Chapter XXXVI
Constructivist Online Learning Environment Survey

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BACKGROUND

Understanding the psychosocial classroom environment has been important in both traditional face-to-face courses and online education. Trickett and Moos (1974) pioneered the use of postcourse self-report instruments to measure the classroom environment through the classroom environment scale. More recently, Taylor and Maor (2000) developed the Constructivist Online Learning Environment Survey (COLLES) to examine the students' perceptions of the online learning environment in light of social constructivist pedagogical principles.

The 24-item, Likert-type COLLES instrument is a popular measure for examining online learning environments for a least two reasons. First, it measures the online learning environment along constructivist categories, which makes it in line with the dominant pedagogical philosophy for online instruction. Second, the COLLES instrument is freely included in the survey module of Moodle, the most popular open source course management system available. This makes it particularly convenient for online instructors to use COLLES in their teaching and research.

COLLES assesses the learning environment using six scales:

- **Relevance:** How relevant is online learning to students' professional practices?
- **Reflection:** Does online learning stimulate students' critical reflective thinking?
- **Interactivity:** To what extent do students engage online in rich educative dialogue?
- **Tutor Support:** How well do tutors enable students to participate in online learning?
- **Peer Support:** Is sensitive and encouraging support provided online by fellow students?
- **Interpretation:** Do students and tutors make good sense of each other's online communications? (http://surveylearning.moodle.com/colles/)

Each of these scales is represented by four items. In filling out the form, an individual indicates the relative frequency (ranging from almost never to almost always) that different activities occur in the online course.

An individuals' score on the COLLES is determined by summing responses across all six

scales (24 items). In addition, six scale scores can be calculated (4 items each). Thus, an overall constructivist learning environment score and a separate score for relevance, reflection, interactivity, tutor (instructor) support, peer support, and interpretation.

The COLLES instrument is self-report and takes about 10-15 minutes to complete. There are preferred and actual forms of the instrument available. According to the authors:

Which form of the COLLES to administer depends largely on timing and purpose. Typically, we administer the preferred form early in the teaching semester, after allowing a couple of weeks to pass while students become familiar with our online learning requirements. Then, in the final week of semester, we administer the combined form (preferred and actual) (http://surveylearning.moodle.com/colles/).

COMMENTARY

The COLLES is a significant instrument to support online learning within a constructivist pedagogical framework. The constructs that it measures are useful for the teacher and researcher alike. Furthermore, the simplicity of the instrument, the availability of both preferred and actual versions, and the ease of access make the COLLES an extremely attractive instrument for online learning research. The lack of detailed validity and reliability testing bundled with the instrument itself is disconcerting, although perhaps explained by the relative newness of the instrument and the extensive validation of similar learning environment instruments. Nevertheless, the popularity and accessibility of the COLLES warrants additional research into this instrument to support its continued usage in academic research and practice.

COST

The COLLES is free to take and use online.

LOCATION

The preferred and actual forms of the COLLES are available online at

http://surveylearning.moodle.com/colles/

The COLLES is also bundled with the Moodle course management system, available at: http://www.moodle.org

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