
How Interactive are YOUR Distance Courses? A Rubric for Assessing Interaction in Distance Learning

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Introduction

Like many other programs which offer courses via distance technologies, the State University of West Georgia's teacher education program has found that one factor that plays a primary role in determining course quality is students' perceptions of the degree of interaction. The research literature supports this observation (Fulford & Zhang, 1993; Klesius, Homan, & Thompson, 1997; Zhang & Fulford, 1994; Smith, 1996; Zirkin & Sumler, 1995). In fact, in their annotated bibliography on this topic, Zirkin and Sumler found that interaction seemed to have an impact on student achievement, as well as satisfaction: "The weight of evidence from the research reviewed was that increased student involvement by immediate interaction resulted in increased learning as reflected by test performance, grades, and student satisfaction" (p. 101).

However, we also note great variation in what faculty and students view as "interactive qualities." In order to clarify the role of this important factor and encourage faculty to make their distance courses more interactive, the authors have designed a rubric for faculty to use to determine the degree of interactivity in their own distance learning courses. This rubric is based on information obtained from a review and analysis of a considerable body of literature and research on this topic.

Defining Interaction

As a first step toward identifying desirable qualities and activities to enhance course interaction, we reviewed definitions of the terms used in the research literature. We found some consensus and some areas of disagreement in definitions and use of terms.

Gilbert and Moore (1998) note that an accepted definition of interactivity in the literature on computer-mediated instruction is a reciprocal exchange between the technology and the learner, a process which he says is referred to as "feedback." Gilbert and Moore use the terms "interaction" and "interactivity" interchangeably. However, Wagner (1994, 1997) draws a sharp distinction between them. Like Gilbert and Moore, she says that "interaction" is an interplay and exchange in which individuals and groups influence each other. Thus, interaction is when there are "reciprocal events requiring two objects and two actions (p. 20). On the other hand, she says "interactivity" seems to have emerged from "descriptions of technological capability for establishing connections from point-to-point ... in realtime" (p. 20). Thus, interaction focuses on people's behaviors, while interactivity focuses on characteristics of the technology systems.

Even if one accepts this distinction, it is evident that these qualities are linked and that both are necessary to achieve the qualities students find so desirable. Also, it is clear that there is a relationship between these two qualities in distance courses. Technologies that allow high interactivity seem necessary to allow high person-to-person, person-to-group, and person-to-system interaction.

Can Distance Learning Offer Enough Interaction?

Some studies reveal deep doubts among students and faculty that distance learning ever can have the degree of interaction in a non-distance environment. For example, a study by Smith (1996, May) found that about 30% of the nearly 400 respondents to a survey about distance learning options would never choose DL because they felt that it could never provide the qualities they desire in a face-to-face course. However, studies such as one by Miller and Webster (1997, December) have found no significant difference in assessments of interaction between students in a synchronous (face-to-face) and asynchronous courses. Horn (1994) and Hirumi and Bermudez (1996) are among those who find that, with proper instructional design, distance courses actually can be more interactive than traditional ones, providing more personal and timely feedback to meet students' needs than is possible in large, face-to-face courses.

How Can an Evaluation Rubric Promote Interactive Qualities?

Malone, Malm, Loren, Nay, Oliver, Saunders, and Thompson, (1997, October) point out that both students and faculty have additional responsibilities in a distance environment. Faculty must alter both course design and teaching strategies to take advantage of technologies and assure maximum interaction. But they say that students must assume more responsibility for their learning taking the initiative for requesting clarification and feedback to make up for the immediacy offered by face-to-face formats. Malone et al., cite the need for well-researched criteria to help faculty know what they are aiming for when they evaluate the effectiveness of their distance courses.

Interaction Dimensions in Distance Learning Courses

The rubric shown below in Figure 1 has four separate dimensions that contribute to a course's level of interaction and interactivity.

Rubric for Assessing Interactive Qualities of Distance Learning Courses

(Roblyer and Ekhaml, 2000)

RUBRIC DIRECTIONS: The rubric shown below has four (4) separate elements that contribute to a course's level of interaction and interactivity. For each of these four elements, circle a description below it that applies best to your course. After reviewing all elements and circling the appropriate level, add up the points to determine the course's level of interactive qualities (e.g., low, moderate, or high)

Low interactive qualities	1 - 7 points
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Moderate interactive qualities	8 -14 points
High interactive qualities	15-20 points

Scale (see points below)	Element #1 Social Rapport-building Activities Created by the Instructor	Element #2 Instructional Designs for Learning Created by the Instructor	Element #3 Levels of Interactivity of Technology Resources	Element #4 Impact of Interactivity on Quality of Learning and Reflection
Few interactive qualities (1 point)	The instructor does not encourage students to get to know one another on a personal basis. No activities require social interaction, or are limited to brief introductions at the beginning of the course.	Instructional activities do not require two-way interaction between instructor and students; they call for one-way delivery of information (e. g., instructor lectures, text delivery).	Fax, web, or other technology resource allows one-way (instructor to student) delivery of information (text and/or graphics).	By the end of course, all students in the class are interacting with instructor and students <i>only</i> required.
Minimum interactive qualities (2 points each)	In addition to brief introductions, the instructor provides for one other exchange of personal information among students, e.g., written bio of personal background and experiences.	Instructional activities require students to communicate with the instructor on an individual basis only (e. g., asking/responding to instructor questions).	E-mail, listserv, bulletin board or other technology resource allows two-way, asynchronous exchanges of information (text and/or graphics).	By the end of course, between 25% of students in the class are interacting with instructor and students on a voluntary basis other than what is required).
Moderate interactive qualities (3 points each)	In addition to providing for exchanges of personal information among students, the instructor provides at least one other in-class activity designed to increase social rapport among students.	In addition to the requiring students to communicate with the instructor, instructional activities require students to work with one another (e. g., in pairs or small groups) and share results within their pairs/groups.	In addition to technologies used for two-way asynchronous exchanges of text information, chatroom or other technology allows synchronous exchanges of written information.	By the end of course, between 50% of students in the class are interacting with instructor and students on a voluntary basis other than what is required).

<p>Above average interactive qualities</p> <p>(4 points each)</p>	<p>In addition to providing for exchanges of personal information among students, the instructor provides several other in-class activities designed to increase social rapport among students.</p>	<p>In addition to the requiring students to communicate with the instructor, instructional activities require students to work with one another (e. g., in pairs or small groups) and share results with one another and the rest of the class.</p>	<p>In addition to technologies used for two-way, asynchronous exchanges of text information, additional technologies (e. g., teleconferencing) allow one-way visual and two-way voice communications between instructor and students.</p>	<p>By the end of course, between 75% of students in the class are interacting with the instructor and students on a voluntary basis other than what is required).</p>
<p>High level of interactive qualities</p> <p>(5 points each)</p>	<p>In addition to providing for exchanges of personal information among students, the instructor provides a variety of in-class and outside-class activities designed to increase social rapport among students.</p>	<p>In addition to the requiring students to communicate with the instructor, instructional activities require students to work with one another (e. g., in pairs or small groups) and outside experts and share results with one another and the rest of the class.</p>	<p>In addition to technologies to allow two-way exchanges of text information, visual technologies such as two-way video or videoconferencing technologies allow synchronous voice & visual communications between instructor and students and among students.</p>	<p>By the end of course, over 75% of students in the class are initiating interaction with the instructor and students on a voluntary basis other than what is required).</p>
<p>Total for each:</p>	<p>_____ pts.</p>	<p>_____ pts.</p>	<p>_____ pts.</p>	<p>_____</p>
<p>Total overall:</p>	<p>_____ pts.</p>			

Variable #1: Social Goals of Interaction

However, Gilbert and Moore (1998) and Wolcott (1996) note another equally important purpose: establishing rapport and collaboration among class members and between class members and instructor. Thus, interaction can support both social and instructional aims. Gilbert and Moore (1998) agree with this duality of purpose, noting that social rapport and increased collaboration can lead to greater levels of interaction that address instructional goals.

Variable #2: Instructional Goals of Interaction

Our analysis of the distance learning literature indicates that interaction serves two important - but different - functions in learning environments. One purpose is to encourage reflection and discussion on course topics and concepts. Much of the literature in this area focuses on instructional designs to increase this kind of participation and feedback.

Variable #3: Types and Uses of Technologies

Many authors describe the various technologies that can be used to encourage and facilitate interaction. Desktop videoconferencing (Edmonds, 1996, July) and web-based resources (Hughes and Hewson, 1998) currently are among the most popular. However, equally important to the technologies are the techniques, designs, and methods used to take full advantage of these powerful, evolving resources (Kimeldorf, 1995; Roblyer & Ekhaml, 1999).

Variable #4: Impact of Interactivity-Changes in Learner Behaviors

The last dimension involved in assessing interactive qualities of courses seems the one most often neglected: the impact on learners. McHenry and Bozik (1997) point out that students respond to effectively (or ineffectively) designed distance courses with observable behaviors. This dimension evidences itself most often in an increased or decreased willingness to use the various technology resources (e. g., chat features, microphones), to collaborate with other students, to take responsibility for requesting needed information from the instructor, and to participate in class activities.

Development and Uses of the Rubric

The rubric presented in this paper is the result of an analysis of the literature on the four dimensions described here. The rubric currently will be tested in the author's own distance courses and will be revised based on students' feedback and used in several more courses during 2000-2001. The authors view this instrument as one of an array of tools that can help improve the quality of distance courses and help make them more responsive to student needs for social and professional development skills and attitudes.

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