

FROM BOOKS TO BYTES: EXPLORING SOCIAL MEDIA OPPORTUNITIES IN UNIVERSITY LIBRARIES

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Abstract

Purpose: This study aimed to explore Social Media Opportunities (SMO) in Pakistani University Libraries (UL). Moreover, differences in respondents' opinions from public and private sector universities, social media users and non-users of social media, and respondents' geographical locations were also identified.

Methodology: Quantitative research design was employed, and data were collected through an online structured questionnaire. The questionnaire was distributed among all head/chief Librarians of one hundred & eighty-one HEC recognized universities in Pakistan. However, 124 (69%) valid responses were received out of 181 distributed questionnaires.

Findings: The study findings revealed that 54% of university libraries offering library services through social media and showed positive perceptions towards the social media opportunities for libraries. Surprisingly, the librarians currently not using social media services showed more positive perceptions than social media users in university libraries. Also, the study revealed that no policy for social media use in university libraries is available.

Practical Implications: The results have practical implications for universities, policymakers, and higher education commission decision-makers and theoretical implications for researchers. Also, help librarians design more library services through social media.

Originality: This study is among the first attempts to explore the perceptions of university librarians toward social media opportunities for university libraries in an organizational context by covering the whole population.

Keywords: *Library social media; Social Networking Sites (SNS); Social Media Services (SMS); University Libraries (UL); Web 2.0 tools; Social Media Opportunities; social media in Pakistan.*

Introduction:

Social media is defined as “Web sites and applications that enable users to create and share content or to participate in social networking” (Oxford Dictionaries - Dictionary, Thesaurus, & Grammar [OD-DT&G], 2022). These websites or applications facilitate user interaction and provide a seamless, effective, and efficient process for immediate creation, sharing, and editing of multimedia content. Social media provides many opportunities for service departments to engage their customers by offering services and business through a variety of applications. It offers a wide range of applications, such as Facebook, Instagram, YouTube, LinkedIn, Twitter (currently renamed to “X”), etc. that have been adopted by both individuals and organizations. Garoufallou *et al.*, (2013) mentioned that social networking tools provide many opportunities for communication, interaction, exchanging ideas, and collaboration. Also, it is social media that provides the opportunity to enable organizations to collect feedback and opinions from users (Lam *et al.*, 2019). These tools also offer ease for libraries and librarians to promote library services and collections (Cheng *et al.*, 2020).

This study differs from previous studies (Al-Daihani & Abrahams, 2018; Anwar & Zhiwei, 2020; Choi & Joo, 2018; Khan & Bhatti, 2012; Khan & Rafiq, 2018; Khan & Rafiq, 2019; Mogale & Bopape, 2023; Pashootanizadeh & Rafie, 2020; San Kong *et al.*, 2016; Quadri, & Adebayo Idowu, 2016; Wang & Meiselwitz, 2015) conducted in the domain of social media as this study focuses on exploring the opportunities of social media for university libraries. That may help university librarians to integrate such social media opportunities easily while expanding their libraries' existing services and introducing new library services through social media. Furthermore, administrators, team leaders,

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policy developers and planners may access and comprehend all relevant aspects of social media opportunities for university libraries in a consolidated manner, enabling them to effectively plan and implement strategies that benefit their respective institutions, particularly academic libraries.

Literature Review:

Social media usage in higher education is rising (Wang & Meiselwitz, 2015). The scholarly and research activities of students and personnel in the academic environment are influenced by social networking tools (Penzhon & Pienaar, 2009). Similarly, Hashim *et al.*, (2018) mentioned the significance of social media tools as a communication tool between faculty members and students. Most students preferred using WhatsApp for an instant response over face-to-face reference interviews in university libraries in south-south Nigeria (Etebu, & Orumah, 2019). Rafiq *et al.*, (2019) mentioned that students regularly feel comfortable using social media tools.

Academic libraries are drawn to social media because of its large user base and ability to facilitate communication with user communities (San Kong *et al.*, 2016). Tadasad and Patil (2017) stated that social networking services are powerful tools for offering library services. Also, social media promotes library and information resources services promotions in Sindh province libraries (Buriro *et al.*, 2018). Also, social media tools were mostly used for disseminating information (Quadri, & Adebayo Idowu, 2016).

Fiander (2012) suggested that "*libraries should be there where library users are*" and nowadays society members, particularly library patrons, rely heavily on social media tools. Owusu *et al.*, (2019) stated that social media's inviting nature and ease attracts students to become social media users. Similarly, Harrison *et al.*, (2017) mentioned the creative and inviting nature of social media that attracts libraries for its usage and libraries are conveying their library mission, goals, and objectives to patrons through social media. In the field of higher education, university libraries serve as a hub of information for information consumers. Due to the inviting and flexible nature of social media; and have many opportunities for introducing new library services; several studies have proposed and recommended libraries and librarians utilize social media tools for the uplifting of universities (Al-Daihani & Abrahams, 2018; Choi & Joo, 2018; Garcia-Milian *et al.*, 2012).

The greatest way to advertise library resources and services would be through social media (Anwar & Zhiwei, 2020). Also, social media has enormous potential to improve academic libraries' ability to provide information services (Mogale & Bopape, 2023). Even information literacy sessions and webinars viral through social media platforms for easy and instant communication (Rafiq *et al.*, 2020). However, the most prominent social media tool is Facebook which is highly used for library services in university libraries (Adewoyin *et al.*, 2017; Akter & Islam, 2019; Khan & Rafiq, 2018). Social media tools impact the libraries of engineering colleges in Odisha (Sahu, 2016). Likewise, Cheng *et al.*, (2020) stated that social media is a common technique used in marketing by various organizations, such as libraries. Another study mentioned that social media is changing the way libraries serve their clients and augmenting reference service delivery by professional librarians in Nigeria (Okoroma, 2017).

The COVID-19 pandemic's challenging circumstances also proved the extended reach and effectiveness of social media tools and offered many opportunities for community members to receive news, alerts, and updates through these tools on their smartphones. These alerts created awareness among society members about the pandemic situation as well as a network for help. Live webinars, training, workshops, and other sessions were shared and broadcasted by using different social media tools to strengthen people's mental health and well-being. Social media greatly helped libraries to reach and serve their users during this pandemic (Gmiterek, 2021).

Social media has become an integral part of life and members of society particularly the young generation, who are engaged on social media 24/7. Universities' libraries have a very important role in the development of the university community and society. Chugh *et al.*, (2021) findings based on reviewing twenty-four studies revealed that social media provides opportunities for making connections, improving students' learning, and research dissemination. Furthermore, they have highlighted that there is a need to explore social media for effective use in academia.

Literature documented several social media opportunities being offered to university libraries such as: fundraising activities through social media platforms (O'Keefee, 2016); professional development (Luo & Hostetler, 2020); restructuring traditional library services to user-centered library users (Collins & Quan-Haase, 2013; Tella *et al.*, 2013); connecting with students when they

are out from classrooms (Lorenzen, 2014); instant communication (Baro *et al.*, 2014; Hopkins *et al.*, 2015; Mahmood & Richardson Jr, 2013); effective communication (Khan & Bhatti, 2012; Ganster & Schumacher, 2009; Hopkins *et al.*, 2015; Raza *et al.*, 2017a); information and resource sharing (Alkindi & Al-Suqri, 2013; Ebrahimzadeh Pirshahid *et al.*, 2016); providing quick assistance to library patrons (Del Bosque *et al.*, 2012; O'Dell, 2010); performing library promotional activities (Griffin & Taylor, 2013; Khan & Bhatti, 2012); offering reference e-services (Khan & Bhatti, 2012); and, enhancing library outreach and service delivery (O'Dell, 2010).

Other opportunities like conversation, involvement, sharing, experience, feedback, and interaction with community members and library patrons were also mentioned in the literature (Abdullah *et al.*, 2015; Fong *et al.*, 2020; Hopkins *et al.*, 2015; Stephens & Collins, 2007). H. Wordofa (2014) identified that social media facilitates the promotion of library services, enhances e-resources accessibility, fosters information literacy, e-learning, distant learning, teamwork, and simple communication. Similarly, Cheng *et al.*, (2020) emphasized social media as a good tool for marketing library services and collections. Moreover, Bridges (2012), Ebrahimzadeh Pirshahid *et al.*, (2016), and Hopkins *et al.*, (2015) stressed the collaborative nature of social media that enables users to work in teams. Social media also offers specific tools for academic purposes. Academia and Researchgate are the best examples of academic social media. Authors and research contributors interact, collaborate, discuss, and decide instantly through social media (Gruzd, 2012; p. 21). Similar findings were reported in a recent study by Pashootanizadeh and Rafie (2020), who stated that social media is popular among library users due to its interactive nature. Seventy percent of respondents in the study showed interest in receiving alerts from the library through social media.

However, the literature in the local context shows a gap in the phenomenon as we did not find any study conducted in Pakistan exploring perceived social media opportunities by university librarians from an organizational perspective. In Pakistan, university librarians also used different social media tools to serve the users during this pandemic, however, the scarcity of these applications was exposed (Rafiq *et al.*, 2021). The perceptions of individuals and organizations affect their behaviors. Thus, gauging the perceived level of social media opportunities among university librarians affects their use of different social media tools. Thus, it seemed necessary to conduct this study and assess the perceptions of Pakistani university librarians towards the opportunities being offered by social media. This exploration will reveal their organizational behavior and may be used for policy formulation and act accordingly.

Research Problem:

University libraries play a key role in the development of society, particularly the university community, by offering traditional library services, collections, and resources. However, the concept of “*library beyond the walls*” has been well developed in society and contemporary information consumers look for remote services beyond time and place restrictions. Also, Khan and Rafiq (2019) suggested social media use for the survival of libraries. Therefore, university libraries are focusing on the use of social media for library services. However, the use of social media largely depends on organizational perceptions, attitudes, and behavior. Thus, it seemed necessary to assess the perceptions of Pakistani university librarians from an organizational perspective toward social media opportunities. That is necessary for better understanding of social media opportunities for university libraries. Furthermore, it may enable professional librarians to integrate social media in university libraries. Literature presents a gap in this regard.

Research Objectives

The current study is intended to meet the following research objectives to:

- Identify the social media opportunities (SMO) in university libraries as perceived by the university librarians in Pakistan.
- Find out any statistically significant differences in the perception of university librarians based on
 - a. Sector of the universities (Public vs. Private sector universities).
 - b. Social media users and non-users.
 - c. Geographical division of university libraries.

Methodology

The study adopted a quantitative research design by conducting a census survey. The survey research method is used when the population is geographically dispersed and it is not possible to reach them physically or collect data personally (Connaway & Powell; 2010). The data collection tool was a structured online questionnaire prepared based on relevant literature reviews and visits to social media sites maintained by Pakistani university libraries. However, certain measures were taken to improve the reliability and validity of the data collection instruments. Firstly, seven experts in the field of librarianship who have a good reputation in the profession and research expertise at the national and international level were requested to review the instrument (questionnaire). Their suggestions were incorporated into the tool. Secondly, pilot testing was conducted on the alike respondents. Through pilot testing, the tool was again reviewed, and necessary changes were incorporated. Moreover, the Cronbach alpha value of the questionnaire items was calculated (0.968) which proved that the questionnaire was reliable to assess the phenomenon. The respondents who participated in the pilot testing phase were not included in the final data results. The nature of the study was from an organizational perspective and the whole population (all HEC recognized universities in Pakistan) was approached for data collection through a census survey. One response (from the head/chief/university librarian) from each university was required. The data were collected through an online structured questionnaire prepared in Google Forms. University/chief/head librarians were contacted through official and personal email addresses. Multiple follow-ups were made to maximize the response rate. 124 (69%) valid responses were received out of 181 university librarians.

Data Analysis and Interpretation:

The whole population was covered through a census survey to meet the objectives of the study; however, the normality of the data was not tested nor reported due to covering the whole population. Inferential statistics (t-tests) were used to compare social media opportunities between parent organizations (Public Vs Private; and Social Media Use Vs Social Media Non-use). Furthermore, ANOVA test was applied to know social media opportunities on the basis of geographical division.

Demographics:

Among the total 124 (69%) respondents (university librarians), 74 (60%) belonged to public sector universities and 50 (40%) were from private sector universities. Moreover, social media use in Pakistani university libraries is higher (67; 54%) than social media non-use (57, 46%). However, not a single university library has a social media policy (Table 1).

Table 1: *Demographics of Respondent University Libraries*

<i>Demographics</i>	<i>Freq.</i>	<i>%</i>
Parent Institution		
Public Sector Universities	74	60
Private Sector Universities	50	40
Use of social media		
Yes	67	54
No	57	46
Social media policy		
Yes	0	0
No	124	100
Geographic Distribution		
Punjab	45	36
Khyber-Pakhtunkhwa (KP)	30	24
Sindh	27	22
ISD/RWP/AJK/GB	20	16
Balochistan	02	02

Geographical representations of the participation of librarians from university libraries are shown in Table 1. A majority (45, 36%) of the respondent librarians have participated from Punjab province followed by Khyber-Pakhtunkhwa province (30, 24%). The third largest response (27, 22%) was

received from Sindh province followed by Islamabad Capital Territory (ICT) (20, 16%). However, the representation of university librarians from Balochistan province is only two (2%).

Librarians Perceived Social Media Opportunities (SMO) for University Libraries:

The respondents were given 25 statements on a five-point Likert-type scale to determine how they felt about the prospects that social media presented to university libraries. Their degree of agreement or disagreement was evaluated using the mean score. The data (see Table 2) revealed that respondents were agreed with 21 statements out of 25 statements. The data findings are like the findings of Rhodes (2014), Phillips (2015), Abdullah *et al.* (2015), Chu and Meulemans (2008), Peacemaker *et al.* (2016), Seena and Pillai (2014), Stewart *et al.* (2017), and Wan (2011). These authors have mentioned the opportunities that were presented as questionnaire items in the form of statements to respondent libraries for data collection. However, all these studies were conducted from an individual perspective.

The mean score of the last four statements revealed that respondents were undecided about the last four statements about social media opportunities for Pakistani university libraries.

Table 2: Perceived Social Media Opportunities by University Libraries

<i>Statements</i>	<i>n</i>	<i>Mean</i>	<i>S.D</i>
Enhance visibility of library services	120	3.99	1.025
Foster professional networking by building friendship among library professionals	122	3.98	1.052
Collect ideas and feedback on library services	119	3.97	.873
Seamless communication with library users	123	3.92	1.045
Foster a friendly rapport with library users	120	3.92	1.042
Assist in addressing users' questions and complaints	120	3.87	.949
Collaborative communication	122	3.85	1.065
Real-time communication	120	3.85	1.113
Library users relationship management	119	3.85	.936
Moderate discussions about library services & products	120	3.81	.990
Library services accessible on mobile devices	121	3.79	1.095
Clear and impactful communication	120	3.79	.952
Track followers count	118	3.79	1.011
Round-the-clock connectivity	118	3.77	1.165
Social media allows user segmentation for targeted services	119	3.73	1.023
Tagging feature for information sharing	120	3.73	1.012
Track readership per post	119	3.71	.931
Conduct instant surveys	119	3.63	.973
Curate and manage collections	121	3.56	1.095
Library advocacy and lobbying	120	3.55	.924
Enable voice call support	120	3.51	1.045
Assist in hiring top talent	119	3.46	1.064
Enable video call support	120	3.38	1.062
Scheduling	118	3.31	1.034
Fundraising/revenue generation	117	3.24	1.023

Note: Strongly Disagree=1, Disagree=2, Neutral=3, Agree=4, Strongly Agree=5

Comparison of Librarians Perceived SMO for University Libraries based on Type of Parent Institution:

The independent sample t-test was applied to determine the difference between the perceptions of librarians about social media opportunities based on the type of organization. The data (Table 3) revealed that there was no statistically significant difference between the mean scores of public and private sector university librarians. It means that librarians in the public and private sectors consider social media opportunities for university libraries equally.

Table 3: Comparison of Librarians Perceived SMO for University Libraries Based on Type of Parent Institution

Statements	N	M		T	Sig.
		Public	Private		
Real-time communication	120	3.89	3.80	.415	.551
Collaborative communication	122	3.79	3.94	-.755	.124
Clear and impactful communication	120	3.83	3.74	.501	.937
Seamless communication with library users	123	3.97	3.84	.690	.964
Foster professional networking by building friendship among library professionals	122	4.01	3.94	.380	.499
Round-the-clock connectivity	118	3.72	3.85	-.604	.285
Enable voice call support	120	3.61	3.36	1.318	.143
Enable video call support	120	3.44	3.29	.764	.114
Library advocacy and lobbying	120	3.61	3.47	.792	.470
Track readership per post	119	3.73	3.69	.257	.356
Track followers count	118	3.87	3.67	1.081	.203
Library services accessible on mobile devices	121	3.85	3.71	.654	.145
Tagging feature for information sharing	120	3.82	3.59	1.199	.245
Social media allows user segmentation for targeted services	119	3.79	3.65	.695	.625
Assist in hiring top talent	119	3.44	3.50	-.318	.650
Conduct instant surveys	119	3.69	3.54	.815	.387
Collect ideas and feedback on library services	119	3.94	4.00	-.350	.781
Enhance visibility of library services	120	3.94	4.06	-.616	.564
Moderate discussions about library services & products	120	3.75	3.90	-.823	.520
Assist in addressing users' questions and complaints	120	3.89	3.86	.171	.354
Library users relationship management	119	3.86	3.83	.147	.645
Foster a friendly rapport with library users	120	3.97	3.83	.714	.784
Curate and manage collections	121	3.51	3.65	-.682	.147
Fundraising/revenue generation	117	3.26	3.21	.229	.063
Scheduling	118	3.27	3.35	-.426	.318

Comparison of Librarians Perceived SMO based on Social Media Use and Non-Use:

The independent sample t-test was applied to find out the difference in librarians' perceptions based on social media use and non-use. The data (Table 4) highlighted that there was a significant difference in the mean scores of 18 statements. The librarians who were not using social media showed slanted opinions towards an agreement with 17 statements. Only one statement "*Enable video call support*" received significantly higher agreement from the librarians already using social media for library services.

Table 4: Comparison of Librarians perceived SMO based on social media (SM) Use and Social Media (SM) Non-Use

Statements	N	M		T	Sig.
		SM Use	Non-Use		
Real-time communication	120	3.72	4.00	-1.427	.001*
Collaborative communication	122	3.82	3.89	-.398	.016*
Clear and impactful communication	120	3.75	3.84	-.487	.019*
Seamless communication with library users	123	3.76	4.11	-1.934	.000*
Foster professional networking by building friendship among library professionals	122	3.94	4.04	-.518	-.007*
Round-the-clock connectivity	118	3.75	3.80	-.254	.041*
Enable voice call support	120	3.55	3.46	.430	.091
Enable video call support	120	3.45	3.29	.876	.010*
Library advocacy and lobbying	120	3.47	3.64	-1.061	.000*
Track readership per post	119	3.63	3.82	-1.163	.003*
Track followers count	118	3.66	3.94	-1.601	.000*
Library services accessible on mobile devices	121	3.75	3.84	-.432	.161
Tagging feature for information sharing	120	3.51	3.98	-2.733	.000*
Social media allows user segmentation for targeted services	119	3.52	3.98	-2.617	.000*
Assist in hiring top talent	119	3.45	3.47	-.100	.583
Conduct instant surveys	119	3.62	3.64	-.135	.036*
Collect ideas and feedback on library services	119	3.91	4.04	-.841	.012*
Enhance visibility of library services	120	3.98	4.00	-.085	.020*
Moderate discussions about library services & products	120	3.66	3.98	-1.852	.005*
Assist in addressing users' questions and complaints	120	3.74	4.04	-1.780	.006*
Library users relationship management	119	3.73	3.98	-1.505	.000*
Foster a friendly rapport with library users	120	3.81	4.04	-1.173	.050
Curate and manage collections	121	3.58	3.54	.244	.747
Fundraising/revenue generation	117	3.30	3.18	.328	.614
Scheduling	118	3.29	3.33	-.217	.955

*The mean difference is significant at 0.05 alpha level.

Comparison of Librarians' Perceived SMO Based on Geographical Division:

The mean score variation in the perceived SMO of respondents' geographical divisions were compared using a one-way analysis of variance (ANOVA). Geographical divisions were Sindh, Punjab, Khyber Pakhtunkhwa (KP), Islamabad Capital Territory (ICT), and Balochistan. However, because there were not enough responses, the Balochistan was not included in this comparison. Alpha = .05 was chosen as the type I error rate. A statistically significant variation in the average score for

just one statement i.e. “*Library users relationship management*” was noted as less than $P = .05$ based on geographical divisions (Table 5).

Table 5: Comparison of Librarians Perceived SMO Based on Geographical Division

Statements	F - value	P – value
Real-time communication	2.078	.107
Collaborative communication	.688	.561
Clear and impactful communication	.784	.505
Seamless communication with library users	.849	.470
Foster professional networking by building friendship among library professionals	.698	.555
Round-the-clock connectivity	1.046	.375
Enable voice call support	.380	.767
Enable video call support	.273	.845
Library advocacy and lobbying	.931	.428
Track readership per post	.460	.711
Track followers count	1.289	.282
Library services accessible on mobile devices	.466	.707
Tagging feature for information sharing	.650	.585
Social media allows user segmentation for targeted services	.968	.410
Assist in hiring top talent	.168	.918
Conduct instant surveys	1.625	.187
Collect ideas and feedback on library services	1.900	.134
Enhance visibility of library services	1.410	.244
Moderate discussions about library services & products	1.087	.358
Assist in addressing users’ questions and complaints	1.041	.377
Library users’ relationship management	3.749	.013*
Foster a friendly rapport with library users	1.422	.240
Curate and manage collections	1.733	.164
Fundraising/revenue generation	.668	.573
Scheduling	1.528	.211

*The mean difference is significant at 0.05 alpha level.

Additionally, the differences among the four geographical divisions for which the ANOVA result was found to be significant were ascertained using the post-hoc test. The data (Table 6) shows that the mean score of respondent libraries from Sindh province was lower than other geographical divisions for the statement of ‘*managing relationship with library users.*’

Table 6: Tukey's Post-Hoc Test for the statement "Library users' relationship management based on geographical division"

Geographical divisions	n	Subset for alpha = .05		F- value	P – value
		1	2		
Sindh	26	3.38		3.749	.013*
Islamabad Capital Territory	20		3.70		
Khyber-Pakhtunkhwa	29		4.00		
Punjab	43		4.09		
Sig.		.064	.382		
Total	118				

*The mean difference is significant at the 0.05 level.

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 27.360.

b. The group sizes are unequal. The harmonic meaning of the group sizes is used. Type I error levels are not guaranteed.

Discussions

It may be concluded that the number of university libraries using social media (67, 54%) is higher than that of non-user libraries (57, 46%).

Literature tells us that social media provides many opportunities for university libraries. Twenty-five (25) statements on social media opportunities were identified and presented to the respondents from university libraries. The mean score revealed that respondents agreed with 21 statements that show positive perceptions of librarians towards the opportunities being offered by social media to university libraries. Previous studies support the findings of this study like: Enhance visibility of library services ($M = 3.99$), similarly Rhodes (2014) mentioned that social media raises users' knowledge of libraries and their services; Collect ideas and feedback on library services ($M = 3.97$), similar findings were reported in studies conducted (Phillips, 2015; and Abdullah *et al.*, 2015); Seamless communication with library users ($M = 3.92$) that is mentioned in the study conducted by (Seena & Pillai, 2014); Foster a friendly rapport with library users ($M = 3.92$) also same findings were reported by Chu and Meulemans (2008); Assist in addressing users' questions and complaints ($M = 3.87$) is supported by a study conducted by Stewart *et al.*, (2017); Collaborative communication ($M = 3.85$) relevant findings revealed by Baro *et al.*, (2013; 2014); Real-time communication ($M = 3.85$) relevant results reported by Abdullah *et al.*, (2015) and Chan *et al.*, (2020); Library users relationship management ($M = 3.85$) also mentioned by Peacemaker *et al.*, (2016) and Fong *et al.*, (2020); Moderate discussions about library services & products ($M = 3.81$) same findings reported by Wan (2011); Library services accessible on mobile devices ($M = 3.79$) supported by the findings of Wickramanayake and Muhammad Jika (2018); Clear and impactful communication ($M = 3.79$) supported by many studies (Charnigo & Barnett-Ellis, 2007; Ganster & Schumacher, 2009; Hopkins *et al.*, 2015; Raza *et al.*, 2017). Two-way communication is necessary for effective communication and Xie & Stevenson (2014) mentioned that social media is a good tool for two-way communication. Moreover, the statement that social media allows user segmentation for targeted services ($M = 3.73$), these findings are supported by literature (Bridges, 2012; Hopkins *et al.*, 2015; Raza *et al.*, 2017). Social media enable professional librarians to conduct instant surveys ($M = 3.63$), this point was mentioned by Quan-Haase (2012). Social media has the facility to curate and manage library collections ($M = 3.56$) same findings were reported by Khan and Bhatti (2012) who conducted a study and mentioned that social media may curate and manage library collections.

We can draw a conclusion that university librarians view the potential that social media presents to their institutions favorably. The favorable opinions of librarians at Pakistani university libraries would eventually lead to a rise in the use of social media in these institutions. Currently, 54% of university libraries in Pakistan are using social media for the delivery of library services. It may be projected that this number will increase significantly soon as more university libraries adopt social media tools to reach out to users and deliver library services.

A statistically significant difference was observed in mean scores for 18 statements out of 25 statements on SMO based on social media users and non-user university libraries. Among these 18

statements, 17 received a high mean score from university library librarians who are currently not using social media for library services. Thus, we may conclude that social media non-user librarians in university libraries have more positive perceptions of social media. Moreover, we could not assume any reason for this difference between social media users and non-user librarians in university libraries, however, this trend may justify our projection of an increased number of libraries' adoption of social media soon.

No statistically significant difference was observed in mean scores for all 25 statements based on the type of parent institution (public and private sector universities) of Pakistan or geographic division of parent institutions except one statement '*Library users relationship management*' where the university libraries belonged to Sindh province, the 2nd most populated province of Pakistan, showed lower agreement with this statement than other provinces' libraries.

Conclusion:

The study revealed that 54% of university libraries in Pakistan use social media for delivering library services. The libraries using social media had a higher percentage (54%) compared to non-users (46%). However, no single university library has a social media policy to operate social media formally. Respondents agreed with 21 statements indicating positive perceptions of librarians working in university libraries towards the opportunities provided by social media. These opportunities included increasing awareness, gathering feedback, facilitating communication, and managing relationships with library users. Non-user libraries showed more positive perceptions toward social media. No significant differences were observed based on the type of institution and geographic division, except for lower agreement with the statement on managing relationships in libraries from the Sindh province.

The data revealed that there is a comparable tendency for social media opportunities in university libraries, both individually and organizationally. Exploring social media prospects from an organizational standpoint, on the other hand, may broaden the dimensions of social media for university libraries. Furthermore, university libraries may reap additional benefits by engaging library users through instant communication and providing them with the information they require. Engaging social media in university libraries from an organizational standpoint may also assist professionals in communicating with library users and portray a positive image of the library while serving and advising library customers. The study predicts increased adoption of social media in university libraries in the future.

Research Recommendations:

Based on the study findings, it is recommended that the following steps should be taken to avail maximum benefits from social media by utilizing the social media opportunities for university libraries. These recommendations are:

- An official social media page may be created.
- The official social media page may be formally operated.
- Designate officials who are responsible for operating the official social media page.
- There may be duty slots for officials to be engaged on the official social media page for an instant and effective response.
- Officials engaged in the operations of social media pages may be trained for uniformity in communications.
- The officials engaged for the official media page may be polite and have good communication and language skills to tackle any situation easily.
- There should be a separate section in the library for social media operations to keep the library quiet.
- There should be a written policy for social media in libraries.

Research Implications

Social media use has become a reality, and organizations, universities, and libraries are all using social media, as established in the literature review section and in the findings of the study. The study findings help in designing library services through social media. Therefore, there is a need to implement or introduce such new library services to engage, attract, and facilitate library users instantly and effectively. Secondly, the findings of the study help service-oriented organizations to

develop or introduce innovative services to achieve their targets and facilitate their customers. Also, the study findings may help policymakers, administrators, and team leaders in designing social media policies while observing social media opportunities. Similarly, introducing a social media policy may help in introducing services through social media formally and uniformly.

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References

- Abdullah, N., Chu, S., Rajagopal, S., Tung, A., & Kwong-Man, Y. (2015). Exploring Libraries' Efforts in Inclusion and Outreach Activities Using social media. *Libri*, 65(1), 34-47.
- Adewoyin, O. O., Onuoha, U. D., & Ikonne, C. N. (2017). Social media use and service delivery by librarians in Federal Universities in south-west, Nigeria. *Library Philosophy and Practice (e-journal)*, 1641.
- Akter, S., & Islam, M. A. (2019). Perceived value of social media in students' participation in social movement: A developing country perspective. *Digital Library Perspectives*, 35(3/4), 244-258.
- Alkindi, S. S., & Al-Suqri, M. N. (2013). Investigating Faculty Decisions to Adopt Social Networking Sites (SNSs): The Case of Sultan Qaboos University in Oman. 194 International Research: *Journal of Library and Information Science*, 3(4), 687- 704.
- Al-Daihani, S. M., Al-Qallaf, J. S. & Alsaheeb, S. A. (2018). Use of social media by social science academics for scholarly communication. *Global Knowledge, Memory and Communication*, 412-424.
- Anwar, M., & Zhiwei, T. (2020). What is the relationship between marketing of library sources and services and social media? A literature review paper. *Library Hi Tech News*.
- Baro, E. E., Idiodi, E. O., & Godfrey, V. Z. (2013). Awareness and use of web 2.0 tools by librarians in university libraries in Nigeria. OCLC Systems & Services: International *Digital Library Perspectives*, 29(3), 170-188.
- Baro, E. E., Edewor, N., & Sunday, G. (2014). Web 2.0 tools: A survey of awareness and use by librarians in university libraries in Africa. *The Electronic Library*, 32(6), 864-883.
- Buriro, M. A., Rahoo, L. A., Nagar, M. A. K., Kalhoru, M., Kalhoru, S., & Halepota, A. A. (2018). *Social Media used for promoting the Libraries and Information Resources and services at University Libraries of Sindh Province*. Paper presented at the 2018 IEEE international conference on innovative research and development (ICIRD).
- Bridges, L. M. (2012). Librarian as professor of social media literacy. *Journal of Library Innovation*, 3(1), 48-65.
- Chan, A. K., Nickson, C. P., Rudolph, J. W., Lee, A., & Joynt, G. M. (2020). Social media for rapid knowledge dissemination: early experience from the COVID-19 pandemic. *Anaesthesia*, 75(12), 1579.
- Charnigo, L., & Barnett-Ellis, P. (2007). Checking out Facebook. com: The impact of a digital trend on academic libraries. *Information technology and libraries*, 26(1), 23-34.
- Cheng, W. W. H., Lam, E. T. H., & Chiu, D. K. (2020). Social media as a platform in academic library marketing: A comparative study. *The Journal of Academic Librarianship*, 46(5), 102188.
- Choi, N. & Joo, S. (2018). Understanding public libraries' challenges, motivators, and perceptions toward the use of social media for marketing. *Library Hi Tech*, 39, 352-367.
- Choi, C. (2012). Is your library ready for a social media librarian? Paper presented at the ALIA Biennial Conference, Sydney, Australia. http://conferences.alia.org.au/alia2012/Papers/18_Crystall.Choi.pdf.
- Chu, M., & Meulemans, Y. N. (2008). The problems and potential of MySpace and Facebook usage in academic libraries. *Internet Reference Services Quarterly*, 13(1), 69-85.
- Chugh, R., Grose, R. & Macht, S. A. (2021). Social media usage by higher education academics: A scoping review of the literature. *Education and Information Technologies*, 26, 983-999.
- Collins, G., & Quan-Haase, A. (2013). Social media use by Ontario university libraries: Challenges and ethical considerations. Paper presented at the Proceedings of the Annual Conference of CAIS/Actes du congrès annuel de l'ACSI.

- Connaway, L. S. & Powell, R. R. (2010). *Basic Research Methods for Librarians, Fifth Edition*, ABC-CLIO.
- Del Bosque, D., Leif, S. A., & Skarl, S. (2012). Libraries atwitter: trends in academic library tweeting. *Reference Services Review*, 40(2), 199-213.
- Ebrahimzadeh Pirshahid, S., Naghshineh, N., Fahimnia, F., & Thomsett-Scott, B. (2016). Knowledge and use of Web 2.0 by librarians in university libraries of East Azerbaijan, Iran. *The Electronic Library*, 34(6), 1013-1030.
- Etebu, A. T., & Orumah, G. O. (2019). Emerging Initiatives In Reference And Information Services In University Libraries In South-South, Nigeria. *J. ICT Dev. Appl. Res.*, 1(1), 20-32.
- Fiander, D. J. (2012). Social media for academic libraries. In Neal, D. R. (Ed.), *social media for Academics: A practical guide*, (pp. 193-210). UK: Chandos Publishing.
- Fong, K. C. H., Au, C. H., Lam, E. T. H. & Chiu, D. K. W. (2020). Social network services for academic libraries: A study based on social capital and social proof. *The journal of academic librarianship*, 46, 102091.
- Ganster, L., & Schumacher, B. (2009). Expanding beyond our library walls: Building an active online community through Facebook. *Journal of Web Librarianship*, 3(2), 111-128.
- Garcia-Milian, R., Norton, H. F. & Tennant, M. R. (2012). The presence of academic health sciences libraries on Facebook: the relationship between content and library popularity. *Medical Reference Services Quarterly*, 31, 171-187.
- Garoufallou, E., Siatiri, R., Zafeiriou, G. & Balampanidou, E. (2013). The use of marketing concepts in library services: a literature review. *Library Review*, 62, 312-334.
- Gmiterek, G. (2021). Polish university libraries' social networking services during the COVID-19 pandemic spring term lockdown. *The journal of academic librarianship*, 47, 102331.
- Griffin, M., & Taylor, T. I. (2013). Of fans, friends, and followers: Methods for assessing social media outreach in special collections repositories. *Journal of Web Librarianship*, 7(3), 255-271.
- Gruzd, A. (2012). Non-academic and academic social networking sites for online scholarly communities. In Neal, D. R. (Ed.), *social media for Academics: A practical guide* (pp. 21-37). UK: Chandos Publishing.
- Hashim, K. F., Rashid, A., & Atalla, S. (2018). Social Media for Teaching and Learning within Higher Education Institution: A Bibliometric Analysis of the Literature (2008-2018). *International Journal of Interactive Mobile Technologies*, 12(7).
- Harrison, A., Burrell, R., Velasquez, S., & Schreiner, L. (2017). Social media use in academic libraries: A phenomenological study. *The Journal of Academic Librarianship*, 43(3), 248-256.
- Hofacker, C., & Belanche, D. (2016). Eight social media challenges for marketing managers. *Spanish Journal of Marketing-ESIC*, 20(2), 73-80.
- Hopkins, P., Hare, J., Donaghey, J., & Abbott, W. (2015). Geo, audio, video, photo: How digital convergence in mobile devices facilitates participatory culture in libraries. *The Australian Library Journal*, 64(1), 11-22.
- Khan, S. A., & Bhatti, R. (2012). Application of social media in marketing of library and information services: A case study from Pakistan. *Webology*, 9(1), 1-8. Article 93. Available at: <http://www.webology.org/2012/v9n1/a93.html>
- Khan, M. T., & Rafiq, M. (2018). Trends in Adoption of Social Networking Sites. *Pakistan Library and Information Science Journal*, 49(1), 11-18.
- Khan, M. T., & Rafiq, M. (2019). Library Social Media Services (LSMS)! Going Viral for Survival. *Pakistan Library & Information Science Journal*, 50(3), 23-32.
- Lam, E. T. H., Au, C. H. & Chiu, D. K. (2019). Analyzing the use of Facebook among university libraries in Hong Kong. *The journal of academic librarianship*, 45, 175-183.
- Lorenzen, E. A. (2014). Making Hay While the Sun Shines: Using the Cause of Equine Welfare as a Platform for Teaching the Skills of Information Literacy. *Indiana Libraries*, 33(2), 41-46.
- Luo, T. & Hostetler, K. (2020). Making professional development more social: A systematic review of librarians' professional development through social media. *The journal of academic librarianship*, 46, 102193.
- Mahmood, K., & Richardson, J. V. (2013). Impact of web 2.0 technologies on academic libraries: A survey of ARL libraries. *The Electronic Library*, 31(4), 508-520.

- Mogale, M. G., & Bopape, S. (2023). Trends and issues relating to social media utilisation in academic libraries: Experiences from the University of Limpopo subject librarians. *South African Journal of Information Management*, 25(1), 1580.
- O'Dell, S. (2010). Opportunities and Obligations for Libraries in a Social Networking Age: A Survey of Web 2.0 and Networking Sites. *Journal of Library Administration*, 50(3), 237-251. doi: 10.1080/01930821003634989
- Okoroma, F. (2017). Issues and the use of social media in reference services by academic library personnel in Nigeria. *Advances in Social Sciences Research Journal*, 4(12).
- O'Keeffe, G. S. (2016). Social media: Challenges and concerns for families. *Pediatric clinics of North America*, 63(5), 841-849.
- Oxford Dictionaries - Dictionary, Thesaurus, & Grammar. (2022). Oxford Dictionaries | English. Retrieved 19 December 2022, from <https://languages.oup.com/>
- Owusu, G. M. Y., Bekoe, R. A., Otoo, D. S. & Koli, A. P. E. (2019). Adoption of social networking sites for educational use. *Journal of Applied Research in Higher Education*, 11, 2-19.
- Pashootanzadeh, M. & Rafie, Z. (2020). Social Media Marketing: Determining and Comparing View of Public Library Directors and Users. *Public Library Quarterly*, 39, 212-228.
- Peacemaker, B., Robinson, S., & Hurst, E. J. (2016). Connecting best practices in public relations to social media strategies for academic libraries. *College & Undergraduate Libraries*, 23(1), 101-108.
- Penzhorn, C. E., & Pienaar, H. (2009). The use of social networking tools for innovative service delivery at the University of Pretoria Library.
- Phillips, A. L. (2015). Facebooking it: Promoting library services to young adults through social media. *Public Library Quarterly*, 34(2), 178-197.
- Quan-Haase, A. (2012). Research and teaching in real-time: 24/7 collaborative networks. In Neal, D. R. (Ed.), *social media for Academics: A practical guide*. (pp. 39-58). UK: Chandos Publishing.
- Quadri, G. O., & Adebayo Idowu, O. (2016). Social media use by librarians for information dissemination in three federal university libraries in Southwest Nigeria. *Journal of Library & Information Services in Distance Learning*, 10(1-2), 30-40.
- Rafiq, M., Ali, S., & Khan, M. T. (2020). Information literacy instructions in university libraries of Lahore, Pakistan: Practices and Methods. *Library Philosophy and Practice*, 4511, 1-25.
- Rafiq, M., Asim, A., Khan, M. T., & Arif, M. (2019). The effects of social media on reading habits. *Pakistan Journal of Information Management and Libraries*, 21, 46-65.
- Rafiq, M., Batool, S. H., ALI, A. F. & Ullah, M. (2021). University libraries response to COVID-19 pandemic: A developing country perspective. *The journal of academic librarianship*, 47, 102280.
- Rao, K. S., Subangi, M. C., & Malhan, I. V. (2019). Social Networks as a Platform for Academic Interaction: Possibilities and Challenges for Indian Academic Libraries. *Asian Journal of Information Science & Technology (AJIST)*, 9.
- Raza, M. Z., Soroya, S. & Babar, S. A. (2017a). Academic use of social media among students of University of the Punjab, Lahore. *Pakistan Library & Information Science Journal*, 48, 49-58.
- Raza, M. Z., Soroya, S. & Rehman, Z. (2017b). Use of social media among students of University of the Punjab, Lahore. *Pakistan Library & Information Science Journal*, 48, 26-36.
- Rhodes, T. (2014). A living, breathing revolution: How libraries can use 'living archives' to support, engage, and document social movements. *IFLA journal*, 40(1), 5-11
- Sahu, M. K. (2016). Best Practices of social media in Academic Libraries: A Case Study of Selected Engineering College Libraries of Odisha. *DESIDOC Journal of Library & Information Technology*, 36(5).
- San Kong, E. W., Chiu, D. K., & Ho, K. K. (2016). Applications of social media in academic library services: A case of the Hong Kong Polytechnic University Library. *International Journal of Systems and Service-Oriented Engineering (IJSSOE)*, 6(2), 53-65.
- Seena, S., & Pillai, S. K. (2014). Impact of Web 2.0 Technology Applications in Kerala University Library: Library Professionals' Perspective. *DESIDOC Journal of Library & Information Technology*, 34(5), 419-425.
- Stephens, M., & Collins, M. (2007). Web 2.0, library 2.0, and the hyperlinked library. *Serials Review*, 33(4), 253-256.

- Stewart, M. C., Atilano, M., & Arnold, C. L. (2017). Improving Customer Relations with Social Listening: A Case Study of an American Academic Library. *International Journal of Customer Relationship Marketing and Management*, 8(1), 49-63.
- Tadasad, P. G., & Patil, S. (2017). Use of online social networking services in university libraries: A Study of university libraries of Karnataka, India. *DESIDOC Journal of Library & Information Technology*, 37(4).
- Tella, A., Olarongbe, S. A., Akanbi-Ademolake, H. B. & Adisa, M. Y. (2013). Use of social networking sites by academic librarians in six selected states of Nigeria. *New Review of Academic Librarianship*, 19, 274-290.
- Wan, G. (2011). How academic libraries reach users on Facebook. *College & Undergraduate Libraries*, 18(4), 307-318.
- Wang, Y., & Meiselwitz, G. (2015). *Social media and higher education: A literature review*. Paper presented at the Social Computing and Social Media: 7th International Conference, SCSM 2015, Held as Part of HCI International 2015, Los Angeles, CA, USA, August 2–7, 2015, Proceedings 7.
- Wordofa, H. K. (2014). Adoption of web 2.0 in academic libraries of top African universities. *The Electronic Library*, 32(2), 262-277
- Wickramanayake, L. & Muhammad Jika, S. (2018). Social media use by undergraduate students of education in Nigeria: A survey. *The Electronic Library*, 36, 21-37.
- Xie, I., & Stevenson, J. (2014). Social media application in digital libraries. *Online Information Review*, 38(4), 502-523.
- Zohoorian-Fooladi, N., & Abrizah, A. (2014). Academic librarians and their social media presence: a story of motivations and deterrents. *Information development*, 30(2), 159-171.