A case study on tablet effectiveness in enhancing open distance learning in Wawasan Open University, Malaysia: research report

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The Tablet - A Learner’s Gadget: A Case Study On Tablet Effectiveness In Enhancing Open Distance Learning In Wawasan Open University, Malaysia

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Content Outline

- Research purpose
- Relevant literature
- Methodology
- Discussion and conclusions
- Significance and recommendations
BACKGROUND TO THE STUDY
Research Purpose

The purpose of the study is to seek answers to the following questions:

i. How did students use the tablet in an open and distance learning environment?

ii. How was the tablet an effective tool for enhancing e-learning?

iii. What tablet features were important for effective open and distance learning?
RELEVANT LITERATURE
Flexible learning, Open distance learning & mobile learning

**Flexible learning**
- offering students choices about when, where and how they learn (Clarke & Svanes, 2014). In this study flexible learning include using technology to provide open distance and mobile learning.

**Open distance learning (ODL)**
- the provision of flexible educational opportunities in terms of access and multiple modes of knowledge acquisition (Ahmad et al., 2010).

**Mobile learning**
- any activity that allows individuals to consume, interact with, or create information, mediated through a compact digital portable device that the individual carries on a regular basis, has reliable connectivity, and fits in a pocket or purse (Wexler et al., 2007).
Framework for the Rational Analysis of Mobile Education (FRAME)

- Model proposed by Koole (2009)
- Facilitate understanding of mobile devices as distance learning tools
- Constitutes three elements/components and their interactions.
  - device usability (D)
  - learner (L) and
  - social aspects (S)
- Hypothetically, the primary intersections, a convergence of all the three aspects, defines an ideal mobile learning situations.
How are the mobile technologies used?

*The tablet has the potential to enhance active learning, promote interaction, improve opportunities for collaboration and support social constructivist learning* (Mckenzie and Franke, 2009)

Mobiles can be ideal for bite-sized learning, that is, learn something better in short frequent bursts than doing a five-hour study spree at the weekend" (Thomas (2013)."
Tablet and its Uses

- note-taking, formative feedback, joint dialogue (Mckenzie and Franke, 2009)
- highlighting text and linking different colors to specific feedback (Loch and Fisher, 2010)
- ideal for bite-sized learning in short frequent bursts (Thomas, 2013)
- virtual field trips (Kravcik et al., 2004)
- recording of the lectures (Kothaneth et al., 2012)
Tablet Use Statistics

March 2012: 31% of United States internet users have a tablet (Moscaritolo, 2012)

May 2013: over 70% of mobile developers were targeting tablets as compared to 93% for smart phones and 18% for hand phones (Developer Economics, 2013)

2015: More than half of all Internet time now occurs on mobile platforms, and 12% is on tablet (Karr, 2015)
Benefits of Tablet Technology

Six in ten college and high school seniors agreed that tablets help students to study more efficiently (66% and 64%) and help students to perform better in classes (64% and 63%).

81% of U.S teachers think tablets can enrich classroom learning, and 86% of students believed that tablets can help them to study more efficiently.

~Wainright (2015)
METHODOLOGY
Methodology

Survey research

Case study of Wawasan Open University
Research participants

The participants were from two programmes offered by the School of Education, Languages and Communications (SELC), Wawasan Open University:

- Bachelor of Arts (Hons) in English Studies (BAES)
- Post-Graduate Diploma in Education (PGDE)

<table>
<thead>
<tr>
<th>Programme</th>
<th>EED205/05</th>
<th>EED308/05</th>
<th>ELL304/05</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>KLRC</td>
<td>10</td>
<td>2</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>PGRC</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>JBRC</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>2</td>
<td>8</td>
<td>20</td>
</tr>
</tbody>
</table>
Research Implementation

1. Selection of tablets
2. Familiarized participants with the tablet
3. Tablet use for learning
4. Data Collection
5. Participants reflected and reported
<table>
<thead>
<tr>
<th>Section</th>
<th>No of Items</th>
<th>Description</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section A</td>
<td>12</td>
<td>Demographic Details</td>
<td>Information regarding course enrolled, gender, centre of enrollment, level of technology use.</td>
</tr>
<tr>
<td>Section B</td>
<td>8</td>
<td>Profile of Tablet use</td>
<td>Information on the frequency of usage, such as, frequency and duration of use, purpose of use, location of use, etc.</td>
</tr>
<tr>
<td>Section C</td>
<td>38</td>
<td>The effectiveness of Tablet as a tool</td>
<td>Students’ perception on the effectiveness of the tablet as a tool for learning, communication and interaction. Use of 5-point Likert scale - strongly disagree (1) to strongly agree (5).</td>
</tr>
<tr>
<td>Section D</td>
<td>3</td>
<td>Views about the Tablet Features</td>
<td>Students’ perception of the tablet features that are important. 5-point rating scale - not important at all (1) to very important (5).</td>
</tr>
<tr>
<td>Section E</td>
<td>3</td>
<td>Written</td>
<td>Students’ written responses on the use of the tablet.</td>
</tr>
</tbody>
</table>
DISCUSSION AND CONCLUSIONS

The Learner’s use of the tablet
Tablet Use in Teaching-Learning situations

- **often**
- **sometimes**
- **rarely**

### Individual Learning
- **Making presentation**: 20%
- **Giving explanation**: 20%

### Pair Work
- **Group Discussions**: 20%
- **Pair Work**: 20%

### Group Discussions
- **Making presentation**: 15%
- **Giving demonstration**: 20%
- **Giving explanation**: 0%

### Making presentation
- **Individual Learning**: 25%
- **Pair Work**: 20%
- **Group Discussions**: 0%
- **Making presentation**: 30%
- **Giving explanation**: 10%
- **Giving demonstration**: 20%
- **Group Discussions**: 5%
- **Pair Work**: 10%

### Giving explanation
- **Individual Learning**: 25%
- **Pair Work**: 20%
- **Group Discussions**: 0%
- **Making presentation**: 30%
- **Giving demonstration**: 20%
- **Giving explanation**: 0%
- **Group Discussions**: 5%
- **Pair Work**: 10%

### Giving demonstration
- **Individual Learning**: 25%
- **Pair Work**: 20%
- **Group Discussions**: 0%
- **Making presentation**: 30%
- **Giving demonstration**: 20%
- **Giving explanation**: 0%
- **Group Discussions**: 5%
- **Pair Work**: 10%

### Pair Work
- **Group Discussions**: 20%
- **Pair Work**: 20%
<table>
<thead>
<tr>
<th>The tablet as a tool for learning</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>enhanced the knowledge and understanding gained from self-study</td>
<td>3.9</td>
</tr>
<tr>
<td>① strongly disagree  ② disagree  ③ neither agree nor disagree  ④ agree  ⑤ strongly agree</td>
<td></td>
</tr>
</tbody>
</table>
Respondent remarks

“the tablet has helped to improve my learning, especially self-learning, by serving as a supportive device to access course-related information other than my own laptop.”
Findings revealed the effectiveness of tablet use in an ODL environment by the individual learner. Less obvious was its effectiveness for learning in groups (Kothaneth et al. 2012; Loch and Fisher, 2010; Mckenzie & Franke, 2009; Weitz & Mirliss., 2006; Schwazer et al., 2005).
The tablet enhances flexible e-learning for the individual
Effectiveness of the tablet: Preparations for course learning

<table>
<thead>
<tr>
<th>Activity</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read course e-learning materials</td>
<td>4.0</td>
</tr>
<tr>
<td>Search the internet for course-related information</td>
<td>4.0</td>
</tr>
<tr>
<td>Access the LMS for all course learning purposes</td>
<td>4.0</td>
</tr>
<tr>
<td>Download and view course-related lecture notes</td>
<td>4.0</td>
</tr>
<tr>
<td>Check emails</td>
<td>4.0</td>
</tr>
<tr>
<td>Download and view course-related Power Point presentations</td>
<td>3.9</td>
</tr>
<tr>
<td>Do research for course assignments</td>
<td>3.8</td>
</tr>
</tbody>
</table>

1. strongly disagree  2. disagree  3. neither agree nor disagree  4. agree  5. strongly agree
1. “it is easier to have the whole subject downloaded in the tablet. I can read it anytime and anywhere without having to carry a bulky book.”

2. “help me to easily highlight the key points so can learn what have to learn. Easily can do my assignment and find the materials need for my course easily

3. “easier to have all my notes in one place”

4. “useful because I can download the reading materials in the tablet and I can read it in offline mode anytime.”
Use of Tablet in Off-line and Online Modes

**Offline Use**
- Never: 10%
- Rarely: 20%
- Sometimes: 15%
- Often: 15%
- Always: 40%

**Online Use**
- Never: 10%
- Rarely: 20%
- Sometimes: 15%
- Often: 15%
- Always: 40%
Respondent remarks

1. "Easily can do my assignment and find the materials need for my course easily”

2. “easy to access an assignment”

3. “often use it to do my assignment as it is very light and I can carry it everywhere”.

4. “the use of the tablet as a tool for assignment preparations”
Effectiveness of the tablet for interaction and communication

<table>
<thead>
<tr>
<th>The tablet as a tool for interaction &amp; communication</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participate in the LMS forum</td>
<td>3.9</td>
</tr>
<tr>
<td>Use social networking tools to collaborate with other course learners (facebook, blogs)</td>
<td>3.7</td>
</tr>
<tr>
<td>enhanced interaction with course members (peers, tutors, course coordinators)</td>
<td>3.1</td>
</tr>
<tr>
<td>Communicate with fellow learners on course matters</td>
<td>3.3</td>
</tr>
<tr>
<td>Communicate with course coordinators</td>
<td>3.2</td>
</tr>
<tr>
<td>Communicate with course tutors</td>
<td>3.2</td>
</tr>
<tr>
<td>enhanced communication with course members (peers, tutors, course coordinators)</td>
<td>3.1</td>
</tr>
</tbody>
</table>

① strongly disagree  ② disagree  ③ neither agree nor disagree  ④ agree  ⑤ strongly agree
The Social Aspects: Pedagogical benefits of tablet use

Learning
- effective as a tool for enhancing the individual learner’s e-learning
- enhanced the knowledge and understanding gained from self-study

Communication
- The use of tablet for course communications generally supports individual learning

Interaction
- The tablet was largely effective for interaction in the LMS forum
The tablet – a learner’s gadget
The important tablet features and characteristics for learning, interaction and communication

<table>
<thead>
<tr>
<th>Important tablet features/characteristics</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wi-fi enabled</td>
<td>4.7</td>
</tr>
<tr>
<td>Portability</td>
<td>4.1</td>
</tr>
<tr>
<td>User friendly</td>
<td>4.0</td>
</tr>
</tbody>
</table>

1. not important at all
2. not so important
3. not sure
4. important
5. very important
Respondent remarks

1. “has provided me a more portable and somewhat laptop replacement option for the past few months. It has improved my learning in a sense where I may carry my notes easily without a burden.”

2. “can read and study the course material at anywhere, anytime”.

3. “I could utilise my time by using while I am on move”

4. “can learn anyplace, anytime” with the tablet.

5. “the tablet’s USB device was convenient for learning”
Respondents’ Tablet Use by Location

- **At home:**
  - Often: 45%
  - Sometimes: 25%
  - Rarely: 15%

- **Regional Center:**
  - Often: 25%
  - Sometimes: 15%
  - Rarely: 20%

- **Work Office:**
  - Often: 10%
  - Sometimes: 25%
  - Rarely: 15%

- **Cafe and Restaurant:**
  - Often: 10%
  - Sometimes: 25%
  - Rarely: 20%

- **Library:**
  - Often: 0%
  - Sometimes: 15%
  - Rarely: 20%

- **Moving vehicles:**
  - Often: 0%
  - Sometimes: 15%
  - Rarely: 10%
The Device usability – a gadget for flexible learning

- usability anytime and anywhere
- Tablet
- portability
- user-friendliness
- wi-fi enabled technology

Flexible · Affordable · Accessible
CONCLUSION
Tablet Effectiveness in Enhancing ODL

FRAME (Koole, 2009) Adapted from FRAME (Koole, 2009)
Significance of study

• Emergent framework of tablet use in an ODL environment adapted from Koole’s (2009) FRAME.

• Pedagogical benefits discussed allow handling of anticipated issues in and facilitate the best practice of tablet use.

• Methodology may be duplicated in bigger scale studies.

• Findings, while not generalizable, may resonate with others in similar situation and context.
Recommendations

• Future studies may include larger samples.
• Study on customized course materials for tablets.
• Future studies to explore individual learning learner strategies using tablet
Thank You!

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