Fostering Effective Asynchronous Discussions in the Online Classroom: Impact of Formative Feedback

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Fostering Effective Asynchronous Discussions in the Online Classroom:
Impact of Formative Feedback

Ted Cross MA, MSed & B. Jean Mandernach, PhD
“If you are serious about quality, everybody has to know how they are doing.”

~Marchese (1991, pg. 5)
Impact of Discussions

- Promotes preparation
- Increases accountability

- Fosters engagement
- Enhances interest

- Fosters communication skills
- Promotes awareness of discipline-specific language

- Formative learner feedback
- Instructional feedback

Asynchronous Discussions

Students post substantial, meaningful contributions

Interactions frequent enough to produce ongoing discussion
Formative Assessment

- Emphasis on learning
- Monitor progress
- Provide feedback on strengths/weaknesses
Value of Feedback

• **Formative assessments provide:**
  – Insight on students’ strengths and conceptual errors in relation to specific course concepts
  – Guidance to improve student understanding
  – A means of monitoring progress in learning
  – Diagnostic information concerning students’ errors in understanding
  – A non-threatening environment to identify and correct problems in learning and instruction
  – Feedback to the instructor concerning the effectiveness of instructional activities
Factors Driving Interaction

- Time
- Effort
- Learning
- Grades
- Student Interaction
The Challenge

Does providing formative feedback that a discussion post is “substantial”:

- increase discussion via emphasis on learning?
- decrease discussion due to emphasis on grading?
Providing Discussion Feedback

LoudCloud

One Size Does Not Fit All
searching for appropriate research to include in my introduction, it is important to my topic (Grand Canyon University, 2011). If I carefully plan my research, I will be better prepared to design my research methods.

Scientific article. Grand Canyon University, Phoenix, AZ.

Re: To Question or Not Question?

I agree that it takes courage to ask some questions, for me this is especially true. I take about an hour each morning to think on my feelings, my actions, and my intentions. I must have the courage to change. Usually this involves example, I am uncomfortable speaking in front of large crowds. Each time I convince myself that my fear was unreasonable. It takes a little courage and it's easy to get used to feeling nervousness. Soon after I begin I soon lose my nervousness.
Analysis

- **Initial Data Set**
  - 2000+ sections resulting in 96,229 different assigned discussion questions
  - All undergraduate courses

- **Resultant Data Set**
  - Selected only assigned discussions in which there was a minimum of 20 student posts
  - Resultant 27,499 discussion questions

- **Analysis**
  - 2x2 factorial analysis of the difference in the frequency of discussion posts as a function of the integration of formative feedback and the status of the faculty
### Sample: Number of Discussion Questions by Group

<table>
<thead>
<tr>
<th>Number of Discussion Questions by Group</th>
<th>Faculty Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fulltime</td>
</tr>
<tr>
<td><strong>Formative Feedback</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>1754</td>
</tr>
<tr>
<td>No</td>
<td>8187</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>9941</td>
</tr>
</tbody>
</table>
### Results: Mean Posts Per Discussion Question

<table>
<thead>
<tr>
<th>Mean Student Posts per Discussion Question</th>
<th>Faculty Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fulltime</td>
</tr>
<tr>
<td><strong>Formative Feedback</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>49.44</td>
</tr>
<tr>
<td>No</td>
<td>37.09</td>
</tr>
<tr>
<td>Total</td>
<td>39.27</td>
</tr>
</tbody>
</table>
Results: Significant Effects

- **Significant main effects:**
  - Use of formative feedback
  - Faculty status

- **Significant interaction:**
  - Feedback by status
Implications

Active instructor involvement

• Frees instructional time for higher order facilitation and interaction

Group Dynamics of Public Feedback

• Creates a space where students can see the implicit made explicit

Provides guidance and feedback to student

• Creates a system for providing more immediate, consistent feedback on individual discussion contributions
Learning Through Discussions

Higher order thinking strategies:
- Guide evaluation
- Foster synthesis
- Promote analysis
- Encourage application
- Foster comprehension
- Establish knowledge

Lower order thinking strategies:
- Creating
- Evaluating
- Analyzing
- Applying
- Understanding
- Remembering

Bloom, 1956
Anderson & Krathwohl, 2001
Disciplined Discussions

• Faculty role:
  – Maintain a focused discussion
  – Keep discussion intellectually responsible
  – Stimulate discussion by using probing questions that hold students accountable for their thinking
  – Infusing questions in the minds of students
  – Encouraging full participation
  – Periodically summarizing what has or needs to be done

(MacKnight, 2000)
“‘Feedforward’ is possibly a more appropriate term to identify formative feedback since its primary purpose is to provide guidance for improvement.”

~Godbout, 2008
References


• Bloom, B. S. (1956). *Taxonomy of Educational Objectives*. Allyn and Bacon, Boston, MA. Copyright (c) 1984 by Pearson Education.

