

Key Factors Affecting Participant Satisfaction of Course Facilitators in a Large-Scale Online Professional Development Context

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ABSTRACT

This study investigated the effects of key facilitator factors on participants' satisfaction of their facilitators in large-scale online professional development courses. The study attempted to predict an overall facilitator performance by three selected key factors (content knowledge, communication skills, and approachability). Subjects of this study were school district participants who took the Florida Online Reading Professional Development course in the spring of 2006 and completed the end-of-course survey (n=1,229). The study found that the three selected facilitator factors were able to predict participants' satisfaction of their facilitator significantly. Moreover, the composite variable (communication skills and approachability) accounted for much more variance of participants' satisfaction of online facilitators than content knowledge.

The internet and technology are advancing so fast that they have become an integral part of reshaping the ways people live and learn in the information age. In today's training and education, they play an important role in designing, developing, and delivering online courses. With added benefits, online learning has been widely used for a variety of professional development programs since the advent of advanced technology and the internet. "Online learning allows for flexibility of access, from anywhere and usually at anytime - essentially, it allows participants to collapse time and space" (Anderson, 2004, chap. 1, para. 3).

Generally, online courses are delivered in three ways such as web enhanced, mixed mode, and fully online (CDWS, 2006) via a course management system (e.g. Moodle, WebCT). Fully online courses are equipped with most web (or online) components as the primary learning and interaction means. In fully online courses, participants read the content and communicate with instructors (or facilitators) and peers through electronic bulletin boards, virtual chat rooms, and email systems in addition to conventional communication means. Online learning demands much from online facilitators in terms of time, knowledge, support, and monitoring. The online facilitator is a key element of participant success in online learning.

Roles of Online Facilitators

Facilitators play an important role in keeping participants engaged and motivated in an online course. They do not just upload reading materials into a course and step back from the learning process (Easton, 2003). The roles of facilitators in online courses are not very different in nature from the roles of an instructor delivering a conventional type face-to-face course. However, there are still differences in their roles due to the differences in delivery modes (McPerson & Nunes, 2004).

Berge (1995) classified the roles of online facilitators into four categories: pedagogical, social, managerial (organizational), and technical roles. Online facilitators have to find effective ways to: (a) facilitate participants' intellectual activities; (b) create a comfortable and friendly learning environment to stimulate participant learning; (c) create a well-organized course; (d) adhere to scheduling requirements, and (e) provide technical assistance and guidance to participants that will help them become comfortable with online learning tools and learning online. The roles online facilitators play and also the extent to which they provide effective online facilitation contribute to participant satisfaction of the online course.

Facilitator Factors Affecting Participant Satisfaction

Past studies found that student satisfaction of course facilitators was a key factor in predicting student satisfaction of online courses (Finaly-Neumann, 1994; Williams & Ceci, 1997). Bolliger (2004) found that facilitator factors such as communication skills, promptness, encouragement, approachability, and content knowledge were significantly related to student satisfaction of online courses. Arbaugh (2001) and Thurmond, Wambach, and Conners (2002) also found significance regarding communication skills and promptness. In addition, timely feedback was found to be a key indicator of support to the success of online learning (Northrup, 2002).

In an online course, face-to-face communication is minimal or zero due to the nature of the course structure and the delivery medium. In most online courses, written communication is dominant, but spoken communication is minimal due to technology constraints. Obviously the demand for spoken communication in face-to-face classroom has been switched to the demand

for written communication in online environment. The frequent interaction with participants is a necessity and a successful online facilitator should feel comfortable with communicating in writing.

The facilitator factors are integral components of shaping and increasing facilitators' teaching presence. Teaching presence is defined as "the design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes" (Anderson, Rourke, Garrison, & Archer, 2001, section V, para. 1). Building teaching presence takes into account maintaining an effective online community and helping participants construct knowledge through continuous communication and motivation (Anderson, 2004). By increasing teaching presence online facilitators can ensure that participants are satisfied with them and also with the online course experience. On the other hand, we do not know how these factors contributed to overall participant satisfaction of an online facilitator and how each of these factors contributed differently to the overall facilitator performance.

The Florida Online Reading Professional Development (FOR-PD) Project

FOR-PD is Florida's first large-scale statewide online professional development project funded by the Florida Department of Education. The project was designed to enable teachers to keep abreast with emerging standards, current scientifically-based research, best instructional practices, and the ever-changing literacy needs of an increasingly diverse population of preK-12 students. The project is housed and was developed at the University of Central Florida. Since 2003, FOR-PD has provided services to over 31, 000 preK-12 educators across the state and services to all (67) Florida's school districts, seven state universities, and six community colleges in Florida. FOR-PD participants include preK-12 teachers, administrators, exceptional educators, speech and language pathologists, school psychologists, school counselors, literacy experts, literacy coaches, foreign language educators, and others.

The free 14-week online FOR-PD course is facilitated by reading specialists and other well-qualified educators (who are selected through an application process and are trained to facilitate online via a 7-week online course). The seven week training course is designed to prepare facilitators with the basic skills necessary to facilitate online (i.e., the basics of online staff development, facilitator's role, online facilitation best practices, learning in the WebCT environment, and other practical information about facilitating online). In addition, FOR-PD offers a professional development course related to teaching presence for facilitators and continues developing more lessons for the facilitator professional development.

PURPOSE OF THE STUDY

This study investigated key factors affecting school district participants' satisfaction of their facilitators in FOR-PD courses. Specifically, the study attempted to predict an overall facilitator performance by the key factors identified through the selected literature review. Two research questions were formulated to help guide the present study.

- How well did the three selected factors (content knowledge, communication skills, and approachability) predict the overall rating of course facilitators? How much variance in the overall rating of course facilitators could be explained by the selected factors?

- Which was the best predictor of the overall rating of course facilitators?

Participant satisfaction of overall facilitator performance was defined as the participants' overall ratings of their course facilitators. This study examined only three selected factors due to limited measurement items. Limitations of the present study are described in detail in the discussion section.

This study hopes to present evidence and add to the existing knowledge about web-based instruction and facilitator training regarding the factors affecting participant satisfaction of online facilitators. The study's findings would provide scientifically-driven evidence to determine key factors to the success of facilitators in online professional development. In addition, the findings could provide guidance to providers of facilitator training courses about the types of content, experiences, and skills online facilitators will need to have in order for them to provide effective online facilitation of learning.

METHOD

Data Sources

Two sources of data for this study were drawn from the FOR-PD data collection: an end-of-course evaluation survey and a sections database for the spring of 2006. These were the recent complete data sets available when the study began. The survey with 46 items was designed by FOR-PD. Five items were about demographic information, pace of study, and time spent on the course. Thirty-six items clustered into seven topics: (1) instructional alignment of the course; (2) usability of the course features; (3) FOR-PD's follow-up support and sources used for technical help; (4) ways of participant seeking assistance from the FOR-PD help desk; (5) performance of course facilitators; (6), and effectiveness of course features to help create a sense of learning community. Five open-ended items asked about the barriers of involvement, barriers encountered due to the course design, and suggestions for improvement.

According to the project, the survey was conducted before participants entered into the last lesson. The survey data were collected by an internal evaluation team of the project. The survey was anonymous and administered online at the end of the course. The sections database was updated semester by semester by a data management specialist. Data collection of all the sections was completed after the sections were closed. The specialist used procedures and protocols established for the data collection in order to preserve data integrity.

Sample Selection

There were four types of enrollment that allowed participants to take the FOR-PD course: *District Enrollment* (DE) [where school districts submitted a registration file with names and relevant information of interested educators], *Open Enrollment* (OE) [PreK-12 educators register on their own via the FOR-PD website/online registration form], *Community College Enrollment* (CCE) [the course has been adopted by community colleges that send us registration files of interested students], and *University Enrollment* (UE) [the course has also been adopted by seven state universities; universities submit a registration file to FOR-PD]. Only the first two types of enrollment were considered for sampling in order to increase subject homogeneity. Each DE section consisted of the same district participants, while each OE section consisted of different

district participants. A total of 2,338 school district participants enrolled in and 1,564 actually started the course in the spring of 2006. Of the 1,564 starters, 1,229 completed the end-of-course survey, with 1,038 from the DE sections and 191 from the OE sections.

Selected Variables

A set of four items for multiple regression were selected from the end-of-course survey based on item availability and the selected literature review. They were the participants' ratings of their course facilitators regarding content knowledge, communication skills, approachability, and an overall performance. The first three items were used as independent variables, and the last one as the dependent variable. The first three items read in order as "the facilitator displayed content area expertise," "the facilitator communicated with me effectively," "the facilitator was friendly and approachable online." These were rated on a four-point Likert scale from 'strongly disagree' to 'disagree' to 'agree' to 'strongly agree'. The overall rating of a course facilitator was rated on a five-point Likert scale from 'needs improvement' to 'fair' to 'satisfactory' to 'good' to 'excellent'

Data Analysis

Standard multiple regression (Pallant, 2005; Stevens, 2002) was used to see how well the three selected factors (content knowledge, communication skills, and approachability) predicted the overall rating of a course facilitator. The regression analysis was performed in two phases. The initial phase entered all the three predictors into an equation at once and found that the last two predictors (communication skills and approachability) were highly correlated, which was above an acceptable value of .70 according to Tabachnick and Fidell (2001) (as cited in Pallant). Pallant and Stevens suggested removing one of the variables or making a composite variable from highly correlated variables. Therefore, the second phase performed the regression, entering two predictors (content knowledge and a composite of the other two variables) into the equation. Additional assumptions of multiple regression were checked to see if there was any violation which are described in detail in the result section.

Descriptive statistics were also performed using a set of items selected from the end-of-course survey and the sections database in order to increase an understanding of the context for the present study. Four items drawn from the survey included enrollment type, first attempt at taking the course, pace of study, and time spent. The pace of study represented an average number of lessons completed a week, and was rated on a four-structured scale. The time spent indicated an average time spent working on the course, and was rated on a four-structured scale. Such information as completion rates (including the numbers of sections offered and of course facilitators) and class size were drawn from the sections database. Completion rates were computed in two ways: one based on the number of the enrolled and the other based on the starters. The starters were defined as those who completed lesson one and completed at least part of lesson two of the 14-lesson course according to the FOR-PD project.

RESULTS

Description of Course and Samples

In the spring of 2006, the FOR-PD project offered 51 DE sections and 52 OE sections. A total of 91 facilitators served those sections. Seventy-nine facilitators served at least one section, and 12 facilitators served a maximum of two sections. The average, minimum, and maximum class sizes of the DE sections were 17, 6, and 27 respectively, while that of the OE sections were 14, 6, and 20 respectively. Completion rates for the DE sections were 77% of those started and completed and 50% of those who enrolled and completed, while that for the OE sections were 76% and 53% respectively.

Of the 1,229 samples drawn from the end-of-course survey, 1,038 (84%) were from the 51 DE sections, while 191 (16%) were from the 52 OE sections. About 86% (n=1,055) said that it was the first attempt at taking the FOR-PD course, while 14% (n=173) attempted at taking it more than once. Regarding the pace of study, 67% (n=819) indicated completing a lesson per week, while 16% (n=199) completing a lesson per two weeks, 13% (n=156) completing two lessons per week, and 4% (n=52) completing three lessons or more per week. Regarding the time spent, 18% (n=226) indicated that they spent three hours or less on the course, while 51% (n=622) spent four to six hours, 19% (n=234) spent seven to nine hours, and 12% (n=146) spent ten or more hours.

Multiple Regression

As shown in Table 1, all the independent variables (content knowledge, communication skills, and approachability) correlated substantially with the overall rating of a course facilitator (.63, .72, and .73 respectively).

Table 1
Correlations between four variables

		Overall Rating	Content Knowledge	Communication Skills	Approachability
Pearson Correlation	Overall Rating	1.00	.626*	.722*	.726*
	Content Knowledge	.626*	1.00	.669*	.640*
	Communication Skills	.722*	.669*	1.00	.783*
	Approachability	.726*	.640*	.783*	1.00

* indicates a statistically significant correlation at $p < .05$.

Correlations between content knowledge and each of the other two independent variables (communication skills and approachability) were .67 and .64 respectively. However, the correlation between communication skills and approachability was .78, which was above the acceptable value of .70 (Pallant, 2005). Because of this result, the two variables (communication skills and approachability) were combined into a composite variable as suggested by Pallant (2005) and Stevens (2002).

In the second phase, standard multiple regression was performed involving two variables (content knowledge and the composite variable). As shown in Table 2, the independent variables (content knowledge and the composite variable) correlated substantially with the overall rating of

a course facilitator (.63 and .77 respectively) which were preferably above .30 (Pallant, 2005). The correlation between content knowledge and the composite variable was .69 being less than .70, which allowed for regression analysis with these two independent variables.

Table 2
Correlations between three variables

		Overall Rating	Content Knowledge	Composite (communication skills & approachability)
Pearson Correlation	Overall Rating	1.00	.626*	.767*
	Content Knowledge	.626*	1.00	.693*
	Composite (communication skills & approachability)	.767*	.693*	1.00

* indicates a statistically significant correlation at $p < .05$.

Results of the multiple regression present in Tables 3 and 4. The model including content knowledge and the composite variable explained 60.5% of the variance in the overall rating of an online facilitator. Both content knowledge (Beta=.18) and the composite variable (Beta=.64) made a statistically significant contribution ($p < .01$) to the overall rating. Content knowledge itself accounted for 39.2% of the variance in the overall rating (square of .626), while the composite variable accounted for 58.8% (square of .767). As for unique contribution, content knowledge uniquely explained 1.7% of the variance in the overall rating (square of .131). The composite variable made a larger contribution uniquely explaining 21.3% of the variance in the overall rating (square of .462).

Table 3
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.778(a)	.605	.605	.505	.605	936.20	2	1221	.000

a Predictors: (Constant), Composite, Content Knowledge.

Table 4.
Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Correlations	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial
1	(Constant)	.13	.10		1.25	.20	-.071	.335		
	Content Knowledge	.25	.03	.182	7.23	.00	.182	.316	.626	.204
	Composite	.49	.02	.641	25.67	.00	.448	.522	.767	.592

a Dependent Variable: Overall rating of online facilitators.

Variance inflation factor (VIF) values for both predictors were well below a cut-off value of 10, indicating no violation of the multicollinearity assumption according to Pallant (2005) and Stevens (2002). It was found that, after excluding missing values of cases pairwise, all the cases used in the equation were with Cook's Distance values less than one, suggesting no major problems. Cases with Cook's Distance values larger than one would be influential points and require for either deletion or further investigation according to Tabachnick and Fidell (2001) (as cited in Pallant) and Stevens. The Normal P-P Plot of the regression standardized residual appeared to have a reasonably straight diagonal, suggesting no major violations of the normality assumption according to Pallant. The scatterplot of the standardized residuals appeared to have a reasonably centralized rectangle, suggesting no major violations of the assumption according to Stevens.

DISCUSSION

Results of the regression analyses indicated that the selected factors were able to predict the overall rating of course facilitators to a great extent, explaining 60.5% of the variance in the overall rating. This implies that providers of online facilitator training courses should take into account all these three factors (content knowledge, communication skills, and approachability) in developing their course content and structure.

Of the selected factors, communication skills, and approachability were found to be highly correlated (.78) indicating they shared common aspects to a great extent. The composite variable (communication skills, and approachability) accounted for 58.8% of the variance and was able to predict the overall rating of course facilitators much better than content knowledge explaining 39.2% of the variance. This implies that communication skills and approachability are much more influential than content knowledge to participants' satisfaction of course facilitators. They are also integral components of conveying content knowledge. The ways that facilitators communicate in online courses can affect how well participants understand the information they are trying to pass on.

In the absence of physical presence in online courses, instructors must create a supporting learning environment where participants feel comfortable to communicate with each other and have a sense of belongings. Online instructors must play a role of facilitators rather than a knowledge giver according to Knowlton (2000). Baker (2001) and Hample and Dallinger (1995) pointed out that a lack of facilitators' approachability may lead to a high level of frustration, a critical attitude toward the facilitators' effectiveness, and a lower level of affective learning.

There are several inherent limitations with the present study. The use of previously collected data limits the variables that can be analyzed. The present study used only three selected factors (content knowledge, communication skills, and approachability) to predict overall participant satisfaction of online facilitators. Promptness and encouragement were not examined. In addition, of the collected data, only a few items addressed the selected factors. A single item represented each factor, which could limit reliability.

The end-of-course survey was conducted before the last lesson of the course. In the DE sections the number of subjects who completed the survey outnumbered those who started the course. These indicate that there is a possibility that some subjects who completed the survey may have not started or completed the course, which limited reliability. In addition, samples used for the present study consisted of school district participants who were allowed to take the course

for free. Generalization should be limited to the same or similar online professional development context.

CONCLUSION

This study attempted to predict overall participant satisfaction of course facilitators using three selected factors (content knowledge, communication skills, and approachability). Results of the study indicated that the selected factors were able to predict the overall participant satisfaction of course facilitators very well. Interpretation of the study findings, however, should be conducted cautiously due to the study limitations.

Implications of this study can be extended to both practice and research in the areas of online professional development courses. Providers and facilitators of online courses must keep in mind that these factors play an integral part of overall facilitator performance, which affect participant satisfaction of online courses.

More research is needed to build rigorous scientifically-evidenced knowledge on the facilitator factors affecting participant satisfaction of online facilitators and courses. Further research needs to investigate more instances of similar or diverse context to expand its horizon to a greater extent. Future research needs to examine more factors and include more items for each factor. It is also suggested that open-ended question items be added to a measurement instrument in order to have comprehensive perspectives of a phenomenon of interest and better explain statistical findings.

REFERENCES

- Anderson T., Rourke, L., Garrison, D. R., & Archer, W. (2001). Assessing teaching presence in a computer conferencing context. *Journal of Asynchronous Learning Networks*, 5(2). Retrieved November 3, 2007, from http://www.aln.org/publications/jaln/v5n2/v5n2_anderson.asp
- Anderson, T. (2004). Teaching in an online learning context. In T. Anderson & F. Elloumi (Eds.), *Theory and practice of online learning*. Athabasca, AB, Canada: Athabasca University. Retrieved November 3, 2007, from http://cde.athabascau.ca/online_book/ch11.html
- Arbaugh, J. B. (2001). How instructor immediacy behaviors affect student satisfaction and learning in web-based courses. *Business Communication Quarterly*, 64(4), 42. Retrieved October 15, 2007, from ERIC Document Reproduction Service (EJ638834).
- Baker, J. D. (2001). The effects of instructor immediacy and student cohesiveness on affective and cognitive learning in the online classroom. (Doctoral dissertation, Regent University, 2001). *Dissertation Abstracts International*, 62(06), 2081. (UMI No. 3018333)
- Berge, Z. L. (1995). Facilitating computer conferencing: Recommendations from the field. *Educational Technology*, 35, 22-30. Retrieved October 3, 2007, from ERIC Document Reproduction Service (EJ496583).
- Bolliger, D. U. (2004). Key factors for determining student satisfaction in online courses. *International Journal on E-Learning*, 3(1), 61. Retrieved October 15, 2007, from ERIC Document Reproduction Service (EJ723807).
- Course Development and Web Services (CDWS). (2006). *Types of UCF online courses*. Retrieved October 15, 2007, from University of Central Florida website: <http://teach.ucf.edu/begin/coursetypes.html>
- Easton, S. S. (2003). Clarifying the instructor's role in online distance learning. *Communication Education*, 52(2), 87. Retrieved October 3, 2007, from PsycINFO.
- Finaly-Neumann, E. (1994). Course work characteristics and students' satisfaction with instructions. *Journal of Instructional Psychology*, 21(2), 14-19.
- Hample, D., & Dallinger, J. M. (1995). A Lewinian perspective on taking conflict personally: Revision, refinement, and validation of the instrument. *Communication Quarterly*, 43, 297-319.
- Knowlton, D. S. (2000). A theoretical framework for the online classroom: A defense and delineation of a student-centered pedagogy. *New Directions for Teaching and Learning*, 84, 5-14.
- McPherson, M. & Nunes, M. B. (2004). The role of tutors as an integral part of online learning support. *European Journal of Open, Distance and E-Learning*. Retrieved October 3, 2007, from http://www.eurodl.org/materials/contrib/2004/Maggie_MsP.html
- Northrup, P. T. (2002). Online learners' preferences for interaction [Electronic version]. *Quarterly Review of Distance Education*, 3(2), 219-226.
- Pallant, J. (2005). *SPSS survival manual: A step by step guide to data analysis using SPSS for Windows (Version 12)* (2nd ed.). New York: McGraw-Hill.
- Stevens, J. (2002). *Applied multivariate statistics for the social sciences* (4th ed.). Mahwah, NJ: Lawrence Erlbaum.
- Thurmond, V. A., Wambach, K., & Conners, H. R. (2002). Evaluation of student satisfaction: Determining the impact of a web-based environment by controlling for student characteristics. *Journal of Distance Education*, 16(3), 169-189.

Williams, W. M., & Ceci, S. J. (1997). "How am I doing?" Problems with student ratings of instructors and courses. *Change*, 29, 12-23.