

# READING BETWEEN THE LINES OF ONLINE COURSE EVALUATIONS: IDENTIFIABLE ACTIONS THAT IMPROVE STUDENT PERCEPTIONS OF TEACHING EFFECTIVENESS AND COURSE VALUE

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## ABSTRACT

Students continue to demand and enroll in online courses, but are not always satisfied with their experiences. The purpose of this study was to determine if students' responses to evaluations for online courses could be used to identify faculty actions that could lead to improved evaluation scores in teaching effectiveness and overall course value. Controversy continues to exist over the validity of student evaluations to measure faculty effectiveness and overall course quality. Faculty do not always utilize the collected data for the improvement of teaching. Results indicate that stimulation of learning had the most effect on perceptions of teaching effectiveness and useful and relevant assignments had the highest correlation to overall course value.

## KEYWORDS

online learning, faculty, student satisfaction, distance education, faculty behaviors, faculty interactions, course evaluations

## I. INTRODUCTION

Student demands for distance learning courses, specifically those delivered online continue to grow. A 2008 study conducted of distance learning in community colleges by the Instructional Technology Council (ITC) found that:

The rate of growth for distance education (an 11 percent increase for 2006-2007) far outpaced the growth rate for traditional enrollments. Seventy percent of the respondents reported that student demand exceeds current class offerings. [1, p. 9]

The National Center for Education Statistics supported the findings of the ITC, reporting that there were 12.2 million enrollments in distance education courses in the 2006-2007 academic year at 2- and 4-year institutions, with 77% of those in online courses [2].

College and universities are utilizing distance learning technologies to increase access to their courses and degree offerings, to better serve the needs of their students, as well as to increase their revenues in a downed economy and decreasing state funding. The strategic move to increase the number of distance courses offered leads to the expectation that more college and university faculty will be expected to teach online.

The quality of online courses continues to be debated extensively in the literature, with little consensus on how to measure it, as well as how to assess teaching effectiveness of faculty teaching these courses. One traditional instrument of assessment that has historically been utilized to assess students' perceptions of teaching effectiveness and overall course value is the student course evaluation. Course evaluations

appear to be the most accepted method of assessment for teaching competencies of faculty at most colleges and universities [3]. The results of these assessments are oftentimes utilized for promotion and tenure decisions, merit pay increases, as well as future employment decisions [3, 4].

## II. RELATED LITERATURE

There are opposing views of the usefulness of student course evaluations to assess teaching effectiveness. Opponents of the usefulness of student evaluations cite that college students cannot be expected to understand nor appreciate the significance of what they are undergoing in a course until later in their careers as their perspectives mature [5] and students' lack knowledge of the aspects of teaching [6]. Proponents of course evaluations support that students are a good source to provide feedback on teaching [3], as they are the receivers of the course experience. Knowing the importance of these assessments to the careers of college and university faculty, this study seeks to determine if the data collected through student evaluations of online courses can be used to identify actions that can be taken by faculty to improve students' perceptions of teaching effectiveness and overall course value.

The literature is rich in studies that address faculty behaviors that lead to perceived student satisfaction in both the traditional and online environments. Much of this research is grounded in the work of Chickering and Gamson's [7] *Seven Principles of Effective Teaching*. Student satisfaction within the online classroom is directly affected by quantity and quality of interactions between the assigned faculty member and the enrolled online students [8, 9, 10, 11]. A study conducted by Arbaugh [12] of 25 online sections in a graduate program, found that "immediacy behaviors" of professors correlated with student satisfaction in the online environment, more so than student satisfaction with an instructor's mastery of technology [13].

Shea et al. [10] discovered that the expression of clear expectations and timely feedback also directly impacted student satisfaction. As noted above, increased clarity of expression and timeliness of feedback resulted in increased online student satisfaction. Additional factors, which the researchers identified as positively affecting satisfaction among online students, were low levels of technical difficulties and high quality feedback on assignments.

A study conducted by Young analyzed students' views of effective online teaching. Seven core items were identified: "adapting to student needs, using meaningful examples, motivating students to do their best, facilitating the course effectively, delivering a valuable course, communicating effectively, and showing concern for student learning" [14, p. 65].

Northrup [15] assessed the needs of online students and found that those who could regulate their own learning and received timely responses from instructors were more satisfied with the online course experience. Tricker, Rangecroft, Long, and Gilroy [16] evaluated a variety of distance education courses and found that students were attracted to online courses because of their flexibility. Though flexibility was the initial attraction, students still expected a high quality course, with assignments and course materials that were professionally meaningful. In addition, they wanted high-quality feedback and good communication from their instructors.

Young's [14] study also identified students' perceptions of ineffective and effective online faculty. Students' perceptions of ineffective online faculty were those that were not involved in class discussions, who did not communicate often and effectively with students, and who did not provide students prompt feedback on their work.

A study conducted by Spangle, Hodne, and Schierling [17] examined more than 1,200 student evaluations of online courses along with surveys of the instructors and found that effective online faculty:

- Have good written communication skills;
- Have carefully designed course activities that promote discussion;
- Provide timely feedback;
- Are flexible with students, adapting to their various needs;
- Demand high-quality work; and

- Create an atmosphere that encourages students to collaborate and interact with their classmates, their instructor, and course materials.

### III. THE STUDY

The purpose of this study was to determine if students' responses to evaluations for online courses could be used to identify faculty actions that could lead to improved scores in teaching effectiveness and overall course value. Controversy continues to exist over the validity of student evaluations to measure faculty effectiveness and overall course quality [4, 5]. Typical student evaluations are based on Likert scales and generally result in an overall average based on multiple categories of information. Student course evaluation data are not often used for overall quality improvement of teaching, and oftentimes are provided to faculty who perhaps do not utilize the information as possible predictors of how to improve their teaching effectiveness. Generally, course evaluations are "seen as an end in themselves and their numbers used, without any other analysis of interpretation, to make important personnel decisions," [3, p. 56] such as for promotion and tenure, as well as merit increases for faculty [4]. Two research questions guided this study:

1. What faculty behaviors in online courses lead to higher perceptions of student satisfaction of overall instructor effectiveness?
2. How do faculty actions in online courses affect student perceptions of the overall value of the online course?

#### A. Research Design

The data analyzed for this study were all student course evaluations for fully online courses from one large, research university located in the southwestern region of the United States. The university has a current student enrollment of over 30,000. In 2010, the university had 3,890 students enrolled in online courses (more than 50% of the course being delivered online), with 356 courses offered. The data set for this study was online course evaluations collected between spring 2007 to fall 2009. There were a total of 2,826 records. The evaluations were for both undergraduate and graduate-level courses. The online course evaluation instrument was a university-designed assessment that contained 23-questions (see Table 1) and is different than the evaluation used for on-campus courses. Ten of the questions addressed instructor actions leading to perceptions of teaching effectiveness, ten addressed overall course value, and the remaining questions related to college and university technical support, student advising, and registration procedures.

Question	Measures
Overall the instructor(s) was (were) effective.	Teaching Effectiveness
The instructor(s) was (were) available for consultation in a timely manner.	Teaching Effectiveness
The instructor(s) stimulated student learning.	Teaching Effectiveness
The instructor(s) treated me fairly.	Teaching Effectiveness
The instructor(s) treated me with respect.	Teaching Effectiveness
The instructor(s) welcomed and encouraged questions and comments.	Teaching Effectiveness
The instructor(s) presented the information clearly.	Teaching Effectiveness
The instructor(s) emphasized the major points and concepts.	Teaching Effectiveness
The instructor(s) went beyond presenting the information in the text.	Teaching Effectiveness
The instructor(s) demonstrated knowledge of the subject.	Teaching Effectiveness
Overall this course was a valuable learning experience.	Course Value
The assignments were relevant and useful.	Course Value

Course materials were relevant and useful.	Course Value
Expectations were clearly stated either verbally or in the syllabus.	Course Value
The testing and evaluation procedures were fair.	Course Value
The workload was appropriate for the hours of credit.	Course Value
The textbook or other purchased materials were relevant and useful.	Course Value
The technology for delivering the instruction was appropriate for the course.	Course Value
Information was available to help me solve technical problems before they caused delays in my course	Course Value
Documentation for accessing electronically-delivered class lectures and/or material was effective.	Course Value
Registration procedures for the course ran smoothly.	Institution Procedures
Advising was available and adequate.	Institution Procedures
Course materials were readily accessible.	Institution Procedures

**Table 1. Online Course Evaluation Questions**

To determine teaching effectiveness and course value, questions on teaching effectiveness and overall course value were analyzed to address the two research questions. Cronbach's alphas for the nine teaching effectiveness and nine overall course value items were .96 and .95, respectively. Descriptive statistics, Pearson correlation coefficients, and multiple linear regressions were used to analyze faculty actions that affected students' perceptions of teaching effectiveness and overall course value based on the results of the online course evaluations.

### 1. Data Collection and Tools

Descriptive statistical analysis, conducted using PASW 18.0, were used to provide a breakdown of the overall course evaluation means for the two questions driving this study: 1) Overall the instructor was effective, and 2) Overall the course was a valuable learning experience (see Table 2). These means were evaluated on a 5-point Likert scale with 1 = strongly disagree and 5 = strongly agree.

Question	N	Strongly			Strongly	
		Disagree	Disagree	Neutral	Agree	Agree
Instructor Effectiveness	2,826	79 (2.8%)	160 (5.7%)	278 (9.8%)	1,044 (36.9%)	1,265 (44.8%)
Overall course was valuable	2,826	120 (4.2%)	159 (5.6%)	267 (9.4%)	979 (34.6%)	1,302 (46.1%)

**Table 2. Overall Course Evaluations for Instructor Effectiveness and Course Value**

The student course evaluations indicated high satisfaction overall with teaching effectiveness (81.7%) and the online course being valuable (80.7%), with students agreeing or strongly agreeing. To further dissect the evaluation data to determine what factors could be used to identify higher student perceptions of teaching effectiveness and overall course value, correlations and multiple linear regressions were conducted on multiple independent variables.

### 2. Analysis and Findings

#### a. Teaching Effectiveness

Analysis using the Pearson's correlation coefficient indicated that there were positive correlations between teaching effectiveness and nine independent predictor variables. The highest correlations were

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with stimulation of student learning ( $r = .850$ ), information presented clearly ( $r = .806$ ), major points and concepts were emphasized ( $r = .786$ ), information was presented beyond the textbook ( $r = .769$ ), and assignments were relevant and useful ( $r = .748$ ). Initial correlation analysis indicated that there was less than a 1% chance ( $p < .01$ ) that the relationships occurred by chance (please see Table 3 for further breakdowns of correlations).

Independent Variable	Correlation Coefficient	Sig. (1-tailed)	N
Stimulated Student Learning	.850	.000	2,826
Presented Information Clearly	.806	.000	2,826
Emphasized Major Points & Concepts	.786	.000	2,826
Went Beyond Presenting Info in Text	.769	.000	2,826
Demonstrated knowledge of Subject	.735	.000	2,826
Available in a Timely Manner	.723	.000	2,826
Welcomed & Encouraged Questions	.722	.000	2,826
Treated Students Fairly	.705	.000	2,826
Treated Students Respectfully	.691	.000	2,826

**Table 3. Correlation Analysis of Faculty Actions and Dependent Variable “Teaching Effectiveness”**

Based upon the close relationships identified between multiple independent variables and the dependent variable, further study using multiple regression analysis was necessary to identify the amount of variance in the dependent variable, teaching effectiveness, which could be attributed to each independent variable. Using the Forward method for multiple regression analysis, independent variables were entered into the equation and assessed for significance by the program as identified in Tables 4 and 5. The predictors were entered into the equation at a .05 level of significance, and removed from the equation if the significance fell below .10. Missing cases were pairwise deleted.

The multiple R indicated a high positive correlation between eight of the predictor variables and the dependent variable ( $R = .898$ ). The R Square value for Model 5 ( $r^2 = .806$ ) revealed that approximately 80% of the variance in the dependent variable, teaching effectiveness, could be explained by eight independent variables.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
8	.898	.806	.805	.442

**Table 4. Multiple Regression Analysis Summary - Predictors: (constant = teaching effectiveness), stimulated learning, presented information clearly, emphasized major points, demonstrated knowledge, was available, treated students fairly, welcomed and encouraged questions, went beyond textbook**

The degree of influence of each predictor variable on teaching effectiveness was identified by the Beta value. Instructor stimulation of learning accounted for .38 of the defined variance ( $B = .378$ ), and information presented clearly ( $B = .212$ ) accounted for .23 of the variance. The instructor being available ( $B = .103$ ) explained .11 of the identified variance, while instructor treated students fairly ( $B = .109$ ) accounted for .09 of the variance of student perceptions of teaching effectiveness. Table 5 provides a breakdown of the variances of perceptions of teaching effectiveness for all eight predictor variables. The independent variable, treated students with respect, was excluded by the PASW statistical program during

the Forward method analysis as being non-significant, accounting for less than 1 percent of the variance associated with perceptions of teaching effectiveness.

Predictor Variable	Unstandardized		Standardized		Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta	t	
Stimulated Learning	.378	.016	.383	22.973	.000
Presented Info Clearly	.212	.015	.229	14.017	.000
Was Available	.103	.013	.107	7.988	.000
Treated Students Fairly	.109	.017	.085	6.364	.000
Demonstrated knowledge	.100	.016	.088	6.155	.000
Emphasized Major Points	.057	.018	.055	3.155	.002
Went Beyond Textbook	.032	.015	.035	2.168	.030
Welcomed Questions	.034	.016	.031	2.150	.032

**Table 5. Degrees of Influence of Predictor Variables of Faculty Actions on Dependent Variable “Teaching Effectiveness”**

**b. Overall Course Value**

Analysis using the Pearson's correlation coefficient indicated that there were high positive correlations between perceived overall course value and assignment usefulness and relevancy ( $r = .808$ ) and course materials' usefulness and relevancy ( $r = .787$ ). Moderate correlations existed between overall course value and fair testing and evaluation procedures ( $r = .665$ ), and usefulness and relevancy of purchased materials ( $r = .652$ ). Initial correlation analysis indicated that there was less than a 1% chance ( $p < .01$ ) that the relationships occurred by chance (please see Table 6 for further breakdowns of correlations).

Independent Variable	Correlation		n
	Coefficient	Sig. (1-tailed)	
Assignments Useful/Relevant	.808	.000	2,826
Course Materials Useful/Relevant	.787	.000	2,826
Testing/Evaluation Fair	.665	.000	2,826
Purchased Materials Useful/Relevant	.652	.000	2,826
Documentation for Course Navigation was Effective	.616	.000	2,826
Information was Available for Technical Issues	.609	.000	2,826
Expectations Clearly Stated	.605	.000	2,826
Technology Used was Appropriate	.597	.000	2,826
Workload was Appropriate	.596	.000	2,826

**Table 6. Correlation Analysis of Course Procedures/Content and Dependent Variable “Overall Course Value”**

Based upon the close relationships identified between multiple independent variables and the dependent variable, further analysis using multiple linear regression was necessary to identify the amount of variance in the dependent variable, overall course value, which could be attributed to each independent variable. Using the Forward method for multiple regression analysis, the independent variables were

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entered into the equation and assessed for significance by the program. The predictor variables were entered into the equation at a .05 level of significance, and removed from the equation if the significance fell below .10. Missing cases were pairwise deleted. The independent variables workload was appropriate for hours of credit and documentation for navigating the online course was effective, were excluded by the PASW statistical program during the Forward method analysis as being non-significant, accounting for less than 1 percent of the variance associated with perceptions of overall course value.

The multiple R indicated a high positive correlation between seven of the predictor variables and the dependent variable ( $R = .848$ ). The R Square value for Model 7 ( $r^2 = .719$ ) revealed that approximately 72% of the variance in the dependent variable, overall course value, could be explained by the seven independent variables (see Table 7).

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
7	.848	.719	.718	.568

**Table 7. Multiple Regression Analysis Summary - Predictors: (constant = overall course value) assignments were relevant/useful, course materials were relevant/useful, testing and evaluation were fair, information was available to solve technical issues, expectations were clear, technology used was appropriate, and purchased materials were relevant/useful**

The degree of influence of each predictor variable was identified by the Beta value. Assignments being relevant and useful accounted for .43 of the defined variance in the perception of course value ( $B = .434$ ). The relevance and usefulness of course materials ( $B = .307$ ) accounted for .38 of the variance. These two variables had the greatest influence on students' perception of overall course value. Table 8 provides a breakdown of the variances of perceptions of students of overall course value based on the independent variables. The independent variables, usefulness and relevancy of documentation for course navigation and workload appropriate for the hours of credit, were excluded by the PASW statistical program during the Forward method analysis as being non-significant, accounting for less than 1 percent of the variance associated with perceptions of overall course value.

Predictor Variable	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
Assignments Useful/Relevant	.434	.020	.406	21.781	.000
Course Materials Relevant/ Useful	.307	.023	.273	13.489	.000
Testing/Eval Procedures Fair	.093	.018	.083	5.211	.000
Information was Available to Solve Technical Issues	.070	.017	.066	4.223	.000
Expectations were Clear	.065	.016	.059	4.041	.000
Used Appropriate Technology	.041	.018	.035	2.307	.000
Purchased Materials Relevant/ Useful	.039	.017	.036	2.284	.009

**Table 8. Degrees of Influence of Predictor Variables of Course Structure on Dependent Variable “Overall Course Value”**

## IV. DISCUSSION

The purpose of this study was to determine if the data collected in student evaluations of online courses could be used to identify faculty actions that impacted students' perceptions of teaching effectiveness and overall course value. The results of the study indicate that data collected through student course evaluations for online courses can possibly provide useful information for faculty and higher education administrators to identify actions that can be taken to improve overall student satisfaction. As the literature extensively discusses, colleges and universities rely predominantly on student course evaluations to assess teaching competency. Though there is some support for students' abilities to gauge teaching effectiveness, there is equivalent support that students do not have a sufficient understanding of teaching to do so. In addition, there is debate that course evaluations are neither reliable nor valid and truly do not measure student learning, which is a better predictor of teaching effectiveness. Regardless of what one perceives of these assessment instruments, colleges and universities utilize them in their faculty tenure and promotion decisions, as well as merit pay increases. In addition, faculty seeking new positions are often asked to reproduce their student evaluations in their application packages to support their teaching effectiveness. Due to this extensive reliance on these assessments to measure teaching competence and future merit and promotion decisions, it is important for faculty to consider utilizing the information collected to improve their online courses to maximize their student evaluation scores.

The results of the study identified specific faculty actions within online courses that appear to lead to higher levels of student perceptions of teaching effectiveness. The action that had the greatest impact was that faculty stimulated learning. Students in online courses want high quality and rigorous courses that are well developed and organized, and that provide them with engaging learning experiences. Students expect their online instructors to develop and deliver challenging and worthwhile courses that offer alternatives to the traditional classroom, but not at the risk of losing high-quality learning experiences. Students also appreciate faculty that make a strong effort to facilitate a thoughtful course that is organized and carefully structured. Simply stated, students want online faculty that are engaged in the course. This supports the findings of the prior research on student perceptions of effective online teaching [10, 14, 16, 17].

The variable that had the second greatest impact was faculty presented information clearly. This entails their written communications, as well as the organization and development of their online courses. If students are not able to easily navigate their courses, they may feel lost and overwhelmed. It is important that all communications from faculty are well articulated and organized. The need for clear expectations and timely feedback impact student satisfaction [10]. Also important to the perceptions of teaching effectiveness are faculty availability, and how they support and treat students. It is important for faculty to understand that the online environment is daunting and isolated for many students. If students do not receive supportive and timely communications from faculty when they are having problems within the course, they can become dissatisfied, which could result in them withdrawing from their courses.

The perceptions of overall online course value can be improved by ensuring that assignments and course materials chosen are relevant and useful. This supports findings by Young that identified that students found faculty effective when they utilized "meaningful examples" and delivered "a valuable course" [14, p. 65]. Faculty must select course materials and design and develop their assignments to ensure that they contribute to the mastery of the learning outcomes of the course. Students want to know that what they are being required to do will increase their skills and knowledge. Some faculty perceive that additional readings and assignments are necessary to ensure online courses are rigorous. The results of this study and prior research indicate that the careful selection of relevant and useful assignments lead to higher levels of student satisfaction in online courses.

The results of this study have identified factors that can be addressed in online courses to help improve student perceptions of teaching effectiveness and overall course value. The limitations to this study are that the course evaluation instrument utilized for analysis is specific to one large, research university. There is not a generalized course evaluation instrument utilized by all colleges and universities, so readers will need to assess the generalizability of these findings for their purposes. Also, the results of this study

are not presented to determine a cause-and-effect relationship through its findings. Further research should utilize qualitative methodologies to further evaluate students' needs in online courses and what they value as important to their experiences.

## V. ABOUT THE AUTHOR

**Stephanie J. Jones** is an assistant professor of higher education at Texas Tech University in Lubbock, Texas. Dr. Jones' research focuses are distance education, women in academe, and community colleges.

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