Using Microblogging to facilitate Community of Inquiry: An Australian tertiary experience

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Background

- Students spending less time interacting with each other in class and out of class (anecdotal)
- Could be many factors responsible for this
- One factor is that LMS discussion boards don’t push info out to students …
Microblogging

- … Twitter and similar tools
- More “push” than LMS
- Allows discussion across units, departments and into wider society
- Literature said there is potential for ed use, but some drawbacks
Community of Inquiry

CoI Model

An educational community of inquiry is a group of individuals who collaboratively engage in purposeful critical discourse and reflection to construct personal meaning and confirm mutual understanding.

The Community of Inquiry theoretical framework represents a process of creating a deep and meaningful (collaborative-constructivist) learning experience through the development of three interdependent elements - social, cognitive and teaching presence.

Social presence is "the ability of participants to identify with the community (e.g., course of study), communicate purposefully in a trusting environment, and develop interpersonal relationships by way of projecting their individual personalities." (Garrison, 2009)

Teaching Presence is the design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes (Anderson, Rourke, Garrison, & Archer, 2001).

Cognitive Presence is the extent to which learners are able to construct and confirm meaning through sustained reflection.
Scenario

- 2nd Year Undergrad students – eBusiness unit
- Learning activities in tutorials – had a component that asked students to tweet (encouraged by staff to tweet, but not assessed)
- In-class activities on using hashtags, managing tweets, etc.
- Collaborated with an American instructor whose students were covering similar material
- The curriculum topics around which microblogging was encouraged included privacy, ethics and censorship
Data Set

- list of tweets tagged as being relevant to the curriculum-related discussions over a four-week period
- Four-week period = three week overlap in teaching times + 1 extra week (the discussions continued)
Tweets content-analysed using a coding scheme adopted is adapted from Garrison et al. (2006)

Initial attempt at coding - “message level coding”

- Coder agreement across two coders - 77%
- This was due to several tweets being deemed to fit two categories

- so re-coded for primary and secondary category, coder agreement rose to > 98%

Garrison et al. (2006) say you can do this, but be careful …
## Results – overall numbers

<table>
<thead>
<tr>
<th></th>
<th>Cohort 1 (US)</th>
<th>Cohort 2 (Aus)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Tweets</td>
<td>161</td>
<td>163</td>
</tr>
<tr>
<td>Number of students</td>
<td>20 (of 35)</td>
<td>27 (of 45)</td>
</tr>
<tr>
<td>Participation</td>
<td>57%</td>
<td>60%</td>
</tr>
<tr>
<td>Codes/tweet</td>
<td>1.6</td>
<td>1.55</td>
</tr>
</tbody>
</table>
Results - presence

![Bar chart showing comparison between Cohort 1 and Cohort 2 for Cognitive, Social, and Teaching Presence.]
Results - Frequent Indicators

- Triggering Event (C)
- Exploration (C)
- Group Cohesion (S)
- Facilitating Discourse (T)

Legend:
- Cohort 1
- Cohort 2
- Both Cohorts
Cognitive presence indicated more strongly than Social

  - Context
  - Design of learning activity

- Dunlap & Lowenthal (2009a) focus on social presence, reflect on potential for others
  - Our preliminary findings support their reflection.
Findings - II

- Encouraging level of participation
  - Approx 60%, non-assessed activity
  - Inter-cohort interaction
  - Discussion continued for longer than scheduled
Findings III

- Difference in indicators from two cohorts
  - Generally speaking, pattern across cohorts similar
  - Cohort 1 much higher CTP, Cohort 2 higher CEX
  - For a particular student, the ratio of CEX/CTP is an indicator of how much they are interacting rather than simply broadcasting
Findings IV

Some concerns for us in terms of learning activity design and CoI facilitation:

- Limited teaching presence demonstrated by students

- No occurrence of cognitive presence indicator resolution (CRE):
  - “Resolves an issue, brings a discussion to a close, uses ideas from learning material to settle an argument”
Future work

Limitations
- small
- Short

Engage with other academics through a common framework (to appear)

If you would like your students to participate with ours, please contact me or Suku
Thanks for listening!

Suggestions

Comments

Questions

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Bibliography


 Schroeder, Andreas; Minocha, Shailey and Schneider, Christoph (2010). Social software in higher education: The diversity of applications and their contributions to students’ learning experiences. *Communications of the Association for Information Systems*, 26, Article no. 25.