BLENDED LEARNING IN ADULT EDUCATION

TOWARDS DESIGN GUIDELINES FOR BLENDED LEARNING ENVIRONMENT THAT SUPPORT SELF-REGULATION

Stijn Van Laer and Jan Elen, KU Leuven
Aim of the project

“Vulnerable learners in blended learning environments.”

How to support learners’ self-regulatory behaviour in these learning environments?

Questions to be answered…

1. What attributes support self-regulation?
2. How are blended learning environments designed?
3. Which behaviour profiles can be identified?
4. How does the design relates to these profiles?
5. Does targeting the attributes changes behaviour?
Research phases

1. Literature review
2. Descriptive framework
3. Learners’ self-regulatory behaviour
   “How are blended learning environments designed based on the self-regulatory supporting attributes?”
4. Selecting focus
5. Design-based redesign
Literature review

• Methodology
  o Systematic literature review (n=95)
  o Inclusion and exclusion criteria (Hart, 2009; Joy, 2007)
  o Twofold (peer-reviewed) and double check (manual versus bibliometric)

• Results
  o authenticity (n=29),
  o personalization (n=24),
  o learner control (n=18),
  o scaffolding (n=24),
  o interaction (n=70),
  o reflection cues (n=19) and calibration cues (n=15)

Descriptive framework

• Methodology
  o Literature review per attribute
  o Observation criteria and unit of analysis (De Wever, Schellens, Valcke, & Van Keer (2006) and Jorgensen (1989))
    • Face-to-Face (Classroom observations (video recording))
    • Online (Moodle learning environment (back-up))
  o Pilot (interrater reliability)
  o Actual description

• Results
  o Capturing the design of blended learning environments based on the 7 attributes. (2 institutions, 6 courses, 140 learners – 1 example will be elaborated upon)
### Results - Attributes supporting self-regulation

#### School 1

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Composite</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authenticity</td>
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<td>Personalisation</td>
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<td>Inertial control</td>
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<tr>
<td>Interfering</td>
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<tr>
<td>Interaction</td>
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<tr>
<td>Reflection</td>
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<tr>
<td>Calibration</td>
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</tbody>
</table>

Score on Likert scale:

- 1: Not at all
- 2: Somewhat
- 3: Mostly
- 4: Usually
- 5: Always

Overall score distribution:

- Authenticity: 3
- Personalisation: 2
- Inertial control: 4
- Interfering: 1
- Interaction: 3
- Reflection: 2
- Calibration: 1
Research phases

1. Literature review
2. Descriptive framework
3. Learners’ self-regulatory behaviour
4. Selecting focus
5. Design-based redesign

“Which learners’ self-regulatory behaviour profiles can be identified in blended learning environments and how do they relate to the design of these environments?”

Learner behaviour

- **Methodology**
  - Trace (log) file analysis (n=120).
  - Cluster analysis:
    - Frequency and diversity
    - Timing and sequence (Gabadinho, Ritschard, Mueller and Studer, 2011)

- **Results**
Results - Learner behaviour

Next step

Higher score for self-regulation => less miss-regulators
Further research

• Investigating these findings through a design-based intervention:
  o Cues for reflection and calibration;
  o Content and self-regulation.

• This to determine if profiles shift when:
  o Cues for reflection and calibration are given;
  o Cues specifically target self-regulation.
Introduction

ICT enabled an increase of online and blended courses (OBL) (Redmond, 2011)

Lack of experience in OBL environments affects teaching (Kelz, 2011)

Teacher professional development needed to prepare teachers to teach online (Stavredes, 2011)

Introduction

No comprehensive overview of important components for TPD for OBL, nor much attention to why they are important

Need for an overview on important components and why they are important
## Methodology

### Meta-aggregation

- Convene findings of separate studies
- Compare findings on similarity in meaning
- Construct different categories
- Compare categories on similarity
- Construct synthesized findings
- Concrete action recommendations

#### Exclusion criteria

<table>
<thead>
<tr>
<th>Exclusion criteria</th>
<th>Number of studies identified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key terms</td>
<td>1377</td>
</tr>
<tr>
<td>Scanning title &amp; abstract</td>
<td>80 (with full text)</td>
</tr>
<tr>
<td>Methodology</td>
<td>29</td>
</tr>
<tr>
<td>Fit for research</td>
<td>15</td>
</tr>
</tbody>
</table>
**Results**

Analysis of 15 articles
6 Different synthesized findings

- Design
- Context
- Goals
- Teachers
- Strategies
- Dissemination Evaluation

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"Our main concern in the methodological design was the need to create activities based on the development of authentic tasks, which are relevant both for the teachers and for the educational vision that the university subscribes to" (Guasch, Alvarez, & Espasa, 2009, p. 204).
2) Acknowledge the existing context

"We recognized that a course contextualized to Swineburne, to Australia, and where, appropriate, to a discipline or profession, would likely be the most well received by staff and would enable immediate application to practice." (Gregory & Salmon, 2013, p. 260).

3) Address teacher change

"This process is not only about trainee's knowledge and skill development but also about their attitude and identity change, a psychological change that has been neglected by many other studies." (Wang, Chen, & Levy, 2010, p. 290).
4) Determine the overall TPD goals

Goals and procedures – Transfer to practice – Link to students

“...there was a great deal of consensus about how success could be measured, particularly in terms of staff being able to apply the skills they have gained through the training.” (Wilson, 2012, p. 898).

5) Acknowledge various TPD strategies

Reflective – Active and Experiential – Peer support – Confidence & Motivation – TPD support & feedback

“Relevance, purpose and value can come [...] from experiencing, first hand, the possibilities and practical real-life applications of e-learning within familiar teaching and learning contexts” (Stein, Shephard, & Harris, 2011, p. 158).
6) Disseminate knowledge, skills & attitudes and evaluate the TPD.

Evaluation

Conclusion

Importance of context and local needs

What makes TPD for OBL different?
→ Great resemblance with more general TPD
→ Strong emphasis on addressing teacher change, due to great changes of educational form
→ Experiencing OBL ‘hands-on’
References


Towards a Methodology for Strengthening the Institutional Culture of Online and Blended Learning Programs

Hilde Van Laer, Koen De Pryck and Chang Zhu, VUB
Aim of the project

“Managing quality and ensuring continuous quality improvement (CQI) of existing and new online and blended learning (OBL) programs at the institutional level.”

⇒ meso level: internal quality assurance (IQA)
⇒ interference with
  ⇒ micro level (program & courses)
  ⇒ macro level (external quality assurance & accreditation)

Internal quality improvement

⇒ Quality management and/or quality culture?

⇒ Quality culture in literature:
  • quality culture is part of an overall organizational culture
  • quality culture cannot be imposed from the outside and is contextual
  • quality culture is related to shared values, beliefs and visions of all committed stakeholders
  • all authors link quality culture to (self)reflection

“The proposal here is to start with an assessment phase, since tackling specific problems and finding solutions for them is more likely to attract people’s attention and stimulate their engagement.”

(FCFEEO, 2015)
Self-assessments with the E-learning Maturity Model (eMM)

• Context = institutions with different levels of adoption & implementation of blended learning

• eMM = a quality improvement framework for institutions to assess their OBL-capability in 35 processes in 5 process areas:
  - Learning: processes that directly impact on pedagogical aspects of OBL
  - Development: processes surrounding the creation and maintenance of e-learning resources
  - Support: processes surrounding the support of students and teaching staff & the operational management
  - Evaluation: processes surrounding the evaluation and quality control of the OBL provision through its entire lifecycle
  - Organization: processes associated with the institutional planning & management

• Each process is divided in 5 dimensions
  - Delivery: How is the process operational?
  - Planning: How is the process planned?
  - Definition: Has the institution defined and documented standards, guidelines, templates and policies?
  - Management: How does the institution manage the process?
  - Optimization: Uses the institution formal approaches to improve the activities of a process?

• Assessment scores from 0 to 4

Adaptation of the e-learning maturity model (eMM) for the context of adult education (AE)

• Two pilots in centers with a different level of OBL adaption

• Assessment methodology
  - preparatory meeting with the management
  - management selects contexts and staff members to be involved
  - assessment of selected processes
  - develop a concrete improvement plan and follow-up procedures
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<table>
<thead>
<tr>
<th>Variables</th>
<th>Context 1</th>
<th>Context 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience with OBL</td>
<td>Institution with more than 10 years of experience organizing OBL</td>
<td>Institution planning to develop 2 programs in OBL</td>
</tr>
<tr>
<td>Amount of OBL</td>
<td>OBL in almost all the programs</td>
<td>OBL in 1 program</td>
</tr>
<tr>
<td>OBL vs OL?</td>
<td>Blended learning: predominant &amp; Online learning programs</td>
<td>Only blended learning programs</td>
</tr>
<tr>
<td>Access eMM</td>
<td>All processes</td>
<td>Only assess eMM on the dimensions planning and definition of processes or selected processes</td>
</tr>
<tr>
<td>Group assessment of selected processes</td>
<td>- Principal</td>
<td>- All teaching staff of the blended learning program - IT and development staff</td>
</tr>
</tbody>
</table>

Adaptation of the e-learning maturity model (eMM) for the context of adult education (AE)

• Preliminary results

• The reflection on the 5 dimensions of eMM can reveal:
  - whether an institution is tending towards ad hoc attempts or
  - is mainly focused on procedures without implementation in daily practice or
  - is capable of implementing processes in a full quality cycle

• & sustains the quality competence building of assessors
Next step

• Further design, tweak and develop and implement the eMM self assessment methodology in the context of OBL in AE to strengthen the enabling factors commitment, negotiation and quality competences of Ehlers’ model of Quality Culture (2009)

• The expected outcome:
  1. a revised model for assessing the quality of OBL in AE
  2. a supporting methodology for implementation

Questions?

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References


DISCUSSION

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Q&A – Course level

• Any experiences with measuring self-regulation in blended learning environments? (aptitude or event?)

• What is important? The integration of the attribute itself or rather the integration of the attribute while focussing on self-regulation?
Q&A – Teacher Professional Development

Participate actively in TPD -> experiencing possibilities. Acknowledge institutional characteristics and context (Wilson, 2012)

¬ Tension between what teachers want to implement and possible barriers inherent to local context (Guskey, 2000)

Addressing prof. identity and beliefs and reflection
Not so much in our study ¬ Though very important (e.g. Korthagen 2004; Meijer et al., 2004)