Factors affecting professor facilitator and course evaluations in an online graduate program

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Along with the rapid growth in Internet-based instruction there have been concerns about the quality of online instruction and whether traditional student evaluations of faculty are suitable in online environments. This study uses data collected from ongoing student evaluations of faculty in an MBA program within an online university to investigate the factors leading to student ratings of overall professor facilitator performance and overall satisfaction with the course. Using factor analysis we investigated the underlying factors related to the items on the survey which revealed factors relating to personal attributes of the professor facilitator, learning facilitation and quality of feedback. Results from regression analysis finds that evaluations of overall professor facilitator performance is predominantly driven by both the professor's attributes and learning facilitation while overall student satisfaction is largely driven by factors associated with learning facilitation.

Keywords: student evaluation of faculty, student satisfaction, professor facilitator performance

Introduction

This paper investigates the factors contributing to student ratings of professor facilitator performance in online environments and the factors contributing to overall student satisfaction with the course. Internet-based methods of instruction have been growing rapidly in popularity and have become an important method of instruction across many universities. At the same time, there have been ongoing concerns relating to the quality of online instruction and the overall student learning experience. The most common method of assessing the quality of teaching and the course has been the student evaluation of faculty which has long been considered one of the most important sources of data on faculty teaching effectiveness (e.g. Marsh & Dunkin, 1997).

Few studies though have investigated the factors related to overall student ratings of faculty and satisfaction of the course itself in online environments. In traditional learning environments a positive relationship has been found between student evaluations of faculty and student learning (i.e. Cohen, 1981; Feldman, 1989). Student learning in online environments has been suggested to be enhanced through the use of student centred learning approaches (Bangert, 2006). Researchers have suggested that superior learning experiences in online environments can be achieved through constructivist learning models for the design and delivery of Internet-based courses (e.g. Bonk & Cunningham, 1998). The constructivist model of learning is premised on the notion that learners actively construct their own meaning and knowledge from their experiences (Svinicki, 1999). Partlow and Gibbs (2003) suggest that important aspects of constructivist online teaching practices include active learning, authentic instructional tasks, collaboration among students and diverse and multiple learning formats.

Given the importance of student evaluation of faculty it is important to understand the factors associated with higher faculty ratings and overall student satisfaction of the course. In this paper we investigate the relationship between a student survey constructed of items related to a constructivist pedagogy and the students overall evaluation of the faculty and the course. In doing so, we make a contribution to our understanding of the factors leading to enhanced student evaluations of faculty and the student overall course satisfaction.

Literature review

Internet-based instruction has been growing in popularity over the past few years with strong growth in students undertaking courses in online environments (Young & Norgard, 2006). Along with this growth in demand for online education is the recognised need for ensuring quality programs and ensuring that

student learning outcomes have been met. Assessments of learning outcomes and quality have traditionally been assessed through student evaluation of faculty and student evaluations of the subject which are considered by many as being the single most valid source of data on teaching effectiveness (Kelly, Ponton, & Rovai, 2007). On a broader scale, other surveys such as the Course Experience Questionnaire (CEQ) gathers data on a students' perception of their course and includes 25 items to collect data on factors related to good teaching, clarity of goals and standards, workload appropriateness, assessment and generic skills.

It has also been recognised that traditional student evaluation of faculty instruments might not be as useful in the online environment with traditional survey instruments lacking items that specifically address the learner-centred practices identified as relevant to an online teaching environment (Bangert, 2006). Abrami, d'Apollonia and Cohen (1990) suggest that student's evaluations are dependent on context, while Relan & Gillani (1997) suggest that assessments and positive outcomes in online learning are dependent on different conditions to those found in the traditional classroom. Bangert (2006) proposes that the constructivist nature of online learning suggests that items related to these issues should be included in any instrument developed to measure online teaching effectiveness.

While no single criteria of effectiveness is considered sufficient to validate student evaluations of faculty (Kulik, 2001; Marsh & Dunkin, 1997), several factors have been identified as important in the students overall evaluations. The most widely accepted of these has been student learning, with previous studies finding moderate correlations between student evaluations of faculty performance and student learning as indicated by examination scores (Kelly et al., 2007). In general, greater learning outcomes were associated with higher student evaluation of faculty scores.

Many researchers believe student evaluations of faculty to be multidimensional requiring several items to be linked to specific dimensions that students consider to be important to teaching (e.g. Marsh & Dunkin, 1997). Bangert (2006) developed the Student Evaluation of Teaching Effectiveness (SEOTE) to evaluate teaching effectiveness in online learning. This study yielded four factors related to teaching effectiveness which were student faculty interaction, active learning, time on task and cooperation among students. The instrument used in the study was based on Chickering and Gamson's (1987) Seven Principles of Effective Teaching which suggests that student success is related to instruction that encourages student-faculty contact, cooperation amongst students, active learning, prompt feedback, time on task, high expectations and respect for diverse talents and ways of learning Students overall satisfaction with the course has been found to be associated with a number of factors consistent with teaching effectiveness. Kim, Liu and Bonk (2005) found students satisfaction with the course was positively related to factors which included students feeling they had learned a lot, their sense of community in the class, their engagement in learning, the use of a range of learning techniques their academic confidence and prompt feedback from the instructor. Similarly, Kelly et al. (2007) found that students' evaluation of the course was related to factors related to instructor attributes, course content and organisation as well as factors related to grading and assessment.

Method

The data was collected from MBA students who enrolled in sections of an online graduate program in 2007. The students are mainly working professionals who are enrolled on a part time basis, and typical courses within the MBA program include marketing, management, statistics, finance, operations management, information systems, etc. The survey was made compulsory as part of the students' end of course evaluation, and their final grades were made available for viewing only after successful completion of the survey. As a result, the response rate was near 100 percent, with a total of 4,589 respondents. The sample consisted of 81.23 percent males, with an average age 38 years, which is consistent with the actual profile of MBA students studying at the graduate school.

The survey was derived from the literature on constructivist learning theory and teaching effectiveness. The instrument was further refined via a focus group session consisting of faculty members with significant experience in teaching in an online environment. All the variables used in this study were assessed using five-point Likert scales. The final survey consists of 21 items across three broad categories: Personal Attributes (5 items), Learner Facilitation (9 items), and Quality of Feedback (5 items). In addition, two outcome variables were included: overall performance of the professor and overall satisfaction in the subject (Refer to Appendix 1).

Results

Reliability and validity of measures

The items constituting the three constructs were subjected to confirmatory factor analysis (CFA) using LISREL 8.3 (Joreskog & Sorbom, 1993) to verify unidimensionality. This process resulted in χ^2 = 4158.052, d*f* = 149, p < 0.001, and GFI of .913, CFI .992, NFI .991, and RMSEA .077, which is deemed acceptable.

To establish reliability of the measures, Cronbach's alpha reliability was calculated. As shown in Table 1, all the standardised loadings and their associated t-values for the multi-item scales are significant, demonstrating adequate convergent validity. To assess discriminant validity, a chi-square difference test was conducted on all pairs of scales. In all cases, the baseline model produced a better fit, and the chi-square difference was statistically significant, thereby providing evidence of discriminant validity (Bagozzi & Phillips, 1982).

Table 1: Evidence for reliability and unidimensionality of measures

Construct	Number of items	Cronbach's alpha	Range of Loadings in CFA	Range of *t*-values in CFA
Personal Attributes (PA)	5	.923	.87 - .92	73.69 – 81.58
Learner Facilitation (LF)	9	.934	.83 - .90	67.02 – 79.24
Quality of Feedback (QF)	5	.913	.84 - .93	70.33 – 82.48

Regression results

The intercorrelations between the constructs can be seen in Table 2. The largest correlation between independent variables with overall performance and overall satisfaction were observed for learning facilitation. This suggestion was subsequently established by the multiple regression analysis results for overall satisfaction. As expected, the correlation between overall performance and overall satisfaction was significant.

Table 2: Correlations of constructs

Construct	1	2	3	4	5
PA	1.00				
LF	.832**	1.00			
QF	.807**	.872**	1.00		
OPERF	.784**	.798**	.778**	1.00	
OSAT	.448**	.468**	.453**	.475**	1.00

** Correlation is significant at the .01 level (2-tailed)

To ascertain the best predictor of overall performance and satisfaction, multiple regression analysis was conducted. As seen in Table 3, the best predictor of overall performance is personal attributes, followed by learning facilitation, while the best predictor of overall satisfaction is learning facilitation, followed by personal attributes. In both cases, quality of feedback emerged as the weakest predictor.

Table 3: Regression analyses

	DV: Overall Performance		DV: Overall Satisfaction	
	Beta value	*t*-value	Beta value	*t*-value
PA	.330	21.449***	.156	6.369***
LF	.320	17.192***	.218	7.365***
QF	.233	13.312***	.138	4.946***

***p<.001

Discussion[a1]

Our findings reinforced the studies conducted by Kim, Liu and Bonk (2005) and Kelly et al. (2007), which found positive relationships between student satisfaction and professor attributes, learning facilitation, and quality of feedback. In terms of achieving excellent overall performance, online

facilitators should focus on improving their personal attributes by demonstrating knowledge in the field. In addition, they should be enthusiastic, helpful, fair and unbiased, and well organised. To improve students' overall satisfaction level in the subject, online facilitators should proactively add value to the subject matter by directing students to relevant readings or websites, encourage students to think critically, encourage students to interact with others using various learning tools such as the team discussion boards or other instant messaging tools, and give clear instructions for assignments and other activities by setting the right expectation at the start of the class. Moreover, facilitators should also show genuine concern for student progress and needs by working closely with student care and tech support. When called upon, facilitators should be able to explain difficult topics and concepts in easily understood ways. This can be achieved via the use of a range of learning methods to improve student understanding. Finally, facilitators should strive to create an environment conducive to online learning.

With the significant predictors uncovered, online facilitators can focus on the more important predictors, taking into consideration their expertise and resources. It is also possible that the greatest success will result from an improvement strategy that concentrates solely on one effective trait, rather than one in which the online facilitator improves marginally on all the traits.

Conclusions

In summary, the present study has identified several effective traits which online facilitators should focus on, in order to increase their overall teaching performance as well as their students' overall satisfaction with the subject. Personal attributes, learning facilitation and quality of feedback contribute to both overall performance and satisfaction. Consequently, online institutions should recognise the importance of these effective traits, and plan to incorporate these in their online training and development program.

References

Abrami, P. C., d'Appollonia, S., & Cohen, P. A. (1990). Validity of Student Ratings of Instruction: What We Know and What We Do Not. *Journal of Educational Psychology, 82*(2), 219-231.

Bagozzi, R. P., & Phillips, L. W. (1982). Representing and Testing Organizational Theories: A Holistic Construal *Administrative Science Quarterly, 27*(3), 459-489.

Bangert, A. W. (2006). The Development of an Instrument for Assessing Online Teaching Effectiveness. *Journal of Educational Computing Research, 35*(3), 227-243.

Bonk, C. J., & Cunningham, D. J. (Eds.). (1998). *Searching for learner-centered, constructivist, and sociocultural components of collaborative educational learning tools*. Mahwah, NJ: Erlbaum.

Chickering, A. W., & Gamson, Z. F. (1987). Seven principles for good practice in undergraduate education. *AAHE Bulletin, 39*(7), 3-7.

Cohen, P. A. (1981). Student ratings of instruction and student achievement: A meta-analysis of multisection validity studies. *Review of Educational Research, 51*, 281-309.

Feldman, K. A. (1989). The association between student ratings of specific instructional dimensions and student achievement: Refining and extending the synthesis of data from multisection validity studies. *Research in Higher Education, 30*, 583-645.

Joreskog, K. G., & Sorbom, D. (1993). *Lisrel 8: Structural Equation Modeling with the SIMPLIS Command Language* Lawrence Erlbaum Associates Inc.

Kelly, H. F., Ponton, M. K., & Rovai, A. P. (2007). A comparison of student evaluations of teaching between online and face-to-face courses. *Internet and Higher Education, 10*, 89-101.

Kim, K., Liu, S., & Bonk, C. J. (2005). Online MBA students' perceptions of online learning: Benefits, challenges, and suggestions. *Internet and Higher Education, 8*, 335-344.

Kulik, J. A. (Ed.). (2001). *Student ratings: Validity, utility, and controversy*. San Francisco: Jossey-Bass.

Marsh, H. W., & Dunkin, M. J. (Eds.). (1997). *Students' evaluations of university teaching: A multidimensional perspective*. New York: Agathon Press.

Partlow, K. M., & Gibbs, W. J. (2003). Indicators of constructivist principles in Internet based courses. *Journal of Computing in Higher Education, 14*(2), 68-97.

Relan, A., & Gillani, B. B. (Eds.). (1997). *Internet-based instruction and the traditional classroom: Similarities and differences*. Englewood Cliffs, N.J.: Educational Technology Publications.

Svinicki, M. D. (1999). New directions in learning and motivation. *New Directions for Teaching and Learning, 80*, 5-27.

Young, A., & Norgard, C. (2006). Assessing the Quality of Online Courses from the Students' Perspective. *Internet and Higher Education, 9*, 107-115.

Appendix 1: Survey items

	Item	Question
Personal Attributes	PA1	The professor was knowledgeable in his/her field.
	PA2	The professor was enthusiastic.
	PA3	The professor was helpful.
	PA4	The professor was fair and unbiased.
	PA5	The professor was well organised.
Learning Facilitation	LF1	The professor added value to the subject matter, increasing my interest.
	LF2	The professor encouraged students to think critically.
	LF3	The professor encouraged students to interact with others using various learning tools (eg. discussion boards, instant messenger, team assignments).
	LF4	The professor gave clear instructions for assignments and other activities.
	LF5	The professor made clear what I needed to do to be successful in this subject.
	LF6	The professor showed genuine concern for student progress and needs.
	LF7	When called upon, the professor explained difficult topics and concepts in easily understood ways.
	LF8	The professor created an environment conducive to learning.
	LF9	The professor used a range of methods to improve student understanding.
Quality of Feedback	QF1	The professor was receptive to students' views and feedback.
	QF2	The professor provided feedback which was helpful and constructive.
	QF3	The professor gave advice that met the individual needs of the students.
	QF4	The professor responded to queries quickly and efficiently.
	QF5	The professor suggested specific ways in which students might improve their academic performance.
Overall Rating	OPERF	Overall, how would you rate the performance of the professor in this subject? (1 = poor, 5 = excellent)
	OSAT	Overall, how would you rate your satisfaction level in this subject? (1 = poor, 5 = excellent)

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Please cite as: Wong, A. & Fitzsimmons, J. (2008). Factors affecting professor facilitator and course evaluations in an online graduate program. In *Hello! Where are you in the landscape of educational technology? Proceedings ascilite Melbourne 2008*.
http://www.ascilite.org.au/conferences/melbourne08/procs/wong.pdf