Preliminary Findings for “Social Interaction in online learning: A situationalities framework for choosing instructional methods”

These findings are reported in three sections; Case-specific Analysis, Cross-case Analysis, and Situationalities Framework. Please review each section, as the concepts in the second two sections build upon the content of previous sections.

Case-specific Analysis
For each case in this study, I first identified the fundamental values about learning reported by the case author. Then, I identified the instructional methods (that used social interaction in some form) and looked for some discussion of effectiveness. Finally, I determined the instructional conditions that seemed to impact the effectiveness of a particular method.

A brief explanation of each “situationalities” element follows:

- **Value** – What does the educator (teacher or instructional designer) value about learning, or the online learning environment? Examples: peer discussion, collaboration, community
- **Goal** – What is the ultimate purpose for using a particular instructional method? Example: Students will participate in small group discussions.
- **Method** – What instructional method is used by the educator in order to achieve the learning goal? Example: Assign students to a small group (4-6) for weekly topical discussions.
- **Condition** – What characteristics in the learning environment (that the educator does not control) influence the effectiveness of a given instructional method? Example: Students must have daily access to the online discussion.

In almost all cases, there was only one significant value reported that influenced the selection of instructional goals and methods reported in the case. Similarly, most cases reported only one or two major learning goals that relied upon social interaction. Most cases reported several instructional methods that used social interaction. All cases included a discussion of the effectiveness of the instructional methods, since part of the case selection criteria I used was that the case report must include a discussion of the effectiveness of the instructional methods being used. Once I read this discussion, I determined the instructional conditions that seemed to be the most important influences on the effectiveness of the methods. In some cases, the report identified relevant conditions; for other cases, I had to decide which conditions were implied in the effectiveness discussion. In all, I identified 143 specific reports of instructional conditions among the 30 cases. The smallest number of conditions for one case was two, while many cases reported six or more conditions.

*Note:* To view my detailed analysis of the case study you authored, please select the “case analysis” link for your case from the list at [http://php.indiana.edu/~bibeatty/dissert/cases.htm](http://php.indiana.edu/~bibeatty/dissert/cases.htm)
If you are interested in reviewing the raw data from all cases, download the “Case Analysis Data” file from:
http://php.indiana.edu/~bjbeatty/dissert/data.pdf

Cross-case Analysis
The goal of the cross-case analysis I completed was to identify classes, or groups of values, goals, methods, and conditions, and identify which values and goals led to which instructional methods, and which instructional conditions were associated with which instructional methods. In this section of this findings report, I explain the classification scheme I used, and the relative frequency of each class (of values, goals, etc.) found in the case reports (primarily summative data).

Classification Scheme
The classification scheme I used was based on the information I found in the case reports. Therefore, it is a conceptual scheme rather than a theoretical scheme, since I am starting with the data reported in the cases instead of starting with a particular theoretical framework (such as an instructional or learning theory like “discovery learning” or “learner-centered instruction”).

Values Classification
• Collaboration - 11 (of 30) cases reported a fundamental value of collaboration between and among students, instructor(s), and other experts.
• Community - five cases reported a fundamental value of establishing a learning community among the participants in the learning environment.
• Interactive Dialogue - seven cases reported a fundamental value of engaging students in interactive dialogue (including discussion) to facilitate learning.
• Learning Theory - five cases reported a fundamental value that can be described as a particular learning theory, such as “active learning” or “problem-based learning.”
• Support - three cases reported a fundamental value that can be classified as expressing support for students as they learn.
• Virtual Classroom - one case reported a fundamental value of creating a virtual classroom experience, an experience complete with key components of a traditional classroom such as live (streaming) audio, video, presentation slides, and channels for immediate feedback from the students to the instructor.

Goals Classification
• Collaboration - 16 cases included the goal of student collaboration at some level, either student-student, student-instructor, or student-outside expert.
• Discussion - 11 cases included the goal of student discussion, either student-student, student-instructor, or student-outside expert.
• Community - seven cases included the goal of establishing or enhancing a sense of learning community.
• Student Control - four cases included the goal of allowing students to retain some level of control over their own learning process(es).
• Critical Thinking - three cases included the goal of building critical thinking skills in students.
• Miscellaneous – four cases included goal statements that did not fit well with any other classification group, such as “receiving individual help”, “resolving student conflict”, and creating self-sufficient information users.”

Methods Classification

The methods reported in the case studies can be classified at three levels; synchronicity, interactivity, and activity. Within each level, several categories are useful to further classify each method. Each instructional method identified in a case study is assigned a three level classification such as “Asynchronous Instructor-student Discussion.”

• Synchronicity
  o Asynchronous – students must be “willing and able” to post (and reply) to discussions, to engage with their peers in content discussions, to devote the time required to learn new technologies, tools, and content.
  o Synchronous – students must value community if one of the goals is that they commit emotional and psychological energy to establishing interpersonal relationships with their peers in the online “community.”
  o Mixed – students must be able to use the communications technology tools provided in the learning environment. Students must understand the course content well enough in order to provide accurate peer feedback or enter into dialogue with external experts.
  o Other – students should share certain characteristics or experiences if they are expected to work well together in small groups.

• Interactivity
  o Instructor-student (I-S) – the instructor must be willing to turn over some control of student learning if they desire students to choose discussion topics and moderate class discussions.
  o Student-student (S-S) - instructors must be able to use the communications technology tools provided in the learning environment. Instructors must understand the content well enough to create relevant tasks for groups and select interesting topics for class discussion.
  o Group – experienced instructors usually are more successful in facilitating online discussions and coordinating distance courses than new instructors, especially when using new communications technologies.
  o Student-external expert (S-Ext) – instructors must have the time available to participate in discussions while they may be assessing student learning, learning and teaching new technologies, managing other work responsibilities and taking care of a family.
  o Other – instructors must be collocated with students if desire to take part in face-to-face activities.

• Activity
  o Discussion – participants discuss course-related topics
  o File Exchange – participants share or exchange files
  o Collaboration – participants collaborate to complete instructional tasks
Review and Feedback – participants review each other’s work and provide comments and critique in feedback
Virtual Classroom – participants engage in instructional activity in a virtual classroom setting
Personal Communication – participants communicate one-one in “closed” communication
Social – participants interact with a non-content focus
Technical Support – participants offer or receive technical advice and guidance
Other

Conditions Classification

The conditions reported in the case studies can be classified into several areas of focus; student, instructor, technology, resources, and content. Within each focus area, detailed categories such as motivation, values, and time are useful to further classify each condition. Each condition identified in a case study is classified according to its area of focus and then the detailed category.

- Student
  - Motivation – students must be “willing and able” to post (and reply) to discussions, to engage with their peers in content discussions, to devote the time required to learn new technologies, tools, and content.
  - Values - students must value community if one of the goals is that they commit emotional and psychological energy to establishing interpersonal relationships with their peers in the online “community.”
  - Skills and abilities (technical and content) – students must be able to use the communications technology tools provided in the learning environment. Students must understand the course content well enough in order to provide accurate peer feedback or enter into dialogue with external experts.
  - Background – students should share certain characteristics or experiences if they are expected to work well together in small groups.
  - Time – students must have the time available in order to participate in the discussion while they may be learning new content, learning new technologies, working fulltime and taking care of a family.
  - Location – students must be collocated if they are expected to meet via videoconference or take part in other face-to-face activities.
  - Synchronicity – students must be able to coordinate the times they are online with their peers if they are expected to use synchronous technologies, or if they need to participate in a discussion on a regular (daily) basis.

- Instructor
  - Values – the instructor must be willing to turn over some control of student learning if they desire students to choose discussion topics and moderate class discussions.
  - Skills and abilities (technical and content/pedagogical) - instructors must be able to use the communications technology tools provided in the
In a learning environment, instructors must understand the content well enough to create relevant tasks for groups and select interesting topics for class discussion.

- **Background** – experienced instructors usually are more successful in facilitating online discussions and coordinating distance courses than new instructors, especially when using new communications technologies.
- **Time** – instructors must have the time available to participate in discussions while they may be assessing student learning, learning and teaching new technologies, managing other work responsibilities, and taking care of a family.
- **Location** – instructors must be collocated with students if they desire to take part in face-to-face activities.
- **Synchronicity** – instructors must be able to coordinate the times they are online with their students if they want to use synchronous technologies, or if they need to participate in an asynchronous discussion on a regular (daily) basis.

- **Technology**
  - **Access** – all participants in the learning environment must have reliable access to the technologies (software, hardware, and network connections) need for communication and collaboration.
  - **Features** – the technology must support the functions required by the instructional situation, such as providing separate discussion and file sharing spaces for the various small groups in a class.
  - **Support** – reliable technical support must be available to the participants when they need it, in a form (e.g., email, website, phone, etc.) they can use.

- **External Resources**
  - **Access** – external resources, both technical and human, must be available, affordable, and reliable.

- **Other (usually content)**
  - **Characteristics** – the content must lend itself to meaningful group tasks and interesting discussion topics.

**Situationalities Framework**

The primary goal of this study is to use descriptive case study research to create a useful framework of “situationalities” for the use of social interaction in online learning environments. Figure 1 below is a tabular arrangement of the findings of this research.

**Using the framework**

In order to identify effective instructional methods and important conditions to consider when choosing a particular method, first identify the values and corresponding learning goals that must be met. Next, consider the instructional methods that have been used to meet these learning goals. *(Note: In this initial framework, this is limited to methods used in the 30 cases in this study.)* In the final column you will find important types of conditions that must be met in order for the associated instructional method to be effective.
One final note: If you are interested in exploring these relationships further, you can find tables that connect the different elements of the situationalities framework at the study website, in the “Situationalities Framework” section.
http://php.indiana.edu/~bjbeatty/dissert/sit_frame/tables.htm
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<thead>
<tr>
<th>Value</th>
<th>Learning Goal</th>
<th>Primary Instructional Methods</th>
<th>Related Instructional Conditions</th>
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**Figure 1. Situationalities Framework (Summative DRAFT)**