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PREDICTORS OF AND CHARACTERISTICS ASSOCIATED WITH TEACHER AND FACULTY USE OF ONLINE DATA COLLECTION IN TEACHER PREPARATION SETTINGS

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Abstract

The purpose of this study was to examine some of the gaps in the research around the use of online surveys in teacher preparation settings by exploring the attitudes toward technology and online evaluations, as well as predictors of user assessment of online data collection methodology, among 222 College Supervisors and Cooperating Teachers. Research questions centered around the status of and relationships among College Supervisor/Cooperating Teacher demographic variables, level of computer experience, computer proficiency, attitude toward technology, perceived ease of use, perceived usefulness, facilitating conditions, and overall assessment of online student teacher evaluations. Findings indicated that Cooperating Teachers experienced far fewer technological difficulties and found online evaluation to be much easier and more useful. They also had a more positive overall assessment of online evaluation. Among all study subjects, attitude toward technology, perceived ease of use, and perceived usefulness explained 74% of the variance in their overall assessment of online evaluation. Recommendations regarding the implementation of online evaluation in student teaching settings are offered.

Keywords: teacher preparation, technology use, online surveys, Technology Acceptance Model

1 INTRODUCTION

Internet data collection, including web-based, or online, surveys, is widely considered to be an efficient, cost-effective method for gathering evaluation data. In the United States, teacher preparation programs in institutions of higher education are encountering two realities. On the one hand, accreditation and accountability policies stipulate that process and outcome data be gathered regularly from a variety of constituents, including teacher candidates, the Cooperating Teachers who mentor them, and College Supervisors who oversee the student teaching experience. On the other hand, higher education budgets have been reduced, and institutions of higher learning frequently do not have the resources to support the production of paper surveys and assessments or manual data entry. Hence, low cost, efficient online surveys are an attractive option. However, online data collection and evaluation initiatives tend to be thrust on users, without knowing how they will react to this new medium, how comfortable they are with technology, what predicts success with online evaluation and a host of other factors.

For over two decades, information systems professionals have studied the Technology Acceptance Model (TAM) as a way to explain and predict user acceptance of new technology. Developed by Davis (1989) [1], TAM suggests that users' motivation to use new technology can be explained by its perceived ease of use, its perceived usefulness, and the user's attitude toward using the technology. A number of other variables were subsequently introduced into the TAM, including computer attitudes, computer anxiety, facilitating conditions, prior experience, and certain demographic variables, as the model was applied to user acceptance of computers, Windows, the Internet, email, and other computer systems [2].

The TAM model has also been used to understand and predict user acceptance of technology in various education settings. For example, Teo (2009) [3] suggests that the TAM is a valid and efficient model for explaining computer use among pre-service teachers. Park, Lee, and Cheong (2007) [4] report that this model is also useful for understanding university instructors' acceptance of electronic courseware. Elwood, Changchit, and Cutshall (2006) [5] investigated the applicability of TAM to higher education students' perceptions and their acceptance towards implementing a laptop program. Further examples of the application of TAM to education abound. Other researchers have explored educator acceptance of technology in education independent of the TAM model. For example, Iding, Crosby, and Speitel [6] conclude that lack of experience with educational software influence classroom teachers' use of such tools. Bebell, Russell, & O'Dwyer (2004) [7] suggest years

of teaching experience are correlated with particular uses of technology. While studies about the use of technology in educational settings are plentiful, this researcher was unable to identify any such studies that focus on the acceptance and use of online evaluation methods by College Supervisors and Cooperating Teachers during the student teaching experience.

2 PURPOSE

Based largely on the TAM model, the present study attempts to examine some of the gaps in the research around using online surveys in teacher preparation settings by exploring College Supervisor and Cooperating Teacher attitudes toward technology and online evaluations, as well as predictors of user assessment of online data collection methodology. The subjects of this study are College Supervisors and Cooperating Teachers, respectively. During their student teaching internship experience, teacher candidates (i.e., student teachers) are placed for several weeks or even a whole semester with an experienced teacher (the Cooperating Teacher) who mentors the teacher candidate and provides him/her an opportunity try out his/her own ideas and those he has learned in a practical situation and under close supervision. The Cooperating Teacher's university counterpart, the College Supervisor, typically supervises one or more teacher candidates, and acts as the liaison between the teacher candidate, the College Supervisor, and the university, and conducts an on-campus seminar for teacher candidates. Both the Cooperating Teacher and the College Supervisor conduct frequent evaluations of teacher candidate performance and growth, the student teaching placement, and of each other.

Research questions include:

- What is the level of computer experience/proficiency of College Supervisors and Cooperating Teachers?
- What are College Supervisors'/Cooperating Teachers' attitudes toward technology?
- What are College Supervisors' and Cooperating Teachers' experiences with online student teacher evaluations?
 - How useful and easy do they perceive online evaluation?
 - What conditions facilitate or impede their use of online evaluation?
- What is College Supervisors' and Cooperating Teachers' overall assessment of online student teaching evaluation?
- What are the relationships among College Supervisor/Cooperating Teacher demographic variables, level of computer experience, attitude toward technology, and attitudes toward online student teacher evaluations?

It is anticipated that the results of this study may be used to offer guidance to institutions considering implementing online data collection with a similar population.

3 METHODOLOGY

3.1 Survey

Data were collected through an online survey comprising questions on demographics and multiple items for each construct in the study. TAM-based constructs measured in the survey included Perceived Usefulness, Perceived Ease of Use, Facilitating Conditions, Obstacles, and Overall Assessment of online student teaching evaluation using the online service, CheckBox, and in general. Other survey constructs included: Attitude toward Technology, Level of Computer Experience, and Level of Computer Proficiency.

Perceived Usefulness items were adapted from Davis (1989) [1] and measured respondents' agreement with the following statements: 1) Using CheckBox to complete student teaching evaluations enabled me to accomplish tasks more quickly than completing a paper evaluation form; 2) Using CheckBox improved my performance as a supervisor or Cooperating Teacher; 3) Using CheckBox increased my productivity as a supervisor or Cooperating Teacher; 4) Using CheckBox enhanced my effectiveness as a supervisor or Cooperating Teacher; 5) Using CheckBox made it easier to do my job as a supervisor or Cooperating Teacher; 6) I found CheckBox useful in my role as a supervisor or Cooperating Teacher. Items were followed by a four point Likert-type response scale: 1=strongly disagree; 2=somewhat disagree; 3=somewhat agree; 4=strongly agree. The Cronbach's alpha reliability measure for the Perceived Usefulness scale was 0.96.

Perceived Ease of Use items were also adapted from Davis (1989) [1] and measured respondents' agreement with the following statements: 1) Learning to use CheckBox was easy for me; 2) I found it easy to get CheckBox to do what I wanted it to do; 3) My interaction with CheckBox was clear and understandable; 4) I found CheckBox to be flexible to interact with; 5) It was easy for me to become skillful at using CheckBox; 6) I found CheckBox easy to use. Items were followed by a four point Likert-type response scale: 1=strongly disagree; 2=somewhat disagree; 3=somewhat agree; 4=strongly agree. The Cronbach's alpha reliability measure for the Perceived Ease of Use scale was 0.96.

Facilitating Conditions items were adapted from Thompson, Higgins, & Howell (1994) [8] and measured respondents' agreement with the following statements: 1) When I needed to use CheckBox, guidance was available to me; 2) When I needed help using CheckBox, a specific person was available to provide assistance; 3) When I needed help using CheckBox, specialized instruction was available to me. Items were followed by a four point Likert-type response scale: 1=strongly disagree; 2=somewhat disagree; 3=somewhat agree; 4=strongly agree. The Cronbach's alpha reliability measure for the Perceived Ease of Use scale was 0.88.

Obstacles to completing student teaching online were measured via three items. The first asked whether the respondent had had to contact anyone at the university because of a problem using CheckBox. If they replied in the affirmative, respondents were asked to indicate the type(s) of problems they experienced. A list of common problems experienced in Spring 2010 was presented to the respondents, along with the option to provide an open-ended description of their particular problem(s).

Overall Assessment of online student teaching evaluation items were adapted from Shannon, Johnson, Searcy & Alan Lott (2002) [9] and measured respondents' agreement with the following statements: 1) I find online student teaching evaluations more interesting than paper-and-pencil evaluations; 2) In general, I prefer traditional paper-and-pencil evaluations over online evaluations; 3) Based on my experience this semester, I would recommend online evaluations over pencil-and-paper evaluations; 4) Online evaluations require much more time and effort for College Supervisors or Cooperating Teachers than do traditional pencil-and-paper forms; 5) I would like to go back to traditional paper-and-pencil evaluations; 6) Online or electronic evaluations are superior to traditional paper-and-pencil evaluations; 7) It is important to continue with online evaluations to assist with "green" efforts to protect the environment. The Cronbach's alpha reliability measure for the Overall Assessment scale was 0.92.

Attitude toward Technology items were from the Technology Attitude Scale developed by McFarlane, Hoffman & Green (1997) [10] and measured the degree to which the following statements were true or not true of them: 1) Knowing how to use computer-related technology is a necessary skill for me; 2) I like using computer-related technology; 3) I feel confident with my ability to learn about computer-related technology; 4) Working with computer-related technology makes me nervous; 5) I now use my knowledge of computer-related technology in many ways as a supervisor or Cooperating Teacher; 6) I like using computer-related technology in my work; 7) I wish I could use computer-related technology more frequently; 8) Computer-related technology makes me feel stupid; 9) A job using computer-related technology would be interesting; 10) I don't expect to use computer-related technology much in my work as a supervisor or Cooperating Teacher; 11) I'm not the type to do well with computer-related technology; 12) I feel uncomfortable using most computer-related technology; 13) Working with computer-related technology is boring; 14) Learning about computer-related technology is a worthwhile and necessary subject for me as a supervisor or Cooperating Teacher; 15) It is important for me to know how to use computer-related technology in order to be a supervisor or Cooperating Teacher; 16) I know that if I work hard to learn about computer-related technology, I will do well; 17) I am able to do as well working with computer-related technology as my fellow supervisors or Cooperating Teachers; 18) I think using computer-related technology is difficult for me; 19) Computer-related technology makes me feel uneasy and confused; 18) Once I start using computer-related technology, I find it hard to stop. Items were followed by a seven point response scale where one equaled "not at all true of me" and seven equaled "very much true of me." The Cronbach's alpha reliability measure for the Attitude toward Technology scale was 0.94.

Level of Computer Experience was measured via an item from Russell, O'Dwyer, Bebell & Miranda [11]. This item asked how many years ago respondents first used computers in the following ways: 1) Communication with co-workers via email; 2) For your own work (e.g., writing documents, using administrative software, grading, homework, transparencies, etc.); 3) Require students to complete assignments using a computer; 4) For your personal activities (e.g., personal email, web

surfing); 5) Presentations to the school/college or outside community; 6) For instructional purposes in your classroom. The following response scale was used: 1=Never; 2=one year; 3=two to three years; 4=three to four years; 5=five to six years; 6=seven or more years

Level of Computer Proficiency was measured via an item from Iding, Crosby & Speitel [6]. The item asked respondents to rate their level of computer proficiency as Very high (I have written some programs/scripts or courseware and/or I could teach others how to use computers); High (I can use computers without referring to manuals/instructions/other help); Average (I use applications like word processing, spreadsheets, email, and/or basic web searches); Fair (I can use applications with assistance); or Poor (I barely use computers or don't use them at all).

Demographic characteristics surveyed included: student teaching role (College Supervisor or Cooperating Teacher), length of time in that role (1-2 years; 3-5 years; 6-10 years; 11-15 years; more than 15 years), attendance at university trainings on new student teaching assessments (yes or no), and, for College Supervisors, faculty status (full-time faculty or adjunct).

3.2 Administration

The researcher loaded survey items into electronic survey form on surveymonkey.com. Names and email addresses of Cooperating Teachers and College Supervisors involved in student teaching in Spring 2010 were obtained by the researcher in July 2010. A personalized e-mail invitation to all potential respondents was sent on August 17, 2010. The invitation explained the purpose of the survey and provided the url link needed to access the survey. The invitation was emailed again to potential respondents on August 26, 2010, taking into account the fact that many Cooperating Teachers were just returning to their schools after their summer vacation and would likely be checking their email. A brief reminder email was sent to Cooperating Teachers and College Supervisors who had not responded to the survey on September 9, 2010.

3.3 Population and sample

The study population included all Cooperating Teachers and College Supervisors who worked with student teachers at an American teacher preparation institution during the Spring 2010 semester. The target population included 47 College Supervisors and 275 Cooperating Teachers, for a total of 322 individuals. All members of the target population had participated in online data collection during the Spring 2010 using an online survey provider called CheckBox. During that particular semester, they had completed at least six online surveys related to the performance of teacher candidates and the student teaching experience.

The study sample consisted of 222 respondents, representing an overall response rate of 69%. Sixty-eight percent of Cooperating Teachers (n=187) and 74% of College Supervisors (n=35) completed the survey, totaling 222 responses. The majority of College Supervisors (69%) were part-time, adjunct faculty members, as opposed to full-time faculty, who comprised 26% of College Supervisors. Almost 5% of College Supervisors declined to reveal their faculty status. On the whole, College Supervisors had spent more time than Cooperating Teachers in a student teaching role. In fact, 65.7% of College Supervisors had served in that role between three and ten years. In contrast, almost half of Cooperating Teachers (47.6%) were in their first or second year of working with student teachers (see Table 1). Interestingly, adjunct faculty were more experienced as College Supervisors than full-time faculty. Almost 80% of adjunct faculty supervisors had worked as such for between three and ten years, as opposed to just 44% of full-time faculty.

Table 1: Length of Time in Student Teaching Role

Length of Time in Role	College Supervisors	Cooperating Teachers
1-2 years	17.1%	47.6%
3-5 years	34.3%	24.6%
6-10 years	31.4%	16.0%
11-15 years	2.9%	4.3%
More than 15 years	8.6%	7.5%
Subtotal	94.3%	100.0%
Missing	5.7%	0%
Total	100.0%	100.0%

3.4 Data analysis

Descriptive statistics, correlational analyses, and t-tests were conducted to explore and compare the attitudes and characteristics of College Supervisors and Cooperating Teachers engaged in online data collection. Multiple regression was used to identify statistically significant predictors of Cooperating Teachers' and College Supervisors' overall assessment of online student teaching evaluation. The Statistical Package for the Social Sciences (SPSS) was used for these analyses.

4 RESULTS

4.1 Computer experience and proficiency

The percentage of survey respondents at each self-perceived level of computer proficiency did not differ significantly by student teaching role, $\chi^2(4, N = 222) = 3.47, p = .49$. Fifty-six percent of College Supervisors and 50% of Cooperating Teachers reported average proficiency with computers, meaning that they can use applications like word processing, spreadsheets, email, and/or basic web searches. Twenty-one percent of College Supervisors and 35% of Cooperating Teachers, on the other hand, rated their proficiency as fair, meaning that they can use applications with assistance. Only 9% and 6% of each group, respectively, rated their computer proficiency as high or very high. Further, 15% of College Supervisors and 10% of Cooperating Teachers rated their computer proficiency as poor.

To facilitate comparison of College Supervisors and Cooperating Teachers according to how long ago they began using computers in various ways, the six original response categories (1=Never; 2=one year; 3=two to three years; 4=three to four years; 5=five to six years; 6=seven or more years) were collapsed into two categories: 1) zero to four years and 2) five or more years. Subsequent chi square analyses revealed that length of time survey respondents had been using computers for different purposes did not differ significantly by student teaching role. Table 2 reveals that the vast majority of College Supervisors and Cooperating Teachers had been using computers for personal use for five or more years. On the other hand, using computers for more professional purposes was newer to them, with one third to one half of respondents requiring students to use computers or using computers themselves for instructional purposes and presentations for four or fewer years. In fact, 24% of respondents, all of whom were involved in the preparation of future teachers, had never required their own students to use a computer to complete an assignment. Likewise, a full 10% overall had never used a computer for instructional purposes. However, this represented 29% of

College Supervisors who had never used a computer for instructional purposes, as opposed to just 6% of Cooperating Teachers.

Table 2: College Supervisors and Cooperating Teacher Computer Uses and Length of Time

How many years ago, if at all, did you first use computers in the following ways?	College Supervisors/Cooperating Teachers	
	0-4 years ago	5 or more years ago
Communication with co-workers via email $\chi^2 (1, N = 219) = .19, p = .45$	15%	85%
For your own work (e.g., writing documents, using administrative software, grading, homework, transparencies, etc.) $\chi^2 (1, N = 216) = 1.94, p = .14$	11%	89%
Require students to complete assignments using a computer $\chi^2 (1, N = 221) = 1.32, p = .17$	50%	50%
For your personal activities (e.g., personal email, web surfing) $\chi^2 (1, N = 218) = .22, p = .54$	5%	95%
Presentations to the school/college or outside community $\chi^2 (1, N = 221) = 1.87, p = .12$	37%	63%
For instructional purposes in your classroom $\chi^2 (1, N = 220) = .02, p = .53$	36%	64%

4.2 Attitude toward technology

On a scale of one to seven, with one indicating a negative attitude toward technology and seven indicating a positive attitude toward technology, the mean score of survey respondents on the 20 item Technology Attitude Scale was 5.60, with a range of 4.43 to 6.13, indicating that College Supervisors and Cooperating Teachers had quite positive attitudes toward technology. Independent samples t-tests revealed no statistically significant differences between the means of College Supervisors (mean=5.34) and Cooperating Teachers (mean=5.64) on this measure, $t(214) = -1.53, p = .13$. Overall, both groups of individuals saw themselves as capable of learning and succeeding with technology. They also disagreed with statements suggesting that technology was boring or made them feel uncomfortable.

4.3 Experience with online student teacher evaluation

With means of 3.17 and 2.94 on the Facilitating Conditions scale, College Supervisors and Cooperating Teachers agreed that guidance, specialized instruction, and specific personnel were available to them if they needed help completing their evaluations online (see Table 3). Independent samples t-tests further revealed that College Supervisors and Cooperating Teachers did not differ significantly in the degree to which they perceived conditions that facilitated their use of online student teacher evaluations, $t(206) = 1.59, p = .11$. On the whole, they agreed that guidance, specialized instruction, and specific personnel were available to them if they needed help completing their evaluations online.

On the other hand, College Supervisors and Cooperating Teachers differed significantly in the degree to which they found online student evaluations easy to use and interact with. While College

Supervisors tended to agree that online student teaching evaluations with CheckBox easy to complete, clear, understandable, flexible and easy to learn (mean=3.02), the Cooperating Teachers' mean level of agreement was significantly stronger, with a mean rating of 3.43, $t(40)=-2.81$, $p=.008$ (see Table 3). In particular, College Supervisors somewhat disagreed that the CheckBox program for online student teaching evaluation was not flexible to interact with and that it was hard to get the program to do what they needed it to do.

Differences between College Supervisor and Cooperating Teachers were even more pronounced for their perceived usefulness of online student teaching evaluation, with College Supervisors' mean rating 2.04 and Cooperating Teachers' mean rating 3.02, $t(40)= -5.61$, $p<.001$. In effect, College Supervisors somewhat disagreed that online student teaching evaluation improved their performance, productivity, effectiveness, and speed in completing their work. In contrast, Cooperating Teachers somewhat agreed that online student teaching evaluation was useful and beneficial to their professional student teaching role (see Table 3).

Table 3: College Supervisor and Cooperating Teacher Experience with Online Student Teaching Evaluation

Experience with Online Student Teacher Evaluation	Role	N	Mean
Facilitating Conditions Mean Score	College Supervisor	33	3.17
	Cooperating Teacher	175	2.94
Ease of Use Mean Score	College Supervisor	33	3.02
	Cooperating Teacher	180	3.43
Perceived Usefulness Mean Score	College Supervisor	33	2.04
	Cooperating Teacher	178	3.02
Scale: 1=strongly disagree; 2=somewhat disagree; 3=somewhat agree; 4=strongly agree			

When asked if they had contacted the university about a technical problem associated with filling out an online evaluation, 80% of College Supervisors ($n=28$) and 29% of Cooperating Teachers indicated that they had ($n=54$). When presented with typical technical problems reported in Spring 2010, 14-31% of College Supervisors reported that they had not received a survey link, that the link had not worked, that they could not proceed beyond the first page of an online survey, or that they had not received a completed report after they exited a survey. In contrast, only 3-9% of Cooperating Teachers reported the same issues.

When requested to identify the source(s) of the technical problems they encountered, the most frequent responses from College Supervisors were: CheckBox server was down (22%); Lack of CheckBox training or support (20%); I did not enter the required information on screen (17%), and My own data entry errors (14%). Cooperating Teachers, who reported few technical problems anyway, reported the following sources most frequently: Internet is too slow at work (6%); School firewall or internet security blocked access to CheckBox or emails from [university] (5%); My email provider (e.g., Cox, Yahoo) did not forward completed reports to me (3%).

4.4 Predictors of positive assessment of online student teacher evaluation

Respondents' overall assessment of online student teaching evaluations was assessed via items measuring their agreement with statements related to their opinions and preferences related to online versus paper evaluations. As a group, College Supervisors' and Cooperating Teachers' overall

assessment of online student teaching evaluations was generally favorable, with a mean rating of 3 on a 4-point scale. Looking at the data more closely, however, it was evident that Cooperating Teachers' overall assessment of online evaluation was significantly more positive than that of College Supervisors. On a 1 to 4 scale, with a score of 4 indicating a positive assessment of online evaluation, Cooperating Teachers' mean rating was 3.18, as opposed to 2.29 for College Supervisors. Independent samples t-tests revealed the this difference in means was statistically significant, $t(40) = -6.56, p < .001$. On average, College Supervisors somewhat disagreed with all of the positive statements related to online evaluations. The only statement that they somewhat agreed with was: It's important to continue with online evaluations to assist with "green" efforts to protect the environment (mean=3.06). While Cooperating Teachers also assigned the highest rating to this statement, their mean rating for all other items was three or higher.

Correlations among the Attitude toward Computers, Facilitating Conditions, Perceived Ease of Use, Perceived Usefulness, Years in Role, Level of Computer Proficiency, Level of Computer Use, and Overall Assessment of Online Evaluation variables were subsequently explored (see Table 4). The table reveals that all of the above variables are significantly correlated with respondents' overall assessment of online student teaching evaluation. The perceived usefulness of online evaluation has the highest correlation ($r = .846^{**}$), followed by attitude toward computers ($r = .498^{**}$), and perceived ease of use of online evaluation ($r = .483^{**}$). The variable with the lowest correlation with Overall Assessment was the number of Years in Role (College Supervisor or Cooperating Teacher), with a correlation of $-.168^{**}$.

Table 4: Correlations among Key Variables

	Attitude re: Computers	Facilitating Conditions	Ease of Use	Perceived Usefulness	Years in Role	Computer Proficiency	Computer Use	Overall Assessment
Attitude re: Computers	1	.200**	.453**	.447**	-.138*	.576**	.552**	.498**
Facilitating Conditions	.200**	1	.503**	.259**	.019	-.048	.123	.237**
Ease of Use	.453**	.503**	1	.436**	-.139*	.147*	.241**	.483**
Perceived Usefulness	.447**	.259**	.436**	1	-.127	.199**	.328**	.846**
Years in Role	-.138*	.019	-.139*	-.127	1	-.072	-.130	-.168*
Computer Proficiency	.576**	-.048	.147*	.199**	-.072	1	.488**	.213**
Computer Use	.552**	.123	.241**	.328**	-.130	.488**	1	.324**
Overall Assessment	.498**	.237**	.483**	.846**	-.168*	.213**	.324**	1

* Correlation significant at .05 level (2-tailed)

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

A multiple regression analysis was subsequently performed to explore the combination of variables might best predict College Supervisors and Cooperating Teachers' overall assessment of online evaluations for student teaching. The Attitude toward Computers, Facilitating Conditions, Perceived Ease of Use, Perceived Usefulness, Years in Role, Level of Computer Proficiency, and Level of Computer Use variables were regressed on Overall Assessment of Online Evaluation. Using the enter method, a significant model emerged ($F_{7,191} = 81.44, p < .001$). Significant variables are shown in Table 5:

Table 5: Results of Multiple Regression Analysis

Predictor Variable	Beta	p
Attitude toward Computers	.101	.01
Ease of Use	.127	.02
Perceived Usefulness	.663	.000

Facilitating Conditions, Years in Role, Computer Proficiency, and Computer Use were not significant predictors in this model.

This three predictor model was able to account for 74% of the variance in respondents' overall assessment of online evaluation (Adjusted $R^2=.74$).

5 DISCUSSION

Analyses of survey data revealed that Cooperating Teachers and College Supervisors perceived their computer proficiency to be average. They reported being able to use basic applications, but they could not use computers without referring to manuals, instructions, other assistance. The vast majority of College Supervisors and Cooperating Teachers indicated that they had been using computers for personal use for five or more years. On the other hand, using computers for more professional purposes was newer to them, with one third to one half of respondents using computers for instructional purposes or presentations or requiring students to use computers for four or fewer years. In fact, 24% of respondents, all of whom were involved in the preparation of future teachers, had never required their own students to use a computer to complete an assignment. Likewise, a full 10% had never used a computer for instructional purposes. Nevertheless, Cooperating Teachers and College Supervisors alike reported positive attitudes toward technology, feeling they were capable of learning and succeeding and disagreeing with statements suggesting that technology is boring or makes them feel uncomfortable.

Despite their self-reported proficiency, level of use, and positive attitude toward technology, 80% of College Supervisors reported experiencing technical problems while completing online evaluations, compared to 29% of Cooperating Teachers. When asked to identify the source(s) of the technical problems they encountered, College Supervisors tended to identify personal issues, such lack of training or support, not entering the required information, and data entry errors. Cooperating Teachers reported more "external" issues that were out of their immediate control, such as slow internet connections at work or school firewalls/internet security that blocked access to the online evaluation.

Cooperating Teachers and College Supervisors did not differ significantly in the degree to which they perceived conditions that facilitated their use of online student teacher evaluations. On the whole, they agreed that guidance, specialized instruction, and specific personnel were available to them if they needed help completing their evaluations online. In contrast, they differed significantly in perceptions of ease of use and usefulness of online evaluation, with Cooperating Teachers finding it both easier to use and more useful than their College Supervisor counterparts. As a group, College Supervisors' and Cooperating Teachers' overall assessment of online student teaching evaluations was generally favorable. However, disaggregating the data revealed that Cooperating Teachers' overall assessment of online evaluation was significantly more positive than that of College Supervisors.

Among the variables examined, multiple regression analyses demonstrated that Attitude toward Computers, Perceived Ease of Use, and Perceived Usefulness of online evaluation predicted 74% of the variance in College Supervisor and Cooperating Teachers' overall assessment of the use of online evaluation for student teaching. In particular, the perceived usefulness of online evaluation was the largest predictor of how College Supervisors and Cooperating Teachers viewed online evaluation.

It is possible that differences in College Supervisors' and Cooperating Teachers' perceptions are attributable to factors related to differences in lengths of time in their roles. Almost half of Cooperating Teachers (47%) had only been serving in that role for one to two years. In contrast, 83% of College Supervisors had worked as such for three or more years. It is conceivable that the switch to online evaluations represented a more significant change in practice for College Supervisors than Cooperating Teachers, who were newer to their roles and were less enmeshed in the "old way" of doing things, which had always included the completion of paper-and-pencil evaluations. In addition, Cooperating Teachers were much more accustomed to using computers for instructional purposes. While 29% of College Supervisors indicated that they had never used computers for instructional purposes, only 6% of Cooperating Teachers responded in the same way. This, too, could have influenced the degree to which College Supervisors viewed the online evaluation process as difficult to use and not as useful as paper-and-pencil evaluations.

The results of this study also suggest that College Supervisors may perceive themselves to be more "tech savvy" than they really are. They report at least three times as many technical problems using online evaluations as Cooperating Teachers. Sources of technical problems for College Supervisors are personal (e.g., data entry errors, not following directions, lack of confidence, not enough support). Sources of technical problems for Cooperating Teachers tend to be external, out of their control (e.g., school firewall/internet security, slow internet at work, email provider sent notices to spam).

Findings from descriptive analyses suggest that higher education administrators and others facilitating the move from traditional paper-and-pencil to online evaluations in student teaching might want to pay special attention to the experiences and backgrounds of College Supervisors. While they report relatively high levels of computer proficiency and experience, they experience many more technical issues than Cooperating Teachers. These technical issues tend to be related to their own errors, rather than systematic technical issues. College Supervisors are also less experienced with the use of computers to instructional purposes, which may translate to a lack of appreciation for the use of computers for assessment purposes.

Finally, it is recommended that those advocating for or communicating about the shift from paper to online student teaching evaluations be cognizant of the attitudes of College Supervisors and Cooperating Teachers toward technology, as technology attitudes are a significant predictor of overall assessment of this medium. Even more, though, it is recommended that administrators and trainers focus their message largely on how easy and useful online evaluations are. In particular, the perceived usefulness of online evaluation is a large, significant predictor of user assessment or acceptance of online evaluation. Consequently, communication and training about online evaluation in student teaching should communicate and clearly demonstrate how online evaluation will enhance the performance and effectiveness as College Supervisors and Cooperating Teachers, as opposed to explaining why online evaluation is a cost-effective alternative or beneficial to the university in other ways.

REFERENCES

- [1] Davis, F.D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13 (3), 319-340.
- [2] Lee, Y., Kozar, K. & Larsen, K. (2003). The Technology Acceptance Model: Past, Present, and Future. *Communications of the Association for Information Systems*, 12 (50), 752-780.
- [3] Teo, T. (2009). The impact of subjective norm and facilitating conditions on pre-service teachers' attitude toward computer use: A structural equation modeling of an extended Technology Acceptance model. *Journal of Educational Computing Research*, 40 (1), 89-109.
- [4] Park, N., Lee, K.M., Cheong, P.H. (2007). University instructors' acceptance of electronic courseware: An application of the Technology Acceptance Model. *Journal of Computer-Mediated Instruction*, 13(1), article 9.
- [5] Elwood, S., Changchit, C., Cutshall, R. (2006) Investigating students' perceptions on laptop initiative in higher education: An extension of the technology acceptance model, *Campus-Wide Information Systems*, 23(5), 336 - 349
- [6] Iding, M., Crosby, M.E., & Speitel, T. (2004). Measuring teachers' technology uses: Why multiple-measures are more revealing. *Journal of Research on Technology in Education*, 37 (1), 45-63.

- [7] Bebell, D. Russell, M. & O'Dwyer, L. (2003). *The USETT study technical report*. Boston, MA: Technology and Assessment Study Collaborative, Boston College.
- [8] Thompson, R.L., Higgins, C.A. & Howell, J.M. (1994). Influence of experience on personal computer utilization: Testing a Conceptual Model. *Journal of Management Information Systems*, 1(1), 167-187.
- [9] Shannon, D.M., Johnson, T.E., Searcy, W. , Lott, A. (2002). Using electronic surveys: advice from survey professionals. *Practical Assessment, Research & Evaluation*, 8(1).
- [10] McFarlane, T.A., Hoffman, E.R. & Green, K.E. (1997). *Teachers' attitudes toward technology: Psychometric evaluation of the Technology Attitude Survey*. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL, March 24-28, 1997.
- [11] Russell, M, O'Dwyer, L., Bebell, D., & Miranda, H. (2003). *The USETT study technical report*. Boston, MA: Technology and Assessment Study Collaborative, Boston College.