepts	3.85	.846	3.68	.891	1.566	.119	.176
5	summarize main ideas extracted from gathered information	3.89	.741	4.01	.750	-1.169	.243	-.113
6	use critical thinking to synthesize main ideas to construct new concepts	3.76	.848	3.86	.832	-.929	.354	-.102
7	decide whether initial search query should be revised	3.80	.812	3.76	.909	.412	.681	.045

The results of the study confirmed that no significant difference occurs between the competency level of public and private ULs regarding ‘ethics of use’ (Table 6). The mean scoresof all six statements were from M = 3.75 – 4.07 which exposed that respondents were moderately competent regarding ‘ethics of use’. The MD of three statements, I feel competent to, understand the issues related to free vs. fee-based access to information (MD = 0.164), understand the fair use of copyrighted material (MD = 0.068), andunderstand the issues related to censorship (MD = 0.045), demonstrated that public UL’s were somewhat competent than their counterparts. However, the MD also illustrated that the private ULs were slightly more competent than their counterparts in understanding the issues related to the security of information (MD = 0.062), understanding Plagiarism, and always encouraged to cite other’s research work (MD = 0.045), and understanding that permission granted notices are needed for copyrighted material (MD = 0.045).

The outcomes ofthe t-test illustrated (Table 7) that no significant difference occurs between the competency level of public and private university librarians regarding 'sharing information'. The mean values of the entire five statements from 3.63 to 4.07 indicate that the respondents were moderately competent regarding 'sharing information'. The difference between the means (MD) of three items: I feel competent to, write a research paper (MD = 0.107), have scholarly communication skills (MD = 0.085), and choose a format appropriate to share information (MD = 0.068), confirmed that the competency level of public ULs was slightly higher than private ULs. Conversely, the BDM of two factors: I feel competent to, communicateevidently according to the intended audience (MD = 0.028), and have knowledge of citation styles (MD = 0.022) confirmed that the competency level of private ULs was slightly higher than public ULs.

Table 6. Competency level of public and private ULs regarding ethics of use

Sr. No	Statements	Public (n = 176)		Private (n = 88)		T	Sig. (2-tailed)	Mean diff
	I feel competent to……..	Mean/Std. dev.		Mean/Std. dev.				
1	understand the issues related to security of information	3.81	.884	3.87	.868	-.545	.586	-.062
2	understand the issues related to free vs. fee-based access to information	3.97	.824	3.80	.945	1.45	.146	.164
3	understand the issues related to censorship	3.79	.857	3.75	.900	.399	.690	.045
4	understand the fair use of copyrighted material	4.02	.848	3.95	.908	.601	.548	.068
5	understand Plagiarism and always encourage to cite other's research work	4.03	.967	4.07	.873	-.371	.711	-.045
6	understand that permission granted notices are needed for copyrighted material	3.96	.880	4.01	.837	-.402	.688	-.045

Table 7. Competency level of public and private ULs regarding sharing information

Sr. No	Statements	Public (n = 176)		Private (n = 88)		T	Sig. (2-tailed)	Mean diff
	I feel competent to……..	Mean/Std. dev.		Mean/Std. dev.				
1	have scholarly communication skills	3.99	.838	3.90	.797	.791	.429	.085
2	choose a format appropriate to share information	4.07	.788	4.01	.795	.660	.510	.068

3	communicate evidently according to intended audience	3.88	.808	3.90	.825	-.267	.790	-.028
4	have knowledge of citation styles	3.81	.895	3.84	.981	-.188	.851	-.022
5	write a research paper	3.74	.972	3.63	1.041	.830	.407	.107

The results ofthe t-testindicated that no significant difference occurs between the competency level of public and private ULs regarding 'managing information' (Table 8). The mean scores of the wholefivesubdivisions of 'managing information' were from M = 3.75 – 4.07 which illustratedthat respondents were moderately competent. The MD of three statements, I feel competent to, manage tracking changes in documents (MD = 0.068), manage backup copies of searched material/findings, securely (MD = 0.045), and manage resources for re-finding at a later stage (MD = 0.005), demonstrated that public UL's were slightly competent than their peers. However, the MD also illustrated that the private ULs were slightly more competent than their counterparts in managing research data through appropriate methods (MD = 0.045) andmanaging findings in a variety of formats by using appropriate software (MD = 0.039).

Table 8. Competency level of public and private ULs regarding managing information

Sr. No	Statements	Public (n = 176)		Private (n = 88)		t	Sig. (2-tailed)	Mean diff
	I feel competent to……..	Mean/Std. dev.		Mean/Std. dev.				
1	manage resources for re-finding at a later stage	3.82	.805	3.81	.810	.054	.957	.005
2	manage research data through appropriate methods	3.78	.847	3.82	.912	-.400	.689	-.045
3	manage findings in variety of formats by using appropriate software	3.68	.967	3.72	.991	-.312	.755	-.039
4	manage backup copies of searched material/findings, securely	3.86	.921	3.81	.929	.377	.707	.045
5	manage tracking changes in documents	3.68	.962	3.61	.915	.551	.582	.068

7 Discussion

The present study explores the comparison of competency levels of private and public UL's ILSs. To gauge the said comparison, an independent t-test was exercised.The study outcomes illustrate that no significant difference is found between the competency level of public and private ULs regarding the entire eight dimensions of ILSs (information need, information availability, finding information, evaluating information, exploiting information, ethics of use, sharing information, and managing information) (Table 1 - 8). The preceding

outcomes authenticate the truthfulness of the whole eight hypotheses. Moreover, the findings also indicate thatpublic and private ULs are moderately competent regarding the entire eight subdivisions ofILSs (information need, information availability, finding information, evaluating information, exploiting information, ethics of use, sharing information, and managing information) as their mean scores are approximately four. Additionally, the results discover that in most of the statements of ILS's subdivisions, the competency level of public ULs is slightly higher than their counterparts (Table 1 - 8). The findings are contradictory to the results of Ali and Richardson (2018), Khan (2020), and Umeji et al. (2013) who depicted that public and private ULs possess a low level of competency regarding ILSs/digital ILSs. The remaining debate about the eight subdivisions of ILSs is as underneath:

Every human being has an information need and librarians should have the skills to discover this information need of their users. The findings regarding 'information need' show that the public ULs are slightly more competent than their peers in formulating questions, acquiring needed information, fulfilling information needs, and identifying potential sources (Table 1). On the other hand, private ULs are somewhat more competent than their counterparts in determining needed informationand describing information needs. The findings are similar to the results of Ullah and Ameen (2015)who explored that public ULs were slightly morecompetent than private ULs regarding information needs.The findings show that ULs possess appropriate skills regarding 'information need'however; they have to improve their identifying diverse formats of potential sources.

Information is always available but where available and how to access it depends upon the capability of a librarian. The findings concerning 'information availability' indicate that librarians of private universities are slightly more competent than public ULs concerning accessing information sources, keeping up-to-date sources, and identifying potential sources (Table 2). Differently, librarians of public libraries are marginally more competent than their colleagues concerning selecting appropriate information, and information retrieval systems. The findings are contradictory to the results of Ullah and Ameen (2015) who exposed that public ULs were somewhat more competent than private ULs. The findings show that ULs have to improve their 'identifying variety of potential sources available for exploitation' to support their users.

It is demanded that librarians should possess a variety of techniques to find information. Thefindings regarding 'finding information'show that publicULs are slightlymore competent than their counterparts regarding accessing information, modifying search strategies, browsing sources, and formulating search strategies (Table 3). Conversely, the private ULs are somewhat more competent than their counterparts in searching subject headings to determine information. The results are contradictory to the outcomes of Ullah and Ameen (2015) who uncovered that private ULs were slightly more competent than their counterparts.The findings confirm that ULs possess suitable skills to find information however the private ULs have to expand their skills to participate in professional groups to access information.

Hundreds of documents are available on a topic and it is the evaluating capability of the librarian to determine what documentwill be appropriate to solve the problem. The findings regarding 'evaluating information' show that the public ULs are slightly more competent than their peers in authenticating information,assessing relevant information, purpose of information,

and comparison of resources (Table 4). On the other hand, private ULs are somewhat more competent than their counterparts in checking the currency of information. However, checking the biasness of information is the only statement in the entire study where the competency level of both public and private ULs is equal. The verdicts are contradictory to the outcomes of Ullah and Ameen (2015) also expressed that private ULs were marginally morecompetent than public ULs regarding evaluating information.The outcomesindicate that ULs have to increase their skills in checking the currency and biasness of information.

Applying the available information according to the situation is fun and librarians should have this ability. The findings related to 'exploiting results' illustrate that librarians of private universitiesare slightly more competent than public ULsconcerningsummarizing, synthesizing, interpreting, and using software (Table 5). Differently,librarians of public librariesare marginally morecompetent than their colleagues concerning interrelationships, and revising queries. The findings are contradictory to the results of Ullah and Ameen (2015) who exposed that public ULs were somewhat more competent than private ULs.The results indicate that ULs have to upsurge all the above skills to become relevant in this era of information explosion.

If you minus only ethics from any law, it will be no more impressive. Therefore, the librarians should use the information ethically. The findings concerning 'ethics of use'validate that the competency level of public ULs issomewhathigher than their aristocrats in free vs. fee based access, using copyrighted material, and censorship issues (Table 6). Differently, the level of competence of private ULs ismarginally moreadvancedthan their colleagues regarding securing information, citing other's research, and taking permissions.The findings show that both ULs possess equal levels of competency. The verdicts are somewhat similar to the outcomes of Ullah and Ameen (2015)who expressed that public ULs (M = 4.19) were marginally more competent than private ULs (M = 4.18) regarding ethics of use.The outcomes expose that public ULs generally and private ULs especially have to improve the entire preceding skills.

Information is accessed and placed in libraries so that at the time of need it can be shared with the users. In the portion of 'sharing results', the findings show that public ULs are slightly more competent than their counterparts regarding writing aresearch paper, having communication skills, and sharing information (Table 7). Conversely, the private ULs are somewhat more competent than their counterparts in communicating to the intended audience, and knowledge of citation styles. The results show that ULs have to upsurge their skills in writing a research paper and knowledge of citation styles.

The outcomes of the study related to 'managing information' explore that the public ULs are slightly more competent than their peers in managing track changes, managing backup copies, and managing resources for re-use (Table 8). On the other hand, private ULs are somewhat more competent than their counterparts in managing research data and managing findings using software. The findings are parallel to the outcomes of Ullah and Ameen (2015)who articulated that public ULs were slightly more competent than their partners.It is the obligatory duty of librarians to preserve information for future use. They are doing this job in a better way however it is recommended that they have to improve all these skills to perform in thebest way.

8 Conclusion

The study compares the competency level of public and private ULs regarding their ILSs. Theoutcomes of the study indicatethat librarians of public and private universitiespossess a moderate level of ILScompetency.The outcomes of the present study confirm that no significant difference occurs between the librarians of public and private universities regarding their ILSs. The findings illustrate that librarians of public and private universitiesgrasp a good understanding of ILSs and are uniformly competent to apply these skills. In spite of that in most factors, the librarians of public universities are meagerly competent than private ULs.

The study outcomes may encourage the librarians of public universities to maintain their position and force the private ULs to cover the meager difference to become pertinent in this challenging environment. The public and private ULs are recommended to elevate their entire ILSs to become more effective. Convenience sampling may be the limitation of the study. Therefore, the finding may not be applied to the whole librarian community. The research might be administered to gauge the ILSs of librarians perceived by the students, researchers, or faculty members.

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