LIBRARY USERS INFORMATION SEEKING BEHAVIOUR USING MOBILE TECHNOLOGIES: A LITERATURE REVIEW

BY

ALICE OLIJE ODU

AND

DR. MADELY DU PREEZ

Overview

- Introduction
- Background information
- Problem statement
- Research purpose
- Research methodology
- Information model
- Literature review
- Findings and conclusion

Introduction

- The emergence of information systems have changed information environment (libraries inclusive)

- Same with the introduction of mobile technologies which enable users to seek information online with ease

- Mobile technologies is the use of both wireless and wired network technologies that enables access to all types of data via mobile devices and applications

(Zhang, Chongyang & Lee2014; Ge 2010:435; Mills, Knezek & Khaddage 2013:325; Macwan 2017; Ilako, 2016:6; Sivakumar 2014: 49)

Introduction (continues)

- First Generation (1G) 1982 - analogue voice
- 2G 1992 - Short messaging service & Low data
- 3G 2001 - higher voice capacity & advance data
- 4G 2012 - increased speed and wireless network
- 5G – September18, 2019 was launched in Johannesburg and Tshwane
- Mobile technologies facilitates real time communication and information access
- The use is enhanced by affordability of mobile devices and mobile applications

(Loh & Werner 2018; Sung, Chang & Liu 2016:14; Macwan 2017:1; Mugo & Chemwai 2017:1; Mutisya & Kiai, 2016:1)

Background

▶ Mobile devices are portable devices capable of connecting to mobile network and other devices over radio wireless network

▶ Types - smartphones, tablets, e-readers, netbooks, personal digital assistant (PDA) which runs in different platforms

▶ Have the ability to download and run mobile applications enabling instant communication and information access even from remote areas`

(Finley 2017:4; Ok & Ratliffe 2017:2; Shimrav & Keerti2015:3; Bartholomew 2016:44; UNDP 2012; Kumbhar & Pawar 2014:2)

Background (continues)

- Mobile applications - software that run on mobile devices to accomplish task by extracting information from resources or websites

- There are different types, each with its function

- Integration of mobile devices, applications and wireless network create powerful platform for knowledge and information sharing

- (Ventola, 2014:2; Kang 2014:361; Caniano & Catalano 2017:299; Pitichat 2013:6; Mutsiya and Kiai 2016:2)

Background (continues)

- Creating and enabling a borderless and uninterrupted communication and information flow

- Making mobile technologies popular among library users as it offer limitless information search

- Users can readily access information on the go, use and equally share with others creating conducive atmosphere for information seeking activities

- Despite the numerous benefits linked to information seeking using mobile technologies also has its downside.

(Miakotko 2017:2; Islam & Elahi 2014; Misbah & Qinjian 2016; Bowler et al 2015:325; Mugo, Njagi & Chemwai 2017:98; Komissorov & Murray 2016:423; Spezi 2016:82; Oduntan 2014:4; Ligi and Raja 2017:4).

Statement of problem

- Use of mobile technologies attract high usage from users

- However, certain characteristics influences users information seeking behaviour

- The study explore issues identified in literature regarding the use of mobile technologies

Purpose of the study

▶ Explore the role of mobile technologies in library users' information seeking behaviour
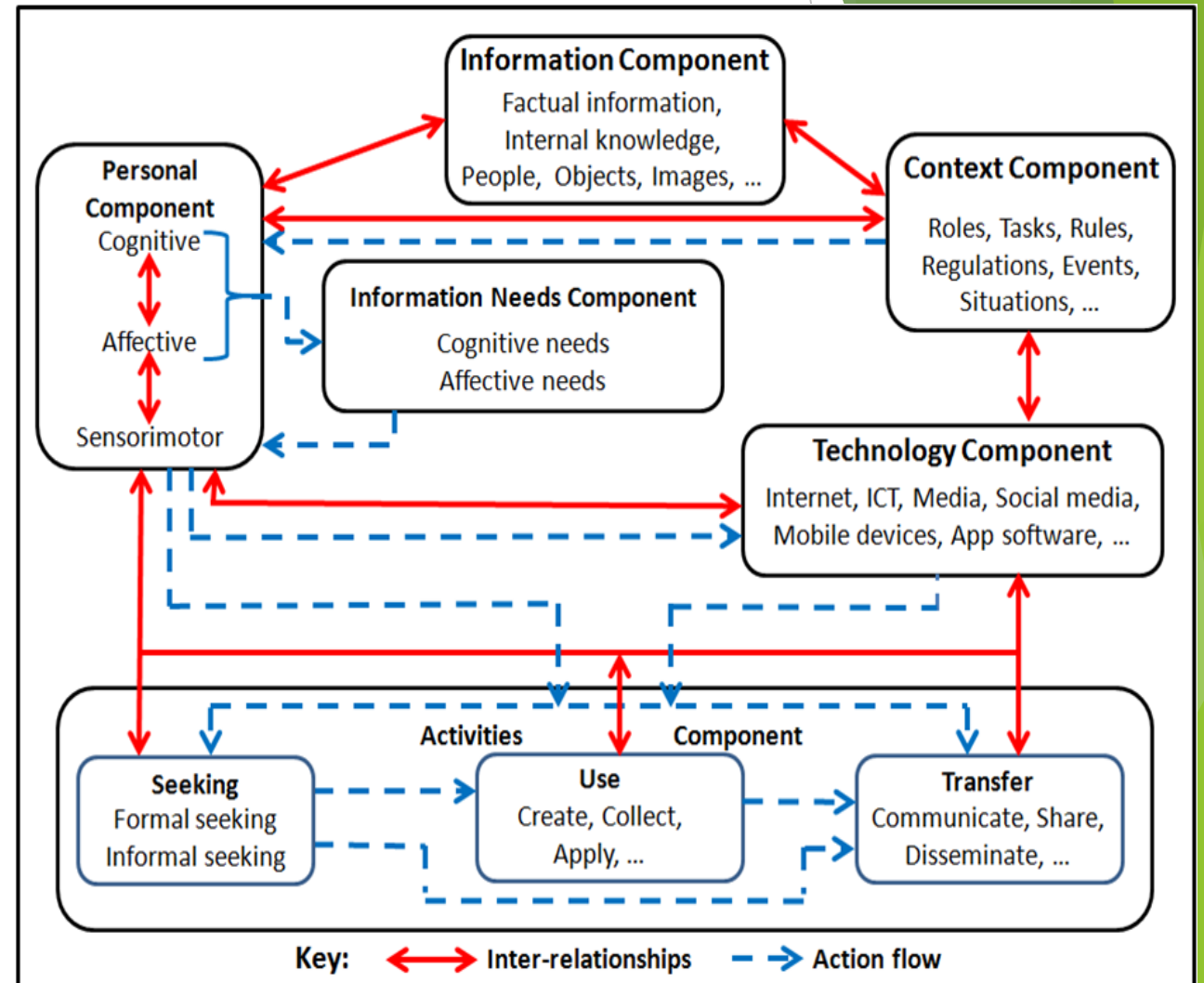
Methodology

- Study was conducted in databases:

 Emerald Insight, Taylor and Francis online, ScienceDirect, International Review of Research in Open and Distributed Learning, ResearchGate, Information Research, UNISA Institutional Repository, Conference Papers, to name but a few.

- Search terms used:

"mobile technologies", "mobile applications" "information seeking behaviour", "mobile device" "information technologies" were used

Information model

- The presentation is based on Meyer's (2016) Information Model

- This model views technology as an enabler of users' information seeking activities

- The level of user's skills and competencies influence information seeking activities

Literature Review; *mobile technology influencers of information seeking behaviour*

- High internet speed, instant feedback and information sharing
- ❖ Poor network
- ❖ Touch Screen (QWERTY)
- ❖ Type of mobile device

(Liga & Raja 2017:2; Ali 2018:109; Buruga 2016:77; Mills, Knezek & Khaddage 2013:325; Savolainen 2017; Sonnewald; Meyer 2009; Kumar 2014:3; Madhusudhan 2017:293; Orblom 2015:16:51; Wihidayat & Ardi 2018:2; IGI-Global Dictionary 2019)

Literature Review (continues)

- Mobile technology creates ease of access to information

- Screen size

- Low memory or space

- Unfriendly mobile library website and database

(Al-Dahaini 2018:194; Kumbhar & Pawar 2015; Buruga 2016:77; Liga & Raja 2017:3; Elahi & Islam 2014; Connaway, Dickey & Radford 2011:186; Thakre & Thakre 2015; Lee & Song 2015:154,159; Dunaway, Searles, Mingxiao & Paul 2018:117; Budiu 2015; Saxena & Yada 2013:9; Kumbhar & Pawar 2015; Spezi 2016)

Literature Review (continues)

- Portability and flexibility

❖ Cost of both mobile device and data

❖ Lack of network and internet connectivity

(Mugo & Chemwai 2017:108; Liga & Raja 2017:3; Mutisya & kai 2016:130; Briz-Ponce et al 2017:612; Liga & Raja 2017:2; Burford & Park 2013:623; Kumar 2014:3; Madhusudhan 2017:293; Orblom 2015:16,51; Connaway, Dickey & Radford 2011:187; Ebiye 2015; Ikoja-Odongo & Mostert 2006:154)

Literature Review (continues)

- Timely access to information.

❖ Lack of technical skills

(Kumbhar & Pawar 2015; Zhitomirsky-Geffet & Blau 2017:325; Spezi 2016; Walsh 2012; Sonnenwald and Iivonen 1999: 436; Savolainen 2006:116; Ebiye 2016; Al-Dahaini 2018:200; Buruga 2016:77)

Conclusion

- Information searching and critical thinking skills to be taught to library users for meaningful and effective use of information

- Use of mobile technologies comes with certain issues like screen sizes and network connectivity which can affect user's information seeking behaviour

- Libraries must ensure they understand Lusers' information in order to provide relevant services to meet their as well as provision of mobile friendly websites

- By creating user experience designs

References

Al-Dahaini, Sm. 2018. Smartphone use by students for information seeking. Global Knowledge, Memory and Communication 67 (4/5):194-208 https://doi.org/10.1108/GKMC-01-2018-0008

Andrakatti, AF & Mulla, KR. 2017. A realistic approach to information services on mobile apps. Journal of Access Service 14(1):7-15 http://dx.doi.org/10/1080/15367967.2017.1287573

Ashikuzzaman, M. 2018. A Brief history of mobile technology: with 5G on the horizon, take a look back at how we got to this point. [Accessed September 12, 2019] http://www.lisbdnet.com/library-services/

Bartholomew, S.2016. A mixed-method study of mobile devices and student self-directed learning and achievement during a middle school stem activity" (2016). All Graduate Theses and Dissertations. 4748. [Accessed May 13, 2018] https://digitalcommons.usu.edu/etd/4748

Briz-Ponce, L Pereira, A Carvalho, L Juanes-M endez, JA García-Penalvo, JF. 2016. Learning with mobile technologies - students' behaviour. Computers in Human Behaviour [Accessed May 12, 2018] http://dx.doi.org/10.1016/j.chb.2016.05.027

Buruga, BA. 2016. The use of mobile technologies for mobile-based service delivery at Muni University Library, Uganda. Masters Dissertation, School of Information, University of Pretoria. https://repository.up.ac.za/handle/2263/58991

Caniano, WT & Catalano, A.2014. Academic libraries and mobile devices: user and reader preferences. The Reference Librarian 55:4, 298-317, DOI:10.1080/02763877.2014.929910

Connaway, LS Dickey, TJ & Radford, ML. 2011. If it is too inconvenient I'm not going after it:" Convenience as a critical factor in information-seeking behaviors. Library & Information Science Research 33(3): 179-190 [Accessed September 2019] https://www.sciencedirect.com/science/article/pii/S0740818811000375?via%3Dihub

Canuel, R & Crichton, C. 2015. Experiencing mobile libraries leveraging apps for research and learning: a survey of Canadian academic libraries. Library Hi Tech 33(1):2-14 DOI 10.1108/LHT-12-2014-0115

Dunaway, J Searles, K Mingxiao, S & Paul, N. 2018. News attention in a mobile era Journal of Computer-Mediated Communication 23 (2018) 107–124. doi:10.1093/jcmc/zmy004 [Accessed August 29, 2019]

Elahi, MH and Islam, MS. 2014. Go fast, go with mobile: Students perception on implementing mobile based library services at Dhaka University Library" (Library Philosophy and Practice (e-journal). 1197. [Accessed May28 2018] http://digitalcommons.unl.edu/libphilprac/1197

References (continues)

Finley, B. 2017. Users experience and usage of mobile services in novel context. Aalto University. Publication Series Doctoral Dissertation 173/2017:174.Helinski, Finland [Accessed May, 17 2018] http://urn.fi/URN:ISBN:978-952-60-7608-9

Ikoja-Odongo,R & Mostert, J. 2006. Information seeking behaviour: a conceptual framework. South African Journal of Libraries and Information Science 72(3):145- 158. http://sajlis.journals.ac.za/pub/article/view/1112/1048 [Accessed September 10, 2018]

Kumbhar, SS & Pawar, RR. 2015. Mobile based services: application and challenges. *Research Gate.* DOI: 10.13140/2.1.2373.2000

Ligi, B& Raja, BWD.2015. Mobile learning in higher education. *International Journal of Research – Granthaalayah,* 5(4): 1-6. https://doi.org/10.5281/zenodo.569363.

Loh, V & Werner, L. 2018. A Brief History of Mobile Technology. [Accessed September 12, 2019] https://www.facilitiesnet.com/buildingautomation/article/A-Brief-History-of-Mobile-Technology---18112

MacWan, U. 2017. Mobile technology, its importance, present and future trends, [accessed May 12 2019] https://www.finextra.com/blogposting/14000/mobile-technology-its-importance-present-and-future-trends

Miakotko, L. (2017). The impact of smartphones and mobile devices on human health and life. http://www.nyu.edu/classes/keefer/waoe/miakotkol.pdf

Mugo, DG Njagi, K & Chemwei, B. 2017. Technological preferences, levels of utilization and attitude of students towards mobile learning technologies in chartered universities, Kenya. International Journal of Education & Literacy Studies Vol. 5(4):98 (Accessed May18, 2018) http://dx.doi.org/10.7575/aiac.ijels.v.5n.4p.98

Mutisya, C & Kiai, W. 2016. Factors Influencing Adoption and Use of Mobile Technology Services by Women Entrepreneurs in Machakos County, Kenya. Journal of Research in Humanities and Social Science 4(11): 129-140 http://www.questjournals.org/jrhss/papers/vol4-issue11/S411129140.pdf

References (continues)

Ok, MW & Ratliffe, KT. 2017. Use of mobile devices for English language learner students in the united states: a research synthesis. Journal of Educational Computing   Research 0(0) 1–25 [Accessed April 23, 2018] DOI: 10.1177/0735633117715748

Orblom, M. 2015. Effects of network performance on smartphone user behaviour. Degree project, Kth Royal Institute of Technology Cambridge Online Dictionary https://dictionary.cambridge.org/dictionary/english/distraction

Spezi, V. 2016. Is information-seeking behavior of doctoral students changing?: a review of the literature (2010–2015). New Review of Academic Librarianship, 22(1):78-106 DOI: 10.1080/13614533.2015.1127831

Sung, Y-T Chang, K-E Liu,T-C. 2016. The effects of integrating mobile devices with teaching and learning on students' learning performance: A meta-analysis and research synthesis. Computers & Education 94 (2016): 252-275 http://dx.doi.org/10.1016/j.compedu.2015.11.008

Thakre, S. and Thakre, S. (2015), "Perception of medical students for utility of mobile technology use in medical education", International Journal of Medicine and Public Health 5 (4):305-311.

Ugwu, CI & Orsu, EN. 2017. Challenges of utilization of online information resources by undergraduate students: implications for information services. Library Philosophy and Practice (e-journal). 1668. https://digitalcommons.unl.edu/libphilprac/1668

Ungvarsky, J. 2019. Content analysis. Salem Press Encyclopedia [Accessed September 12, 2019]. Http://0-eds.b.ebscohost.com.oasis.unisa.ac.za/eds/detail/detail?vid=1&sid=472ddf5a-ec0e-4c2e-a17f-cc73e71e9d08%40sessionmgr101&bdata=JnNpdGU9ZWRzLWxpdmUmc2NvcGU9c2l0ZQ%3d%3d#AN=119214043&db=ers

United Nations Development Programme (UNDP). 2012. Mobile technologies and empowerment: enhancing human development through participation and innovation. United Nations Development Programme http://undpegov.org.

Ventola, CL. 2014. mobile devices and apps for health care professionals: uses and benefits. Vol. 39(5): 356-364 https://www.ncbi.nlm.nih.gov/pubmed/24883008

Zhang, KZK Chen, C & Lee, MKO. 2014. Understanding the role of motives in smartphone addiction. PACIS 2014 Proceedings. Paper 131. http://aisel.aisnet.org/pacis2014/131

Thank you for listening