Creating an Opportunity for Online Students Who Miss the Social Community of In-Person Class Experiences

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Agenda

• Background and Purpose
• Methodology
• Context of Study
• Analysis
• Cycle 1 Changes and Design Propositions
• Cycle 2 Changes and Design Propositions
• Questions
Background and Purpose
Benefits

• Increased flexibility  (Bower et al., 2014)

• Enhanced accessibility  (Bell, Sawaya, & Cain, 2014)

• Multiple perspectives  (Bower et al., 2015; Rogers et al, 2003)
Challenges

• Technology hurdles (Bell et al., 2014; Bower et al., 2015; Park & Bonk, 2007)
• Cognitive overload (Bower et al., 2015; Cunningham, 2014; Popov, 2009)
• Authentic co-presence (Bell et al., 2014; Cunningham, 2014).
• Timing and transition issues (Bell et al., 2014; Popov, 2009)
• Limited research on pedagogical designs
Initial Ideas

- Expansion of “tech navigator” role (Bell et al., 2014)
- Multi-screen projection, individual webcams, mixed groups (Bell et al., 2014; Szeto, 2015)
- Online protocols (McDonald, et al., 2012)
What is a protocol?
Learning from Speakers Protocol

PURPOSE: To structure the presentation experience so learning is maximized.

Presenter(s) speak (25 minutes)

Organizing (5 minutes)
  Participants get into groups and brainstorm questions. Then, prioritize questions into top question(s).

Top Questions (2 minutes)
  A representative from each group submits top questions

Answering (10 minutes)
  Presenter(s) answer questions, building connections

Sharing (Time Permitting)
  Participants share their experience of using the protocol
Purpose & Research Question

How do students’ and instructor’s experiences in the blended synchronous learning environment influence its **technological** and **pedagogical** design propositions?
Methodology
Design-based Research

• “... a systematic but flexible methodology aimed to improve educational practices through iterative analysis, design, development, and implementation...”
  (Wang & Hannafin, 2005, p. 6)

• Used to derive contextualized design principles and theories
Initial Design Propositions

Starting Point

- Reduce instructor overload by having technical support (TAs, tech navigators)
- Create co-presence through mixed groups and visual connections
- Provide scaffolding through protocols

Cycle 1

Cycle 2

?
Context of Study
Two Cycles

**Cycle 1**
- Fully online class
- 17 students
- 3 iterations
- Half volunteered to come to campus

**Cycle 2**
- On-campus class
- 8 students
- 3 iterations
- Iteration 1: Two online
- Iteration 2: Half online
- Iteration 3: Half online
Setting
Analysis
Qualitative Analysis

- **Data collection**: surveys, observations, interviews, and focus groups
- **Data-based design changes**
- **Interpretive**: Assertions, warrants, and disconfirming evidence on small sample then data corpus (Erickson, 1986)
- Assertions → **Design propositions**
Cycle 1 Changes
## Technological Design Changes

<table>
<thead>
<tr>
<th></th>
<th>Iteration 1</th>
<th>Iteration 2</th>
<th>Iteration 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tool</strong></td>
<td>Instructor-hosted whole group and breakout sessions</td>
<td>Instructor-hosted whole group; student-hosted small group</td>
<td>Instructor-hosted whole group; student-hosted small group (only for online students)</td>
</tr>
<tr>
<td><strong>Audio</strong></td>
<td>Headsets for everyone</td>
<td>Headsets for everyone</td>
<td>Headsets only for online students</td>
</tr>
</tbody>
</table>
### Pedagogical Design Changes

<table>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Protocol</strong></td>
<td>Quick go-rounds</td>
<td>Flexible time ranges</td>
<td>Flexible time ranges</td>
</tr>
<tr>
<td><strong>Resources</strong></td>
<td>Emailed tasks</td>
<td>Emailed tasks, resource links, PowerPoint, and facilitator notes</td>
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</tr>
</tbody>
</table>
Cycle 1 Design Propositions
Streamline technology to reduce instructor overload and support pedagogy

**Assertion:** Technology as a limitation

"I was really surprised at how technology almost interrupted it."

-on-campus student, interview
Create co-presence through visual or physical connections

**Assertion:** Seeing is believing

"I think the HoT session definitely felt a little more authentic and closer to an in-person session just by the fact that you’re looking and seeing students in a classroom and you see the teacher there walking around the room."

- online student, interview
Create Flexible Schedule That Builds in Adjustable Time

**Assertion:** Hyperawareness of Time

"I think if you’re under a time limit like two minutes ..., I think it can be tough putting it under time constraints like that to get quality discussions."

- online student, interview
Provide scaffolding through protocols, training, experience, and expectations

**Assertion:** Student control is desirable when perceived outcome is successful

"Honestly, I didn’t really like being the facilitator as I don’t like the responsibility of being the mean person who has to keep track of time."

-on-campus student, interview
Enhanced Design Propositions

Starting Point

- Reduce instructor overload by having technical support (TAs, tech navigators)
- Create co-presence through mixed groups and visual connections
- Provide scaffolding through protocols

Cycle 1

- Streamline technology to reduce instructor overload and support pedagogy
- Create co-presence through visual or physical connections
- Create a flexible agenda with adjustable timeframes
- Provide scaffolding through protocols, training, experience, and expectations

Cycle 2

?
Cycle 2 Changes
## Technological Design Changes

<table>
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<th>Iteration 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tool</strong></td>
<td>WebEx; no breakout groups;</td>
<td>Zoom with breakout groups</td>
<td>Zoom with breakout groups</td>
</tr>
<tr>
<td><strong>Video</strong></td>
<td>Room-installed camera with bird’s eye view</td>
<td>Individual webcams at each station</td>
<td>All students with laptop camera</td>
</tr>
</tbody>
</table>
## Pedagogical Design Changes

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<th>Iteration 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Protocol</strong></td>
<td>Verbal go rounds</td>
<td>Open Discussion</td>
<td>Scaffolded go rounds with clear order</td>
</tr>
<tr>
<td><strong>Groupings</strong></td>
<td>No groups</td>
<td>Intentional groupings</td>
<td>Intentional groupings</td>
</tr>
</tbody>
</table>
Cycle 2 Design Propositions
Find the “right” technology to reduce awkwardness/overload and support pedagogy

**Assertion:** An authentic experience is possible with appropriate technology that mitigates awkwardness of merging environments.

"I mean it was like being there, definitely, it worked fine."

-online student, focus group
Create co-presence through finer-grained visual or physical connections

**Assertion:** Finer grain visual is better for co-presence and an authentic experience.

"It helps that people have their laptops, but we can actually see them now. They don’t look like little tiny elves. You can actually see the people, so it works."

- online student, focus group
Create co-presence through intentional grouping, finer-grained visual or physical connections.

**Assertion:** Relationships created through intentional grouping creates co-presence.

"Knowing each other now made it easier to be able to work with each other online."

-on-campus student, focus group
Provide scaffolding through protocols with guidance for interaction and role playing

**Assertion:** Protocols help support discussion but need additional scaffolding

> Then following the protocol, it was hard to know who was going around, like who, I couldn’t see who was going around so it was hard to know

- online student, focus group
Enhanced Design Propositions

Starting Point

- Reduce instructor overload by having technical support (TAs, tech navigators)
- Create co-presence through mixed groups and visual connections
- Provide scaffolding through protocols

Cycle 1

- Streamline technology to reduce instructor overload and support pedagogy
- Create co-presence through visual or physical connections
- Create a flexible agenda with adjustable timeframes
- Provide scaffolding through protocols, training, experience, and expectations

Cycle 2

- Find the “right” technology to reduce awkwardness/overload and support pedagogy
- Create co-presence through intentional grouping, finer-grained visual or physical connections,
- Create a flexible agenda with adjustable timeframes
- Provide scaffolding through protocols with guidance for interaction and role playing
Questions
Organizing (5 minutes)

Participants get into groups and brainstorm questions. Then, prioritize questions into top question(s).
Top Questions (2 minutes)

A representative from each group submits top questions on index card to presenter.
Answering (10 minutes)

Presenter(s) answer questions, building connections.
Debrief (Time Permitting)

Participants share experiences using this protocol for conference presentations.
Session Evaluation & Drawing

- Download and open OLC Conferences mobile app
- Navigate to specific session to evaluate
- Select “Evaluate Session” on session details screen (located under session type and track)
- Complete session evaluation*

Each session evaluation completed (limited to one per session) = one contest entry

**Five (5) $25 gift cards** will be awarded to five (5) individuals
Must submit evals using the OLC Conferences mobile app or website
References


Popov, O. (2009). Teachers’ and students’ experiences of simultaneous teaching in an international distance and on-campus master’s programme in engineering. The International Review of Research in Open and Distributed Learning, 10(3).
