Personafying academic librarians' social media presence

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ABSTRACT

Persona is an approach for system designer to aroup users based on their common characteristics and personafying refers to the configuration of a concept or practice in the form of a persona. The objective of the study is to explain how persona method can be helpful to illustrate academic librarians' social media presence with respect to their awareness, current practices and readiness. The study uses qualitative research design in a form of case study to understand how librarians know, use and implement social media in the delivery of library services. Data was gathered through interviews with 26 academic librarians and three focus groups sessions of librarians from three research intensive universities in Malaysia. Findings show that librarians illustrate different behaviour to show how their social media awareness, practices and readiness determine the personas into which they were grouped: Skaters, Sliders, Shufflers and Starters. This stream of research on the personas method will provide library managers with results that can be useful to show librarian' behaviour in using social media, and how library management can use it to design library services to reach out to wider audiences. Moreover, library managers can direct subordinate librarians to become more active and participatory in creating their social media presence. It is hoped that the method presented in this paper would be easy to perceive and be translatable into practice.

Keywords: Social media presence; Web 2.0; Personas; Academic librarians; Social networking.

INTRODUCTION

In recent years, libraries have been progressively implementing a wide variety of social media applications to promote and market library services. Many libraries, especially academic libraries, are concentrating on the use of blogs, open source content management systems, social networks and instant messaging to answer reference questions. The web environment has made students' learning experience to be more active and involved, hence motivating them in their learning process (Li 2007). On the other hand, giving people access to online information is the number one goal of the library (Erdman 2008). By participating in social media platforms, students find an exciting new way to create, learn and share information as the Web 2.0 technologies have been shown to foster active learning and social interaction. Students, who are also library users, find it more satisfying interacting with the online world (Bussert, Brown and Armstrong 2008; Goodwin 2002). This newly found outlet for communication and information sharing through social media has placed libraries in a different light, and progressively more library related-information is finding its way to the general public.

Recent studies have recommended that libraries take advantage of the plentiful and freely accessible Web 2.0 tools and incorporate them in the work flow of the library staff (Arif

and Mahmood 2012; Chu and Du 2012; Tyagi 2012; Abidin, Kiran and Abrizah 2013). The researchers, who discussed the motivations and challenges for using social media, also advocated that librarians took on new tasks available through social media in order to promote, market and transparently manage academic libraries in today's society. Conversely, many libraries have feared this paradigm shift in communicating to their library users because of traditionalist values, as they do not "believe in or are fearful of using these online tools (Rogers 2009, p. 2). Heye (2010) reported that although librarians were aware of the importance of social media applications and they had started using these tools, they were however, uncertain about which tools were better to use and how these tools could be fully exploited in library services.

The literature shows that social media research after the year 2009 has found a relationship between user behaviour and social media usage, in studies by Ross et al. (2009), Aharony (2012), Wilson et al. (2010), and Gonzales and Hancock (2011). Banek-Zorica et al. (2009) remarked that only librarians who are knowledgeable in the use of social networking tools can promote the library services to their users through these tools. Similar results were found in Arif and Mahmood's (2012) and Tyagi's (2012) studies which pointed out that excellent skills in Internet usage have influenced librarians' adoption of the social media. Therefore, it is apparent that librarians' online use characteristics and behaviour have contributed to the successful implementation of this new media in library services. However, there appears to remain a disconnect between what social media tools have been designed to do in library services and what librarians would like to do with them. Hence, this paper intends to probe further on librarians' social media presence with regards to their awareness, practices and readiness to use this technology to render library services. This study uses personas, i.e. an interaction design technique, to help understand the librarians' social media presence. Persona has been demonstrated considerable potential for achieving this goal in software product development that seeks to translate understanding into an ability to anticipate user responses to designs (Pruitt and Grudin 2003). It uses complete metaphors of imaginary people which are created out of highly specified and well-understood data about real people (Pruitt and Adlin 2010). Goodwin (2002) illustrated persona as a archetype of a person which helps decision makers to visually design their features, interactions and navigations, for the reason to keep the users in mind all the time and during the process, and to facilitate communications between stakeholders.

LITERATURE REVIEW

The field of user-based research or user-based experience, which started in the mid 1980s, has a wide range of research methods, tools and models available (Brickey, Walczak and Burgess 2012). These methods range from tried-and-true methods, such as ethnographic and lab-based usability studies, to those that have been more recently developed such as eyetracking and unmoderated remote panel studies (Rohrer 2014), Typically, these methods will involve some initial fact-finding in the early stages to understand the user needs, including who they are, how they currently do things, how they would like to do the things, and what information is currently available. While many user-experience research methods have their roots in scientific practice, their aims are not purely scientific and still need to be adjusted to meet stakeholder needs (Rohrer 2014). While it is not realistic to use the full set of methods on a given user-based research project, nearly all projects would benefit from multiple research methods and from combining insights.

Unfortunately many design teams only use one or two methods that they are familiar with, and most of these methods has failed to create strong association between users and designers because of the lack of sensible details. (Miaskiewicz et al. 2008; Brickey, Walczak and Burgess 2012)

In 1999, Alan Cooper created the notion of persona, a user-centered design method which sets up fictitious characters to represent the different user types within a targeted demographic group that might use a site or product (Cooper 1999). Cooper defines persona as a fictitious character that illustrates the system users and tries to keeping the system interface focus on aspects of users such as goals, needs and frustrations. It had been used in many user interface design projects to help software engineers to better understand the end users' requirements because it sets up a concrete figure that represents consistent and reliable understanding of the end user groups. Many of these projects have reported success such as in Microsoft, MSN Explorer and Microsoft Visual Studio user interface design, and Cisco's hardware product design (Nieters, Ivaturi and Ahmed 2007). The benefits of using persona approach have also been illustrated in a few studies. Pruitt and Grudin (2003) reported that persona can create clear and more explicit assumption about target users. Junior and Filgueiras (2005) found that the use of persona is growing and is becoming a popular way to modify and share the research about users. According to Norman (2004) and Pruitt and Adlin (2010), personas could shape better empathy for target users by assigning an identification and scenario for user audience.

According to Rempel, Buck and Deitering (2013), analyzing qualitative findings in terms of personas can help describe a rich setting within the library and information services environment, thereby making it easier to transfer both findings and their meaning to other libraries. Fairly typical user groups, such as undergraduates, graduate students, and faculty, have been previously used as personas by libraries for web design projects (Koltay and Tanchera 2010; Ward 2010). Miaskiewicz, Sumner and Kozar (2008) used personas to display target users' requirement of an institution repository by applying Latent Semantic Analysis (LSA) for identification of the personas. Similarly, Maness, Miaskiewicz and Sumner (2008) used personas to clarify what different user groups, such as older faculty members with technical concerns or younger graduate students seeking collaboration and promotion opportunities, might want from an institutional repository.

According to Ward (2010) persona can help the library to see users' needs clearly and make better decision about how to provide services for the target users. In 2009, the University of Michigan library embarked on a project in order to understand the motivation and characteristics of libraries users using this technique. Five personas were introduced in this project, namely Brooke the Beginner- Richard the Researcher- Sharon the Scholar- Paul the Professional and - April the Alumna (Ward 2010). Rempel, Buck and Deitering (2013) conducted a qualitative study with twenty students, using structured observations to ascertain the processes students use to select databases and choose sources for a typical undergraduate research assignment outside of the classroom. Based on their observations, the authors developed three personas using "hypothetical user archetype" of three cooking models (Company Dinner, Comfort Food and Fusion Cuisine) depicting different approaches to the research process. In a recent study, Al-Shboul and Abrizah (2014) demonstrated how incorporating personas may lead to better understand the information needs of humanities scholars. The four personas utilizing real names and faces that were uncovered in their study, may be able to effectively communicate the actual information needs of the humanities scholars through the personal narrative, name,

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and face, which will remind the academic library of what their users really want and need from their services.

The review indicates that although persona method is a relatively new development for identifying users' behaviour and practices and has been rarely used in a library setting, researchers and library practitioners can use this method in order to understand behaviour of users or other librarians in order to better utilize technological tools in the library and information services environment. However, there is little evidence of studies conducted on the usage of persona method in social media research, specifically in the field of library and information science, to illustrate how different librarians utilize and practice social media application personally and professionally. Theory of persona could be helpful in order to illustrate librarians' social media presence based on their awareness, current practices and readiness.

OBJECTIVES AND METHOD

The objective of this study is to use personas to gain insights into the social media presence of academic librarians in Malaysia with respect to awareness, current practices and readiness. The following questions drive this research:

- a) How would academic librarians see themselves making use of social media in terms of awareness, current practices and readiness?
- b) How could academic librarians' social media awareness, practices and readiness be identified using personas?

Personas are used for the following reasons listed in Al-Shboul and Abrizah's (2014) research work as affirmed by Adlin and Pruitt (2010): (a) personas are a highly memorable, inherently usable communication tool if they are communicated well, and (b) they are shared ideas around which the users come to life in the mind of the people in an organization. Junior and Filgueiras (2005) asserted that user demographic and behavioural data obtained from real user observation provide valuable information; however, such information can be misinterpreted if presented as statistical figures.

As the research design, qualitative case study was adopted and three research-intensive universities in Kuala Lumpur, Malaysia were chosen as the boundary for this case study. These three research universities were chosen because they are among the top universities in Malaysia and Asia, and they quest to be regional leader in research and academic excellence. Data collection, which includes face-to-face interviews with twenty six librarians, focus groups and observations, helped to gather rich data. Participants in this research were from different library departments and were purposively sampled and they met at least one of the following criteria:

- a) They sat in the committee for the update and improvements of their respective library websites.
- b) They were either heads of departments or librarians in charge of creating content and updating social media applications in the sampled libraries.
- c) They considered themselves to be active users in at least one social media tool.
- d) They expressed a willingness to take part in the study.

The sample librarians are presented in Table 1. The names which were chosen as representation are not the real names of the participants and they were chosen to reflect the gender of the participants.

Participants	Library department	Academic background	Age
Harold	Systems and information technology	Masters in Library & Information Science	35
Lina	Information service	Masters in Library & Information Science	40
Mike	Acquisition	B.Sc Information Studies	23
Zahra	Arabic and Islamic civilization	Masters in Library & Information Science	28
Matthew	Cataloging	B.Sc Information Studies	26
Harry	Archive and special collection	Masters in Archive record	29
Jimmy	Acquisition	B.Sc Information Studies	30
Rose	Media collection	B.Sc Information Studies	36
Ayla	Customer service	Masters in Library & Information Science	31
Andy	Law library	B.Sc Information Studies	30
Sofi	Systems and information technology	B.Sc Information Studies	34
Nadia	Systems and information technology	B.Sc Information Studies	25
Shawn	Systems and information technology	Masters in Library & Information Science	38
Sammy	Acquisition	B.Sc Information Studies	28
Helena	Cataloging	B.Sc Information Studies	26
Alec	Medical library	B.Sc Information Studies	33
Natasha	Client service department	Masters in Library & Information Science	31
Romina	Medical library	B.Sc Information Studies	26
Hania	Information skills	Masters in Library & Information Science	27
Sharon	Information skills	B.Sc Information Studies	37
Helsa	Academic services	Masters in Library & Information Science	32
Fred	Information systems	Masters in Library & Information Science	27
Jennifer	Deputy chief librarian	Masters in Library & Information Science	50
Kathrin	Client service department (Department Head)	Masters in Library & Information Science	49

The data collection took six months from February to June 2012. Interviews were conducted in the English language. Each interview session lasted approximately 40 to 90 minutes with all discussions audiotape recorded. The interview sessions continued until data reached theoretical saturation. During the face-to-face interviews, each participant was asked the same set of questions. Prior to conducting the interviews, an interview protocol was created and questions were included that addressed the areas that the researchers were looking for further user research into:

- To discover how librarians currently use and share information in social media (e.g. "can you briefly describe the steps that you went through the last time that used Facebook or Twitter?").
- To capture opinions concerning the library's social media pages (e.g. "can you describe your last two uses of the library's Facebook page).
- To identify how librarians would utilize the library social media page once it was available (e.g. "do you envision yourself sharing information with students or other librarians through the library social media once it is available to you?")

Upon completion of the interview sessions, all participants were invited to attend focus group discussions in order to provide a platform for them to share their experiences and opinions on the social media phenomenon in academic university libraries. Among the 26 librarians, 22 agreed to participate. The librarians were split into three groups, comprising between 6 to 10 participants in each. Each focus group session was conducted between

July to October 2012 and lasted approximately two hours. All discussions were audiotape recorded. Data from interviews and focus groups were transcribed manually, yielding 283 pages of transcripts. The researchers went through each of the transcripts, and identified the significant observations. Additionally, during nearly one year of data collection, librarians' professional and personal practices in social media platforms such as Facebook and Twitter were observed and used to support the interview and focus group data collected. Consistent with Goodwin (2002) and Al-Shboul and Abrizah (2014), once the observations are identified; similar observations are grouped into "patterns". When similar patterns were repeated among multiple participants the basis for one persona is shaped.

RESULTS AND DISCUSSION

This study has chosen to articulate the different social media awareness, practices and readiness associated with each participant by using a metaphor. The four personas identified in this study were "Skater," "Slider," "Shuffler," and "Starter (Appendix A). These four names that signify different personas have also been used in Ramasamy (2010) for benchmarking Malaysia in the Global Information Society. Ramasamy introduced the 8-S Framework which includes the following names in order to show how Malaysia has progressed in the global information society ladder compared to other developing countries: Skaters, Sliders, Sprinters, Sliders, Strollers, Shufflers, Starters and Sleepers. The four personas identified in this study are each summarized in Table 2. Table 3 presents the description of each persona in terms of its social media awareness, practices and readiness.

The Librarians	The Persona Used	Description
Emma, Morgan, Harold, Harry	Skater	Skater represents four librarians in this study, comprising three females and one male. She is 45 years old. She is a Deputy Chief Librarian, graduated from abroad and holds a doctoral degree. She has worked in the library for more than 15 years.
Mike, Matthew, Jimmy, Andy, Sofi, Nadia, Sammy, Helena, Alec, Fred, Romina, Hania, Sharon	Slider	Slider represents 13 librarians in this study, comprising nine females and five males. He holds a Masters degree and has a work experience in the library for about six years.
Shawn, Ayla, Lina, Rose, Helsa, Natasha, Zahra	Shuffler	Shuffler represents seven librarians, comprising six females and one male. She is a senior librarian and holds a Masters degree. She has worked in the library for more than 15 years.
Jennifer, Kathrin	Starter	Starter represents two female librarians in this study. She holds a bachelor degree. She is a department head and has worked more than 20 years.

Persona	Awareness, current practices and readiness	Verbatim response example 1	Verbatim response example 2
Skater	Has a strong awareness and the need to take social media opportunities. Strong user of Web 2.0 technologies. In a strong position for taking social media presence opportunities.	I am ok with this [social media] because I am familiar with these tools. I was an academician before, these are things we encourage our students to use. I am very familiar with Web 2.0 tools so when one of my colleagues proposed [sic], I easily adopt. (Emma, interview 1, January 16, 2012, line27)	I cannot remember when, but our library started quite early. I think our library was the first library in Malaysia to set up a Facebook page and then followed by other universities. I advocate social media. (Morgan, interview 1, January 5, 2012, line 1)
Slider	Steadily aware of social media but lacks momentum in practice. Moving steadily but without consistency because of lack of motivation, deterrents or particular concerns about social media.	Social media is in trend now, most of my friends use it, I use it too, but I feel a little weird when I communicate in [the] library official page. I have to be polite with them [users], be careful with what I write. [I] Need to make sure anything I post is positive, not bias [sic], something sweet (Fred, interview 1, January 10, 2012, line 28)	When Facebook was introduced to the world, I also wanted to use it but sometimes I do not have anything to write. When I do not have information, my colleagues or managers encourage me to be on [the] library [sic] Facebook, they give me some information to post on our library page. (Hania, interview 1, February 6, 2012, line 4)
Shuffler	Aware of social media due to its current trend. In practice, very slow- moving and embraces social media very slowly.	For [the] application of new technology tools we try to adopt everything which is good and possible to adopt, but we cannot adopt 100% because the environment is different Actually we [library] use only one application [which is] Facebook. But we plan to use other application [sic] in future. (Shawn, interview 1, March 7, 2012, line 16)	I created an account, when we had a social media course in-house It was in 2010, and we took so many pictures so they [the organizer] said, if you want to see [the] pictures, you can access it on Facebook. So I created an account to see the photos. After that, I posted some of my pictures. But after a while, I stop [sic] you know I don't have much time to post anything. (Ayla, interview 1, February 20, 2012, line 17)
Starter	Aware of social media but hardly implements it. Does not agree with the social media phenomenon in the library workplace.	I even do not have my personal Facebook [page] as well. I am not really a computer person but I do answer library queries in e-mail so if any students have any problem [sic] and e-mail me, I will answer their questions. (Kathrin, interview 1, April 9, 2012, line 14)	I am not into social media at the workplace because it is extra work. I am not that familiar with social media for the library. I am from the old generation and not IT savvy. Even my personal page is always deactivated and then I deleted it last week. (Jennifer, interview 1, January 19, 2012, line 24)

Table 3: Librarians' Personas based on their Awareness, Practices and Readiness in Social Media

Persona Social Media Awareness

Awareness in current study refers to positions of knowledge or skills for accessing or using available resources (Rehman and Ramzy 2004). All librarians in this study demonstrated that they are aware of the social media application in library services due to the spread of their use in Malaysian libraries. However, librarians became familiar with, and informed about social media in different ways. Some librarians were highly aware of the concept of social media and this gave a picture that they were familiar with all social media tools, while others only learned about social media when it became a trend and were only familiar with one or two social media tool(s). The followings illustrate librarians' different behaviour to show how their awareness determines the personas into which they were grouped:

- a) Skaters' awareness: One of the key similarities amongst the librarians that represent the Skater persona is their high awareness about the importance of taking social media opportunities.
- b) Sliders' awareness: The Sliders are steadily aware of social media because they are part of the younger generation of librarians, who always follow trends. They usually become informed about social media applications from acquaintances and friends and try to use the technology to keep up-to-date on social media trend. Therefore, they have a few social media accounts.
- c) Shufflers' awareness: The Shufflers are approachable librarians who get informed about new technology and social media application very easily from their colleagues. During this study, shufflers show that they are aware of social media as a powerful tool to promote the library.
- d) Starters' awareness: The Starters are older and experienced librarians. They are aware of social media because their family members and the staff working under her use the tools. However, they believe that social media is time-consuming and that useful in their daily work. At times, they do not like to talk about these tools.

Persona Social Media Practices

Librarians utilized social media in different ways at the workplace. Skaters for example, who are very passionate about social media in particular, and any other new technology in general, make efforts to update their social media status or library Facebook pages every hour. On the other hand, Sliders utilize social media when asked to do so by their managers and superiors. However, they like to post messages and communicate through social media. The Shufflers, although have access to the library social media accounts are very slow in updating or responding to it. They are usually active using one social media tool at a time, but admit to plan using more variety of social media tools in the future. Starters do not wish to use social media professionally or personally. The followings illustrate librarians' different behaviour to show how their practices determine the personas into which they were grouped:

- a) Skaters' practices: The Skaters are major users of Web 2.0 technologies, and would quickly seize the chance to take social media presence opportunities. In this study, Skaters advocate social media practices and encourage other librarians to implement library social media pages.
- b) Sliders' practices: Since most Sliders are administrators of their library social media pages, they implement and use social media at the workplace, but lack momentum in practice. The Sliders move steadily, but without consistency, due to lack of motivation, facing deterrents, and having particular concerns about social media presence.

- c) Shufflers' practices: The Shufflers adapt to social media gradually. They have the tendency to delay using social media tools by claiming that they plan to use it in the near future. The only social media platform that Shufflers use is Facebook. Shufflers started using Facebook only after it has become a trend among academic libraries
- d) Starters' practices: Starters hardly use social media at the workplace because they do not support the notion that social media is a necessary tool in the library. However, they show interest in other forms of information and communication technology, such as e-mails.

Persona Social Media Readiness

Readiness involves two aspects i.e. the results of academic librarians' awareness of social media issues and the current practices that specifically address social media currently taking place within the academic libraries. This implies that when librarians are aware of social media and know how to approach it in practice; they are ready to use social media in the delivery of library and information services. In general, the participants showed their readiness in creating social media presence. Only two librarians were not prepared to use technological tools and needed more motivation and encouragement. The followings illustrate librarians' different behaviour to show how their readiness determines the personas into which they were grouped:

- a) Skaters' readiness: Skaters are well-seasoned in using social media and display more interest in creating a social media presence for the library. Skaters are ready enough to implement social media in both their professional and personal lives. Skaters' remarks show that they do not need any motivation to use social media and will use it continuously.
- b) Sliders' readiness: Sliders are competent and capable of delivering library services through social media because they are aware of social media and technological tools. However, they lack commitment and sustainability. Sliders do what their managers and senior librarians dictate them to do. So most Sliders in the current study are junior librarians. If their managers do not require the use of social media, they would not be interested in it or use it constantly.
- c) Shufflers' readiness: Shufflers demonstrated a fair amount of readiness in social media uptake in the library. However, these librarians are very slow in implementing new tools and always postpone doing so. The Shufflers also ask other library staff to employ these new tools.
- d) Starters' readiness: Starters show an interesting issue relating to libraries' social media application. They significantly use e-mails as the preferred mode of communication. It is conceivable that they might redirect their efforts by using social media to communicate with library patrons. Starters do not have any social media accounts and dislike talking about social media tools. Often, librarians with this persona need to be motivated and given training as they are not ready to use social media tools for professional purposes.

CONCLUSION

Libraries in Malaysia are still in the process of learning how to use these tools effectively to create awareness of library services and as outreach to students (Ayu and Abrizah 2011). Given the newness of social media applications in Malaysian academic libraries, this study has extended Zohoorian-Fooladi and Abrizah's (2014) preliminary study on the prevalence of social media use and the obstacles to social media participation among academic

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libraries, by presenting the social media presence of academic librarians using personas. The results of this study yielded "personas" describing different classes of academic librarians in social media uptake, which can be used to guide library management in designing social media library services that facilitate increased participation among their library staff. The personas are Skater, Slider, Shuffler and Starter. Only Skater is very well versed in social media and displays more interest in creating social media presence for the library. This is especially true when they hold managerial positions in an organization. The most striking description of Skater's persona was described well in the study by Partridge, Lee and Munro (2010), who emphasized on personality traits as one of the important attributes for becoming Librarian 2.0. They indicated that Librarian 2.0 should be creative, enthusiastic and inspirational. They also discussed that librarians in the Web 2.0 world should have an open mind and are willing to try new things.

Libraries could benefit from this method to better decide how to approach librarians who ready enough to implement social media. For example Sliders are librarians who can seriously deliver library services through social media. Starters, as librarians who can interact well with people through e-mails, and if given the motivation and appropriate training in using social networking sites, can enhance the process of recognizing library communities' needs. Shufflers being approachable librarians, seem to be self-motivated, very active and continue to perform their work well. Hence, identifying the right personas in the use of social media in library services can increase library social inclusion and outreach in general.

The personas that were identified in this study may provide a representation of the awareness, current practices and readiness of academic librarians in creating social media presence. This paper has shown that personas are a unique and promising user-based research, and researchers should not neglect the promising anecdotal evidence that currently exists. By thinking about the needs of a fictional persona of academic librarians' social media presence, library management may be better able to infer what a real person might need to effectively deliver the library services through social media platforms. However, these personas cannot be representative of all academic librarians in Malaysia because of the limitation of study. This limitation is not inherent in the personas methodology, but in how study participants are selected. It is suggested that before persona is used in library research, researchers and library practitioners should devise a sampling strategy that will allow for generalizing to the broader population of library community.

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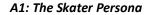
REFERENCES

- Abidin, I.M., Kiran, K. and Abrizah, A. 2013. Adoption of Public Library 2.0: Librarians' and teens' perspective. *Malaysian Journal of Library & Information Science*, Vol. 18, no.3: 75-90.
- Adlin, T. and Pruitt, J. 2010. *The essential persona lifecycle: Your guide to building and using personas.* San Francisco: Morgan Kaufmann.

- Aharony, N. 2012. Facebook use in libraries: an exploratory analysis. *Aslib Proceedings*, Vol. 64, no. 4: 358-372.
- Al-Shboul, M.K. and Abrizah, A. 2014. Information Needs: Developing Personas of Humanities Scholars. *Journal of Academic Librarianship*. Vol. 40, no. 5: 500-509.
- Arif, M., and Mahmood, K. 2012. The changing role of librarians in the digital world: Adoption of Web 2.0 technologies by Pakistani librarians. *The Electronic Library*, Vol. 30, No. 4, 469–479.
- Ayu, A., and Abrizah, A. 2011. Do you Facebook? Usage and applications of Facebook page among academic libraries in Malaysia. *The International Information & Library* Review, Vol. 43, no.4: 239-249.
- Banek-Zorica, M., Lasic-Lazic, J. and Bubas, G. 2009. Potential uses of Web 2.0 tools for library client communication and relationship development. Paper presented at *Qualitative and Quantitative Methods in Libraries*, Technical University of Crete, Chania, Crete. Available at: http://www.isast.org/proceedingsQQML2009/ PAPERS_PDF/Lasic-Lazic_Zorica_Bubas Potential_uses_of_Web_2_tools_for_library_ PAPER-QQML2009.pdf
- Brickey, J., Walczak, S. and Burgess, T. 2012. Comparing Semi-Automated Clustering Methods for Persona Development, *IEEE Transactions on Software Engineering*, Vol.38, no. 3: 537-546.
- Bussert, K., Brown, N. E. and Armstrong, A. H. 2008. IL 2.0 at The American University in Cairo: Flickr in the classroom. *Internet Reference Services Quarterly*, Vol. 13, no. 1: 1– 13.
- Chu, S.and Du, H. S. 2012. Social networking tools for academic libraries. *Journal of Librarianship and Information Science*, Vol. 45, no. 1: 64–75.
- Cooper, A. 1999. *The inmates are running the asylum*. Indianapolis, Indiana: SAMS, A Division of Macmillan Computer Publishing.
- Cooper, A. and Reimann, R. 2003. *About Face 2.0 the essentials of interaction design.* Indianapolis, Indiana: Wiley Publishing, Inc.
- Erdman, J. 2008. Reference in a 3-D virtual world : Preliminary observations on library outreach in "SecondLife", *The Reference Librarian*, Vol. 47, no. 2: 29-39.
- Gonzales, A. L. and Hancock, J. F. 2011. Mirror, mirror on my Facebook wall: effects of exposure to Facebook on self-esteem. *CyberPsychology, Behavior, and Social Networking*, Vol. 14, no. 1-2: 79-83.
- Heye, D. 2010. Social media: the value for librarians. *Information Outlook*, Vol. 14, No.3: 10.
- Goodwin, K. 2002. Getting from research to personas: harnessing the power of data, Available at: http://www.cooper.com/content/insights/newsletters/2002_11/ getting_from_research_to_personas.asp.
- Junior, P. T. A. and Filgueiras, L. V. L. 2005. User modeling with personas. In Proceedings of the 2005 Latin American Conference on Human-Computer Interaction. pp. 277-282. ACM: New York, NY USA.
- Koltay, Z. and Tancheva, K. 2010. Personas and a User-centered Visioning Process. Performance Measurement & Metrics, Vol. 11, no. 2: 172–183
- Kozar, K. and Miaskiewicz, T. 2009. Designing the introductory is course using student personas: lessons learned from product design. Americas Conference on Information Systems (AMCIS) Proceedings San Francisco, California, August 6 9, p. 454. Available at: http://aisel.aisnet.org/cgi/viewcontent.cgi? article=1473&context=amcis2009.
- Li, Q. 2007. Student and teacher views about technology: A tale of two cities? *Journal of Research on Technology in Education,* Vol. 39, no. 4: 377-397.

- Maness, J., Miaskiewicz, T., and Sumner, T. 2008. Using persona to understand the need and goals of institutional repository users. *D-Lib Magazine*, Vol. 14, no 9/10. Available at: http://www.dlib.org/dlib/september08/maness/09maness.html.
- Miaskiewicz, T., Sumner, T. and Kozar, K.A. 2008. A Latent Semantic Analysis methodology for the identification and creation of personas, *Proceedings of Computer-Human Interaction*, pp. 1501-1510. ACM: New York, NY USA.
- Rohrer, C. 2014. When to use which user-experience research methods. Nielsen Norman Group. Available at: http://www.nngroup.com/articles/which-ux-research-methods/.
- Norman, D. 2004. Ad-hoc personas & empathetic focus. Available at: http://www.jnd.org/dn.mss/personas_empath.html.
- Nieters, J.E., Ivaturi, S. and Ahmed, I. 2007. Making personas memorable. *Conference on Human Factors in Computing Systems*, San Jose, CA, US, pp.1817-1824.
- Partridge, H., Lee, J., and Munro, C. 2010. Becoming "Librarian 2.0": The skills, knowledge, and attributes required by library and information science professionals in a Web 2.0 world (and beyond). *Library Trends*, Vol. 59, No. 1-2: 315–335.
- Pruitt J.and Grudin, J. 2003. Personas: Practice and theory. In R. Anderson, J. Arnowitz, A. Chalmers, T. Swack, and J. Zapolski (Eds.). *Proceedings of the 2003 Conference for User Experiences*. pp. 1-15. New York, NY: ACM Press.
- Pruitt, J. and Adlin, T. 2010. *The persona lifecycle: Keeping people in mind throughout product design*. San Francisco, CA: Morgan Kaufmann.
- Rempel, H. G., Buck, S., and Deitering, A. M. 2013. Examining student research choices and processes in a disintermediated searching environment. *Portal: Libraries and the Academy*, Vol. 13, no. 4: 363-384.
- Ramasamy, R. 2010. Benchmarking Malaysia in the Global Information Society: Regressing or progressing? *Journal of CENTRUM Cathedra*, Vol. 3, no.1: 67-83.
- Rehman, S. and Ramzy, V. 2004. Awareness and use of electronic information resources at the health sciences center of Kuwait University. *Library Review*, Vol. 53, no. 3: 150-156.
- Rogers, C.R. 2009. Social media, libraries, and Web 2.0: How American libraries are using new tools for public relations and to attract new users. Paper presented at the *German Library Association Annual Conference, Deutsche Bibliothekartag,* Erfurt, 2 to 5 June 2009.
- Ross, C., Orr, E. S., Sisic, M., Arseneault, J. M., Simmering, M. G. and Orr, R. R. 2009. Personality and motivations associated with Facebook use. *Computers in Human Behavior*, Vol. 25, no. 2: 578–586.
- Rumpel, H.G., Buck, S. and Deitering, A.M. 2013. Examining student research choices and processes in a disintermediated searching environment. *Libraries and the Academy*, Vol. 13, no.4: 363–384
- Tyagi, S. 2012. Use of Web 2.0 technology by library professionals: Study of selected engineering colleges in Western Uttar Pradesh. *DESIDOC Journal of Library & Information Technology*, Vol. 32, no. 5: 439.
- Ward, J. L. 2010. Persona development and use, or, how to make imaginary people work for you. Paper presented at the *Library Assessment Conference*, Baltimore, MD, 2010. Available at: libraryassessment.org/bm~doc/ward_jennifer.pdf.
- Wilson, K., Fornasier, S. and White, K. M. 2010. Psychological predictors of young adults' use of social networking sites. *Cyberpsychology, Behavior, and Social Networking*, Vol. 13, no.2: 173–177.
- Zohoorian-Fooladi, N. and Abrizah, A. 2014. Academic librarians and their social media presence: A story of motivations and deterrents. *Information Development*, Vol. 19, no.3: 159-171.

APPENDIX A





45 years old. Deputy Chief Librarian graduated abroad and holds a doctoral degree. More than 15 years work experience

Skater is a chief librarian in a research intensive university. She usually has a busy schedule at her work place. She participates in different meetings in order to plan and create new services and procedures in library as well as figure out the best practices and new ideas in other universities. She is also very familiar with the issues in library and information services. She is an easygoing person who expresses herself very openly.

She is a very active user of her Facebook page and created her personal page when Facebook was introduced. Skater accepts friend request in social media very easily and post anything she likes about her personal life and interest on her wall.

Surprisingly, she does not expect any feedback for her posts. Skater regularly comments in others post. She believes that social media is one way of communication with family and friends who are far from each other.

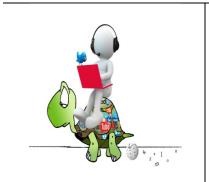
Skater has a personal blog and like to read others personal blog as well. She is very good in English, both, in writing and speaking. Since she is working at the managerial level, the first time she heard about social media went back to the time when these tools were initially introduced for library services in an international conferences (six years ago). She not only decided to create a Facebook page for the library, but also encouraged her subordinates and peers to make use of these new tools personally and professionally. She is very active and always has passion for inviting others to benefit from social media tools. However, she is very concerned about the authoritativeness of the library and the university so she often monitors other librarians to write ethically and post reliable information in social media platform.

A2: The Slider Persona



However, he likes to comment and express his ideas on his friends post. Sider communicates with his family members and friends through social media. However; he believes social media cannot replace face-to-face communication in the real world. When he posts in his page, he expects feedback from his friends because he likes to find out what are others opinions. He likes to do knowledge sharing via social media tools.Slider has been the administrator for the library social media pages because of his passion and familiarity with social media. He is always concerned about posting information in a very correct and polite way in his official social media page. Therefore, he usually prefers to wait for his superior and other library managers to post or comment in the library page. He considers updating social media page very serious and a challenging task when there is an obligation from managers. When there are no tasks on social media, Slider would not be very active in the library's official page.

A3: The Shuffler Persona



A senior librarian and holds a Masters degree. She has worked in the library for more than 15 years

Shuffler is the department head of user education division. She is serious and responsible in her library duties. However, she is not very techno savvy. Sometimes it can be seen that Shuffler is interested and likes to learn about new technological tools because it is trendy. However, it takes her a long time to implement the new tool and replace it with traditional one. In her personal and professional tasks she seems to be self-motivated and a very active person who continues to perform her work well. She often likes to suggest new technology to the other library staff. She prefers to be an observer or manager instead of self-implication of social media page. Shuffler is very conservative who does not show her real personality easily. Shuffler creates her personal page when social media became very popular and trendy. She creates account in only one or two social media tools which is most popular. However her curiosity leads her to open an account in other social media.

Although she can communicate well in English, she prefers to write in the native language. Shuffler posts materials in social media page once in a month. She usually likes to read other pages instead of create or post or even comment. She believes that social media is time consuming and if she wants to communicate or talk with someone she prefers to call directly instead of communicating using social media tools.

When it comes to use and application of social media tools in library services, Shuffler usually asks her staff or other librarians to apply technology and she will act as an observer. However, she monitors her staff well and always chooses the right person to do a particular task. In fact, she takes up new ideas very fast and tries to implement it in the best way. So it is not surprising to see she has been awarded for her new ideas related to technology application in the library. Whenever she knows about new library application, she shows her eagerness. However, she often talks about her plans for the library and intends to exploit it in future.

A4: The Starter Persona



Holds a bachelor degree. She is a department head and has worked more than 20 years

Starter is the department head of a division in an academic library. She is very approachable and is willing to share any information regarding the library and its services. She speaks English very well because she had been educated in the old education system when children went to English-medium schools in Malaysia. She is very responsible in her library duties however she confessed that when it comes to new library technology and ICT tools, she found it hard to accept and adopt the technology. Even in conversation she does not show any interest in hearing or discussing about new technology. Starter expressed that she prefers to use paper instead of computer and even when she want to read something she prefers to print it out first rather than read it online.

Among all kinds of social media tools, the only tool which starter may use is YouTube. Because she can follow her interests and watch films on the subject she likes.

She likes to see videos about instruction for cooking or traditional songs via YouTube. She has not created any account in social media and even if she had created because of enforcement she always deactivates and then she deletes it. Starter expresses that she does not have extra time to use these tools.

She uses the technology in her work place if there is obligation. Otherwise, she does not like to sit and use the computer for a long time and prefers to participate in works which incorporate face to face communication with patrons instead of virtual interaction. She believes that social media is just for fun and cannot be used for her profession. Starter sometimes checks the official page of the library. However, she would never answer any questions as she would ask other librarians to do that. Although, she expresses that she is not computer savvy, she made this commitment to answer students' enquiry by e-mail very fast. If she found some interesting information and would like to share it, she prefers to send it via e-mail.