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Optimizing Library Services--Factors in Integrating Mobile Library Technologies: A Focus Group Study in the United Arab Emirates

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Optimizing Library Services — Factors in Integrating Mobile Library Technologies: A Focus Group Study in the United Arab Emirates

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The rapidly increasing use of smartphones among young users creates new opportunities for successful library service. Mobile library technology has great potential to improve student and researcher access to academic resources. It is also seen by libraries as a positive way to improve their image and to meet the needs of a younger generation of library users who are increasingly engaged with services via mobile devices. However, mobile library technologies have to be implemented in a way that is acceptable to end users in order to encourage usage and therefore be effective. Based on this issue, we conducted a study focused on exploring factors affecting the adoption of mobile library technology. Conducted in **UAE**, this developing country has a particularly high penetration of smartphone technology.

A qualitative focus group revealed a number of theoretical and practical contributions to the adoption of mobile library technology. Six main themes have been explored to lead to practical implications for both the designers of mobile library applications and for organizations that wish to successfully implement such solutions.

The first theme proposed was the perceived *value* that the context of mobile libraries involved (perceived usefulness, quality of working life, mobility, relevance and novelty/distinctiveness). Designers need to understand what users will value in a mobile library system and design both the features and implementation to fit these user needs. Users are looking for ways to enhance the quality of their working life. They need to access resources anywhere, anytime. They also require a system that provides unique services that cannot be obtained elsewhere. The availability of RSS feeds and social networks would allow them to integrate their usage of the app within their existing social networking activities. The availability of tutorials would train students and improve their skills in mobile and Web search experiences. A map service that would show the exact location of a required book and a remote printing service would attract students by covering their need for mobility.

Perceived *ease of use*, the second broad theme, was also proposed to affect the behavioral intention to use mobile library technology. Interface design, mobile self-efficacy, library assistance, and English literacy were factors contributing to perceived ease of use. The findings suggest that designers should consider the use of specific terms that relate to students, arrange the screen in a certain way to focus on pictures versus text, allow for user customization, and design a shallow structure that does not involve intensive navigation. In **UAE** educational context, giving the user the choice of selecting Arabic or English language while using the app would also be expected to improve the perceived ease of use.

Trust also emerged as an important theme affecting the adoption of mobile library technology. Users were concerned about the security, reliability and credibility of such a system. The findings also suggested some ways by which trust might be increased. We proposed that system designers should focus on building an app that protects the privacy of the users and clearly illustrate that the app is developed by the university to give them a sense of trust.

Additionally, the research supported the relevance of *social influence* in the adoption decisions around mobile library technology. Students mentioned the role of both their peers and their teachers in influencing their adoption. Social influence is thought to be a more important determinant of adoption in cultures which are collectivist and high in power distance. Since Arabic cultures are generally thought to exhibit these characteristics, it is possible that context may have played some role in the emergence of this construct in the focus groups (Hofstede, Hofstede and Minkov, 2010). Since social influence was seen as a relevant adoption factor, organizations should ensure that staff members work to highlight the benefit of the app to students whenever possible.

Moreover, the research highlighted the importance of a number of *facilitating conditions* that may affect the adoption. Users were concerned about the technical infrastructure to support mobile access (system coverage). This needs to be good enough to enable users to access the service while on the move. Another factor was the availability of support, and the third factor was the degree of mobile experience among users. The results suggest that organisations need to invest in infrastructure, support and training in order to encourage uptake of mobile library technology. Within the organization, efforts should be made to ensure that Wi-Fi coverage and mobile Internet connectivity is adequate for the intended user group across the whole campus. Relevant staff assistance should be made available and it may also be beneficial to include an "ask a librarian" service in the app to support students' need for assistance. Organizations should also invest in developing the digital literacy of their students and staff so that they are better able to benefit from mobile library interventions.

Finally, the results highlighted the role of *trial-ability* in mobile library adoption. This theme may be indicative of the way that users now interact with mobile apps. The low barriers to entry (in terms of both cost and access) encourage them to try the technology. While this makes the initial adoption decision relatively easy, the flip side is that the technology can be discarded equally easily if the user does not like it in practice. This suggests that the emphasis in studying adoption of this kind of technology should be on intention to continue using the technology, rather than intention to use it self.

Further information on our focus group study is available in the article "The Intention to Use Mobile Digital Library Technology," in the *International Journal of Mobile Human Computer Interaction (IJMHCI)*. In the future, we would like to see similar research conducted in other countries to explore whether the same factors affecting the adoption of mobile library technology will be supported. The theoretical implications illustrate a number of questions arising from this research, which would greatly benefit from future quantitative examination.

Hofstede, G., **Hofstede, G.**, and **Minkov, M.** (2010). *Cultures and Organizations: Software of the Mind* (3rd ed.). New York: McGraw-Hill. **Hong, S. J.**, **Tam, K. Y.**, and **Kim, J.** 🐎