Synchronous and asynchronous video conferencing tools in an online-course: Supporting a community of inquiry

David Wicks, Seattle Pacific University
Andrew Lumpe, Seattle Pacific University
Janiess Sallee, Valley Christian School
Do you use asynchronous communication tools (i.e. threaded discussion forum, email) in your online course?

You may respond at PollEv.com when the presenter pushes this poll. Text a CODE to 37607.

- Yes: 749200
- No: 749228
- Don't know: 757261

Total Results: 9
Do you use synchronous communication tools (i.e. chat, web conference)

You may respond at PollEv.com when the presenter pushes this poll
Text a CODE to 37607

Yes: 749229 (6)
No: 749230 (4)
Don't know: 758181
Total Results: 10
Introduction

• What benefits/challenges does a/synchronous video present for online instructors and students?

• What role (if any) should synchronous video conferencing tools play in online courses?

• What role can a/synchronous video play in advancing a community of inquiry?
Asynchronous Communication

Advantages

• Convenient
• Flexible
• Grants additional time for reflection and preparation of responses
• Provides record of activity

Drawbacks

• Text-based communication lacks nuances of speech and personality
• Delays in responses can create feelings of disjointedness or isolation

Borup, West, & Graham, 2012
Carr, 2000
De Wever, Schellens, Valcke, & Van Keer, 2006
Garrison, 2011
Meyer, 2004
Song, Singleton, Hill, & Koh, 2004
Synchronous Communication

Advantages

• Bridges perceived distances in space and time
• Learners receive immediate feedback
• Audio and video help capture personality
• Activities can be recorded for later review

Drawbacks

• Lacks some flexibility in that participation requires a specific time commitment
• Doesn’t always accommodate learners needing more time to reflect before responding
• Not all students want to broadcast themselves

Zhao, Lei, Yan, Lai, & Tan, 2005
Prep Time

You may respond at PollEv.com when the presenter pushes this poll

Text a CODE to 37607

Online courses take less prep time than f2f

Online courses take same prep time as f2f

Online courses take more prep time than f2f

It really depends...

Total Results: 12
Facilitation Time

Online courses take less time to facilitate than f2f: 749236
Online courses take same time to facilitate as f2f: 2
Online courses take more time to facilitate than f2f: 749238
It really depends...: 749239

Total Results: 14
Potential Challenges for Educators

• Existing belief: process of preparing for and facilitating an online course is more time consuming

• Need to rethink approach: move from teacher-centered to student-centered approach

• Some students maybe overwhelmed by uses of multiple technologies in the same course

Allen & Seaman, 2013, p. 22
Community of Inquiry

Creating an Educational Experience

Social Presence
- Engagement with Participants
  - Supporting Discourse
- Setting Climate

Cognitive Presence
- Interaction re Goals/Direction
  - Regulating Learning

Teaching Presence
- Interaction re Goals/Direction

Educational Experience

Applications

Communication Medium

Discipline Standards

Educational Context
Methods

• Mixed methods study
• Weekly examination of:
  – Google Hangout transcripts
  – Vialogues time-coded, threaded discussions
  – WordPress blog posts containing student reflections
• Participants
  – 13 grad students
  – Taking online instructional technology course
Model for using synchronous/asynchronous video tools

- **Google Hangout on Air**
  - Real-time web conference
  - Share video with YouTube

- **PollEverywhere**
  - Audience response system
  - Polls used to encourage discussion

- **Vialogues**
  - Asynchronous video discussion
  - Interact with the time-challenged

- **WordPress**
  - Students reflect on learning
  - Shared publicly to encourage quality/interaction
Hangouts on Air
Using PollEverywhere in Hangouts
Please watch, comment, and ask questions about the future of educational technology. This discussion is focused on the 2012 K-12 Horizon Report.

00:00 1:2: That certainly is the benefit to buddy groups!
5 months ago

00:00 3:4: In regards to how discussions take place...it sounds like a difference in personalities. An introverted personality will want add...
5 months ago
More >>

02:18 5:6: so, if I had a student who was house bound for some reason, we could use google hangouts to bring them in? Or students a way of in...
5 months ago
More >>

07:13 7:8: Another hangout option...if you just want to see each other's screen and hear each other, you can use "join.me".
5 months ago

07:30 9:10: Since I lived overseas for several years, Skype was a godsend for communicating with people in the states. However, Google+ seems ...
5 months ago
More >>

09:33 11:12: There seemed to be a fair amount of similarities between the two reports: integrating mobile technology and cloud computing.
Module 5: Harnessing the Creativity of Kindergarten

© MAY 4, 2013  Anonymous  P2, P4  3 COMMENTS

Clear

This weeks’ readings approached the concepts of creativity and “creating” in the education process. Resnick’s (2007) article inspired me to recall my own experiences in kindergarten and how impactful a creative approach was on my learning. It is clear that creating real problems for students to solve through trial and error, collaboration and reflection allows for critical thinking and problem-solving skills to evolve as a natural side effect of playing in a creative way. It is clear from the articles, videos, and reading discussion that we seem to be caught in an awkward place in education right now where our theories point towards a more creative approach, but our policies require stringent assessments and lack of supporting technologies. I want to try to find a way to incorporate the creative approach into my own teaching this year and in the future. I believe that I can use the creative approach and still meet or succeed the same expectations as the assessment-focused classrooms. I know that this would certainly be the harder road to follow in our current climate, but I do believe in the course of a few years I could hope to develop a teaching practice that encompasses Resnick’s “spiraling cycle of Imagine, Create, Play, Share, Reflect, and back to Imagine” (2007, p. 1).

I know that my most intense learning memories resonate with the same stages that Resnick describes and I believe that those stages are certainly viable for the education of students today. Calder and Taylor’s (2010) article gives great example of one way to do this is a classroom that engages students in a range effective learning strategies using the program Scratch. Even my short exploration of creating a project on Scratch awoke a creativity in me that I have.
Semantic Analysis

• A form of text analytics was applied to the student posts from Hangouts, Vialogues, and Blogs
• All text was compiled and inserted into an Excel file
• The Semantria (https://semantria.com) program was used to apply semantic linguistic algorithms
• All text was analyzed for two components:
  – general FACETS which represent meta-themes of the students’ writing
  – Community of Inquiry specific CATEGORIES representing the degree that students wrote about teaching, social, and cognitive aspects
Results
Research Question 1: What did the students talk and write about?

• Semantria Facet Analysis
• Analyzed each student’s blog, Hangout, and Vialogues separately
• Students, learning, technology, and schools were the most common Facets
• The number of Facets in the blogs far exceeded Hangouts and Vialogues (see next question)
Word Cloud – Hangout Facets
Research Question 2: Do the number of themes in students’ writing vary across Hangouts, Vialogues, and Blogs?

- Generate semantic Facets for the three text sources
- Count the number of unique Facets generated
- One-way ANOVA to compare means of themes
- Tukey post-hoc tests
Results

Differences noted in post-hoc tests

• Blog Facets > Hangout Facets (p = .001)
• Blog Facets > Vialogues Facets (p = .001)
Research Question 3: How do the student text data reflect aspects of the Community of Inquiry?

• Set up special queries in Semantria
• Queries included terms related to Community of Inquiry
  – Teaching
  – Social
  – Cognitive
• Means compared via one-way ANOVA
  – No significant differences in CoI related themes found across Hangouts, Vialogues, and Blogs
CoI Teaching Example

“I got some really good feedback on how to improve my WebQuest and just this whole way that you’ve laid this out that we communicate with each other is brought my learning that much further down the road.”

From a Hangouts transcript
Col Social Example

“Even though I haven't been able to actively participate in the hangouts because I work nights, I have really enjoyed this option as an alternative to asynchronous discussion. The asynchronous discussions seem so much more disingenuous to me and, conversely, I actually appreciate being able to experience others' thought processes.”

From a Vialogues entry
Col Cognitive Example

“At this time my understanding of design process involves the planning with story boarding, which would translate into composing activities for performance ensembles. Much more thought needs to be made in this area.”

From a blog entry
Research Question 4: What relationships occur between variables?

• Variables included
  – Number of Hangouts participated in by each student
  – Community of Inquiry (CoI) survey scores
    • Teaching
    • Social
    • Cognitive
  – General semantic Facets in Hangouts, Vialogues, and Blogs
  – CoI related Themes in Hangouts, Vialogues, and Blogs
• Spearman correlations due to small sample sizes
## Correlations

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Discussion

• Students talked (Hangouts) and wrote (Vialogues, WordPress) about the most important themes from the course content.

• The number of meta-themes shared in blog posts (WordPress) was significantly higher than the number shared during synchronous (Hangouts) and asynchronous (Vialogues) video indicating that:
  – Students expanded on themes discussed in synchronous and asynchronous video conferences during personal reflection.
  – Blog reflections did not have a time limit

• Synchronous and asynchronous video serve as scaffolding tools for blogging, promoting reflection.

• Content-focused video and text transcripts plus small sample size may have limited occurrences of CoI elements within the dialogue and writing.
Benefits/Challenges of Synchronous and Asynchronous Video

Benefits

• Reduction of procedural questions by email
• “Absent” students like interacting with video conference recording
• Students appreciate exposure to multiple technologies
• Video promotes “getting to know each other better”

Challenges

• Finding meeting time
• Group size
• Synchronous video requires planning/prompts
• Too many tools for some students/professors
• Camera shy

Allen & Seaman, 2013, p. 22
Student Evaluation

- Google Hangout allowed for personal connection. Vialogues was a convenient and useful method to interact with students if you were not able to attend the Hangout, still felt like I got to know classmates better that participated in the Vialogues even if they weren't getting to know me. Blog buddies: helped create a network of other educators who passed on helpful resources.
Student Evaluation

- It was hard to focus on one component of the class because it seemed like there were too many layers. Between the Google hangout or Vialogues, readings, blogging, responding to blogging, and skills test I felt I couldn't go in depth with any of them.
Limitations

- Self-reported
- Single instructor
- Single course


Study Contact

David Wicks

– dwicks@spu.edu
– @drdavidwicks on Twitter
– http://google.com/+DavidWicks1 on G+