

Wireless Technology and English Language Learning: A Study at Two Malaysian Universities

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Abstract. Successfully integrating technology continues to be the primary focus in Malaysian universities. This article describes part of an on-going research illustrating the impact of wireless technology on English language learning in two public institutions in Malaysia. Students concerned with wireless technology implementation and language learning- speaking, listening, writing, and reading skills were surveyed in order to discover how wireless technology helped in their language learning processes. 55 English language and 48 law and politics undergraduates responded to questionnaires. This paper describes their findings and presents specific recommendations. Overall, the survey indicated satisfactory uses of wireless technology by the students. The researchers believe that this research can be useful for educators involved in the integration, evaluation, and assessment of wireless technology in higher education.

Keywords: Educational Technology, Wireless Technology, Language Learning, Higher Education.

1. Introduction

In 2012, The Tenth Malaysian Plan [1] has chartered its target to increase the reception of wireless services of 75% by the end of 2015. Prior to that, in 2008, under the Malaysian, Communications and Multimedia Services 886 act, the government has prioritized the successful implementation of high speed broadband and the Universal Service Provision (USP) [2]. These two policies were established to ensure the education field had access to the tools of learning. As a result, universities have instituted broadband and wireless communication across Malaysia. In response to these policies and move, a study has been carried out to describe the impact of wireless technology on language learning. This paper covers the data collected at two universities. The data for this study were gathered through surveys asking students to respond to items concerning their wireless devices and use of wireless technology on language learning- speaking, listening, reading, and writing. The paper begins by reviewing the current landscape of wireless technology and language learning in Malaysia, followed by description of methodology. Results and pedagogical implications will also be presented.

2. Wireless Technology and Language Learning in Malaysia

In the Malaysian context, the recent work of Thang, Mahmud, and Razak [3] and Idrus [4] are of particular relevance. Questionnaires and interviews were used in order to describe the impact of wireless technologies on 33 English language learners [3]. Their results have revealed easy access to English language learning websites, online dictionaries, online social communications, and incidental language learning through social networking and entertainment activities. Further, they have recommended that language learning websites and online dictionaries be introduced to learning, in line with the mission of advocating autonomous learning experience. Idrus [4], on the other hand, have looked at the impact of wireless technology on language learning among 40 English language learners through a quantitative study. The theoretical construct for “language learning” is based upon the TOEFL framework [5] in order to define the skilled areas of reading, writing, speaking, and listening, while Freire’s model of active learning [6] is used to define value-added offerings of wireless technology. The respondents have experienced positive attributes of wireless technologies in their read alongs and after-class participation. In addition, there is high percentage of respondents concurring on how wireless technology have significantly helped them with word

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spellings, text-understanding, and greater interaction with content. On writing, wireless technology have helped in the awareness of writing conventions, in applying a wide array of word choices, and expanding writing ideas.

3. Study Design

This study is an analysis of data, as part of an on-going study conducted between May 2012 through May 2013. The data examined in this analysis were from four sections of survey items; one set corresponding to demographic items, one set describing the wireless technology used through university's access points, one on wireless technology application, and another describing the impact of wireless technology on language learning. No pre- or post-test was undertaken as the objective of the study was not to investigate learner development with wireless technology but rather to describe how learners used these technologies for language learning. The following sections describe the design with regard to the questionnaires administered to 103 undergraduates at two public institutions in Malaysia.

3.1. Research Questions

In order to specify the goals of the study, the following research questions were formed:

- What are the wireless devices owned by language learners?
- What is the impact of wireless technology on language learning?

Each of these questions was analyzed with regard to independent variables of higher education qualification and wireless devices owned.

3.2. Sampling

Sampling for the survey was based on convenience sampling. Disciplines or areas of specialization of the students were not examined based on the premise that the respondents had satisfactorily passed the Malaysian Certificate of Malaysian Education or Malaysian Certificate of Higher Education and the Malaysian University English Test (MUET). Thus, it was assumed that the English language proficiency among the students was between high-intermediate to advance. 103 respondents completed the questionnaires during a session (35 minutes) in May and November of 2012. This was to maximize the comfort of the respondents and the likelihood of candid responses, as the time would permit concentration and that the students would have less educational assessments to be completed. One of the researchers was present during the completion of the questionnaires to administer, collect, monitor, and respond to the questions and concerns of the respondents.

3.3. Instrumentation

The instrument used to collect the data for this study was a self-report questionnaire that asked students to provide ratings on Likert scale items addressing the impact of wireless technology on language learning. The constructs of language learning- speaking, listening, reading, and writing was based upon Test of English as a Foreign Language (TOEFL) framework [5]. Demographic items asking about gender, marital status, education qualification, and wireless devices owned were also included in the survey instrument. In addition, scale reliability of the survey was verified using Statistical Package of Social Sciences (SPSS 20.0). The resulting reliability coefficients were considered excellent with an acceptable level of Cronbach's alpha value within 0.5 to 0.7 and a good level if the Cronbach's alpha value was more than 0.7 [7]. In this research, specific alpha values include (a) the entire instrument with 64 items (0.898), (b) language learning- reading with 6 items, (0.912), writing with 7 items (0.853), listening and speaking skills with 5 items (0.702). The letters a-b represents each of the four major areas the survey sought to describe.

4. Results

4.1. Wireless Technology Owned for Language Learning

To determine the degree to which the students submitting valid surveys were representative of the student population, profiles were prepared to examine gender, highest education, access points, and wireless technology devices. Profiles on wireless technology were used for the purpose of explaining their backgrounds for this paper. As indicated in Table 1, the table is useful for examining specific wireless technology for language learning possessed by respondents. 75% (77 respondents) had computer/laptops

with built-in Wi-Fi, and relatively small percentage owned smartphones- 20% (21 respondents). However, only a few had tablets, indicated by only 5 % (5 respondents).

Table 1. Wireless technology for language learning

Wireless technology	Frequency (N=103)	Percentage
Computer/laptops	77	75%
Smartphone	21	20%
Tablets	5	5%

4.2. Impact of Wireless on Language Learning

The analyses on impact of wireless technology were centered on the types of skills that warranted the respondents in using wireless technology. Selected sub-skills were used for the reporting of the results for this study because it was felt that they would better portray the skills consistent with [5]. These impacts were measured using four-point Likert scale ranging from Strongly Agree to Strongly Disagree. The results are presented according to the order of the skills highlighted below in tables 2, 3, and 4.

Table 2. Impact of wireless technology on listening and speaking

Sub-skills	Frequency (N=103)	Percentage
Listen and follow texts		
Agree	101	98%
Disagree	2	2%
Improve participation		
Agree	76	74%
Disagree	27	26%
Prepare for MUET		
Agree	58	56%
Disagree	45	44%

Data from the impact section of the survey (table 2) also suggests that students generally used wireless technology in order to listen and follow texts (98%; 101 respondents) and improve participation (74%; 76 respondents). However, the results did not show significant differences with reference to using wireless technology to prepare for MUET/IELTS/TOEFL revealed by a difference of only 13 counts. The second area used for measuring the impact of wireless technology on language learning were reading and writing sub-skills. The learners reported that wireless technology helped in improving oral (94%; 97 respondents) and written vocabulary (92%; 95 respondents), and responding to content by writing (88%; 91 respondents) in the reading skill. Further, wireless technology was used in assisting punctuation (83%; 86 respondents) and writing fluency (88%; 91 respondents) and organizing one's writing (96%; 99 respondents) in the writing section. Tables 3 and 4 summarize the remaining results.

Table 3. Impact of wireless technology on reading

Sub-skills	Frequency (N=103)	Percentage
Improve oral vocabulary		
Agree	97	94%
Disagree	6	6%
Improve written vocabulary		
Agree	95	92%
Disagree	8	8%
Respond by writing		
Agree	91	88%
Disagree	12	12%

Table 4. Impact of wireless technology on writing

Sub-skills	Frequency (N=103)	Percentage
Improve punctuation		
Agree	86	83%
Disagree	17	17%
Improve writing fluency		
Agree	91	88%
Disagree	12	12%
Organize my writing		
Agree	99	96%
Disagree	4	4%

5. Discussions and Pedagogical Implications

The study has revealed the specifics of wireless technology and impact of these technologies on language learning among undergraduates in two Malaysian universities. Specifically, higher number of students owned computers or laptops, followed by smart phones and tablets. In speaking and listening domains, the learners reported using the technology in their process of listening and following texts and improving participation in conversations, but not in preparation for English language proficiency tests. While in reading and writing, all sub-skills were reported to have been used with such technology in particular to improving oral and written vocabulary, providing greater interaction with content, assisting writing punctuation and fluency, and organizing one's writing.

A number of points are worth discussing here. Firstly, Thang, Mahmud, and Razak [3] and Idrus [4] have found similar findings on the lack of use of wireless technology for the preparation of language proficiency tests. This finding hints at students requiring face-to-face mode of learning, with explicit directions made by faculty members [8, 9, 10, 11]. Another observation revealed by the study hints at the high use of wireless technology in reading and writing sub-skills. This finding is consistent with Chapelle [12], who has found a connection between "language knowledge, communication strategies and topical knowledge" and using technology. Ismail [13] has also stated similar responses in that the learners' writing skills may have improved due to their involvement with weblog's reading reflection. In a way, the respondents most probably participated in online communications, movie or film reviews, in which they had to write thesis statement, topic statements, supporting points, and linking statements. This finding, then, points to the possibility of faculty members to include lessons that present opportunities for learners to take part in online discussions and blogs as out-of class assignments.

An important outcome of this study is with regard to language assessment. From the analysis, the learners may not be familiar with using wireless technology in their preparation for language proficiency tests such as IELTS, MUET, and TOEFL. Though some learners may not anticipate the importance of these tests at present, instructors could create applications that allow extensive access of them through their mobile phones or laptops. Interactive content is important to help learners succeed in these tests. In effect, they could communicate with greater interactivity, and allow for instructors, examination policy makers, and learners themselves the much needed access to monitor, assist, and evaluate students' English language learning processes.

6. Conclusions

More extensive data from other disciplines of study are needed to provide the representativeness of the study and present a comparative analysis among them. It would also be interesting to find the relationship between patterns of access with online materials they have used. In addition, a qualitative study asking students to characterize the extent and manner in which wireless technology in the context of language

learning can be conducted to yield the breadth of the use of wireless technology. These studies will continuously support and provide evidence to the successful implementation of MYICMS 886 and the Tenth Malaysian Plan.

7. References

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