Evidence Based Library and Information Practice

LIS Students at a Japanese University Use Smartphones for Social Communication more often than for Educational Purposes

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Aller au sommaire du numéro

Découvrir la revue

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A Review of:
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Abstract

Objective – To discover how undergraduate (UG) and graduate (G; "postgraduate" [PG] in the original article) students of library and information science (LIS) use mobile devices and to understand preferences and perceived barriers to educational use.

Design – Survey questionnaire.

Setting – University in Japan.

Subjects – Ninety undergraduate students (30 male, 60 female) and 30 graduate students (13 male, 17 female). Nineteen additional recruits were excluded from the study due to incomplete surveys. Almost all subjects (>98%) were born between 1982 and 2002.

Methods – Subjects were recruited without incentives from one LIS department. An online survey was conducted with the purpose of gathering information on how often devices were used for various activities, perceived barriers to mobile learning (m-learning), and demographic data. The survey was modeled on a 2015 study of LIS students in Hong Kong, Japan, and Taiwan (Ko, Chiu, Lo, & Ho, 2015). The Mann-Whitley U test was used to investigate possible significant differences between UG and G responses.

Main Results – 94.2% of participants had smartphones with Internet access; both UG and G subjects reported weekly to daily use for social communications (email, short message service [SMS], chat, and social media) and for querying search engines. Both UG and G subjects reported using finance and banking services less than once a month. Other activities (shopping, finding locations, entertainment, sports, tools and productivity software, casual reading, academic reading, accessing reference materials, accessing libraries) for both groups fell within the range of less than once per month to weekly use. Unlike G subjects, UG subjects reported significant ($p < 0.05$) engagement with social media and marginal ($p < 0.10$) engagement with accessing libraries, and productivity tools.

In terms of educational use, neither UG nor G subjects reported daily m-learning behaviors, instead reporting monthly to weekly browsing of online information and social networking sites, with far less (i.e., less than once a month) engagement with professional articles, e-books, learning management platforms, and several other activities (listening to podcasts, viewing videos, "other"). UG subjects reported significant marginal ($p < 0.10$) engagement with "other" materials, unlike G subjects. Library catalogs and databases were less likely to be used when compared to reference sources, with UG and G subjects reporting monthly or less use for these. When asked if they would use mobile library services, respondents answered "maybe interested if available", with UG subject reporting significant marginal ($p < 0.10$) engagement vs. G subjects for several of these services. Regarding productivity activities, both UG and G subjects reported monthly or less use of note taking, word processing, and scheduling tools. For communication and sharing activities, subjects reported monthly or less activity for communicating with classmates, using email for study-related issues, posting to discussions on learning management platforms, posting or commenting about their studies on social networking sites, sending photos or videos to social media, moving document files, and scanning Quick Response (QR) codes. UG

subjects were marginally ($p < 0.10$) more engaged in communicating with classmates than G subjects.

Barriers to m-learning were not considered "high" barriers, with "low" to "medium" barriers for both UG and G subjects being small screen size, non-mobile format, difficulty typing, challenges with authentication, no Wi-Fi, difficulty reading, lack of specialized apps, and slow loading times.

Conclusion – This study provides a snapshot of how participants used mobile devices at the time the survey was conducted. Both UG and G subjects used their devices for social communication more than for educational purposes.

Commentary

This study sheds light on the question of how mobile devices are used in a particular educational setting. It contributes to the multidisciplinary literature regarding m-learning in education (Chee, Yahaya, Ibrahim, & Hasan, 2017), as well as to research on the acceptance of mobile library service technologies (Saravani & Haddow, 2015).

This study fulfills the basic requirements for a user study (Booth & Brice, 2003). The tables summarizing activities are clearly presented and provide a sense of which questions appeared in the original survey. The original survey instrument is not included as an appendix and the citation to the prior survey (Ko, Chiu, Lo, & Ho, 2015) is missing from the reference list, meaning that the survey could not be replicated solely on the basis of this article. Furthermore, information about the reliability and validity of the instrument (e.g., results of reliability testing to measure internal consistency) is not provided. Such information, together with more detail regarding survey administration (including the time needed to the complete survey, as well as whether informed consent was sought), would improve confidence in this study's findings and should be included in future studies.
The authors note that they recruited "sufficient subjects" to perform the Mann-Whitley *U* test,

without stating how they determined this (p. 206). As recognized by the authors, additional investigation would be required to make any generalizations beyond this study (p. 207).

It would be difficult to apply findings from this study to practice because the survey did not tie barriers of use to specific activities, and did not delve into why some activities were performed more often than others. For example, it is clear from the data presented that mobile library services were infrequently accessed, but the reasons behind this are a matter of conjecture. Future studies would be greatly enriched by linking questions about activities to questions about barriers and context, including open-ended questions about activity choices.

Future research could also benefit from allowing subjects to provide commentaries about perceived educational utility. For example, the "viewing video clips" activity was included in the "general m-learning" table (p. 204). However, one can imagine scenarios in which subjects watched non-educational videos. Specifically describing how activities were assigned to the m-learning category and more deeply examining the perspectives of the participants would strengthen the arguments made about educational vs. non-educational use.

Another interesting point of departure for future studies would be an exploration of various types of learning taking place via mobile devices. For example, informal learning can be defined as "any activity involving the pursuit of understanding, knowledge or skill…without the presence of externally imposed curricular criteria" (Bilandzic, 2013, p. 159). Might, therefore, reading about an aspect of finance and banking on a smartphone represent "informal m-learning" and therefore be educational? What do subjects think? Such questions were not part of this study but could be considered in future investigations.

Overall, LIS professionals planning their own local surveys can use this study as an example and as a basis for comparison.

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