Unravelling the Complexity of Online Learning through Prototype Testing at the University of Botswana

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Introduction

• Background
  – Technological innovation in ODL environments is a complex process.
  – Front-end analysis helps in providing understanding of the learning situation.
  – However, this analysis is not able to predict in precise terms how the innovation will play out as it is enacted.
  – Therefore formative evaluation becomes imperative
• In developmental research endeavours, prototype development and testing helps with getting precise information about the learning ecology

• Goal of this paper:
  – is to show, through a case study, how a small prototyping exercise at UB helped in identifying the intricacies of the learning ecology and issues of a subtle nature.
– UB is primarily a conventional university with a traditional ODL programmes.
– Current thinking is that some UB programmes should be offered online.
– Hence, it was proposed in 2007 that the MPM should also be offered online, mainly for the following reasons:
  • Pilot online learning for distance learners
  • Reach out to more prospective learners
  • Leverage the resources at UB
The case study cont’d
(The Planning process)

• A Planning committee was put in place comprising of multiple stakeholders:
  – Faculty (owning the programme)
  – CCE, DDE,
  – CAD, ETU
  – Library
  – IT
  – Etc

• The intention was to have an all-embracing plan that touches on key issues
The case study cont’d
(Training and Course development)

• Course development-a core process

• Training conducted by CAD and CCE to give a skill set necessary for course development.

• Courses divided into weekly sessions which were organised according to ICARE model (discussed in Dimitrova et al, 2004; Anagnostopoulo, 2002; Iahad et al, 2004; see also Boitshwarelo, 2009)

• Course development started towards late 2008.
  – Progress of course development(very slow) by 2009 only one course fully drafted and uploaded into Blackboard

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The case study cont’d
(Developing the prototype)

• From the draft online course one session was selected for improvement:
  – Resources
  – Interactivity

• Involvement of key players (minimal involvement of course lecturer)
The session was tested with conventional MPM students.

Replaced their F2F session.

Demonstration made for the students:
- Accessing the learning environment
- Navigation
- Tools used
- Accessing resources
- How to do activities
- Feedback

Students to engage with the session for a week.

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The case study cont’d
(Outcomes of the prototyping exercise)

• Development
  – Limited team work
  – Limited communication
  – Time constraints
  – Misunderstanding of roles

• Demonstration
  – Students not set-up
  – Limited time
  – Instant feedback
The case study cont’d
(Outcomes of the prototyping exercise)

• **Test run**
  – Course content and activities
    • Explicit/direct activities done (Application)
  – Access to the environment
    • 40 entries from about 60% (n=26)
    • Accessed from outside (slowness)
    • E-books issue
  – Implementation environment (limited access to facilities and limited support)

• **Evaluation**
  – information from the prototyping exercise used for evaluation;
  – no summative feedback from students)
Discussion and conclusions

• This paper sought to demonstrate how prototyping can unravel some of the complexities of a learning ecology. Key findings:
  – Prototyping indeed exposed the deficiency of the front-end analysis;
  – The analysis phase failed to pick subtle consequential issues/elements related to the learning ecology.
  – These issues are summarised in the table in the next slide
Table 1: Assumptions that guided development against the reality as revealed by the prototyping exercise

<table>
<thead>
<tr>
<th>Parameter</th>
<th>What was already known or assumed during development</th>
<th>What was revealed by the prototyping exercise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online learning environment (access)</td>
<td>Blackboard is available and accessible off-campus</td>
<td>Off-campus access to Blackboard is not as efficient outside campus; when server is down the ODL students are disadvantaged because of the limited time they have for interaction with the learning environment.</td>
</tr>
<tr>
<td>Online learning environment (usability)</td>
<td>Full usability was assumed</td>
<td>Some aspects of the learning environment needed refining to become properly functional e.g. the groups needed to be properly set up.</td>
</tr>
<tr>
<td>Online learning environment (content organisation)</td>
<td>All the ICARE components would receive a fair amount of attention from learners</td>
<td>Learners are extrinsically motivated by activity particularly that which is assessed and contribute to grades hence more activity under Application.</td>
</tr>
<tr>
<td>Implementation environment</td>
<td>Physical and human resources available and fairly adequate</td>
<td>There is no clear procedures/process to harness the available resources for optimal utilisation.</td>
</tr>
<tr>
<td>Learning resources</td>
<td>Electronic library resources available e.g. E-books</td>
<td>The e-resources are not conveniently accessible particularly from outside campus.</td>
</tr>
</tbody>
</table>

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• Thus:
  – Importance of prototyping for purposes of understanding “fitness of purpose” of online learning environments in particular contexts is re-emphasised.
• it is noted that the scope, duration and intensity of this particular prototyping exercise was limited—indicative findings.
• Therefore prototyping should be taken seriously if definite conclusions are to be drawn.
• However, some prototyping is better than no prototyping at all
Thank you

• Comments and questions!!!