



2004

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Recommended Citation

Liu, Feng (2004) "Teaching Abilities in Preservice Teacher Self-Ratings and Comparable Instructor Ratings," *The Corinthian*: Vol. 6 , Article 6.
Available at: <https://kb.gcsu.edu/thecorinthian/vol6/iss1/6>

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Teaching Abilities in Preservice Teacher Self-Ratings and Comparable Instructor Ratings

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Abstract

The purpose of this study was to investigate the correlations between preservice teachers' self-ratings of their technology skills and their self-ratings of other teaching skills. The data collected using questionnaires with a four-point Likert Scale were examined. Bivariate correlations were used comparing each competency with the technology competency. The correlation between 232 preservice teachers' self-ratings and their technology skills had statistical significance but were very low ($r = .14$ to $r = .20$; the statistical significance level: $.05$). The skill rating that was most highly correlated to their technology skill was their ability to evaluate and find good teaching materials and resources ($r = .31$, $p < .001$). However, eight instructors' ratings of their 211 preservice teachers' skills showed a much higher correlation between their technology skills and the other teaching skills ($r = .42$ to $r = .68$, the p values are all $< .001$). The hypothesis that technology skills of graduating preservice teachers would be correlated with other important teaching skill aspects was confirmed.

Relationships Between Technology Competency and Other Teaching Abilities in Preservice Teacher Self-Ratings and Comparable Instructor Ratings

These days, instructional technology is used widely in educational settings. Practically everyone, from local school boards to educational departments in teacher education colleges, has strong opinions about the value of instructional technology in education. There are very few articles addressing the correlation between using technology in teaching job and other teaching skills. However, there are many studies designed to complete research on how technology is used in school and the effect the technology has on teaching and learning.

Many people have the opinion that the use of technology in schools can greatly improve the effectiveness of teaching and learning. As Furst-Bowe (1992) stated, technology educators have very positive attitudes towards the use of instructional technology as all agreed that teaching effectiveness is improved through the use of instructional media. Thus, technology should be widely used by teachers and students in schools. From the teacher's perspective, computer use (only one type of technology

used in teaching) familiarity breeds respect and success (Rother, 2003). Using technology in the teaching job can make the teachers more successful.

Technology can improve many kinds of teaching skills. First, it can improve the teacher's skill to find good teaching material and resources to design the teaching units (Moore, 1991). As teachers, we all have our own experience about this especially since the popularity of the Internet. Litvin (1998) has stated every topic or chapter the teacher presently does within the classroom has in some way been enhanced by computer technology. Wibowo, Albohali and Solak (2002) also concluded that with the increasing popularity of networked computers (including the Internet), faculties were able to easily obtain the information they need and able to share the information they have.

Using technology can also improve the teacher's ability to assess the students' learning. As a teacher of computer science in China, after one or two lessons, the students were required to use the knowledge they learned. They had to finish one project assigned to them, and use appropriate courseware to give their corresponding grades. Ruthen and Hennessy (2003) stated specific software could present sequenced items to pupils and test them at each step during their study.

Using technology can also help the teachers respond to parents and students more effectively. Rother (2003) has stated that teaching benefited much from technology's evolving in communicating with parents and in classroom administration. For example, using e-mail and voice mail to inform and respond to parents improves the flow of information about their students.

Although studies have investigated the application of the technology in schools, few studies have attempted to investigate underlying correlation between using technology in teaching and the teacher's other teaching skills. The relationship between the ability to use technology and the successful implementation of teaching skills may contribute to the wide usage of technology among teachers today. Thus, the purpose of this study was to assess the correlation between preservice teachers and experienced teachers' self-ratings of their technology skills and their self-ratings of other teaching skills. The specific competencies investigated were (a) ability to design teaching units; (b) ability to assess the learning of their students; (c) listening and responding professionally to parents, students, and coworkers; (d) ability to self-evaluate your work and decide how to improve it next time; and (e) evaluating and finding good teaching materials and resources.

Method

Participants & Setting:

The participants were 232 preservice teachers and eight of their instructors in one medium-sized college of Georgia. The participants graduated in either May 2003 or May 2004. Their majors were early childhood education, middle grades education, special education, and secondary education. Eight of the faculty also rated their respective students whom they had mentored closely for two years.

Instrumentation

The data was collected using paper and pencil questionnaires with a four-point Likert Scale. The students were asked to rate themselves on fourteen teacher competencies using excellent, good, okay, or poor. The instructors used the same questionnaire and independently rated their students on the same 14 competencies. See Appendix for a copy of the questionnaire.

Procedures

This was a correlational study of the relationship between ratings of technology ability and ratings of other teaching competencies. The other competencies believed to be directly related to technology skills were (a) ability to design teaching units; (b) ability to assess the learning of their students; (c) listening and responding professionally to parents, students, and coworkers; (d) ability to self-evaluate your work and decide how to improve next time; and (e) evaluating and finding good teaching materials and resources. The technology component was using technology in teaching jobs (question number three on the survey form).

Data was obtained from the Program Assessment Coordinator who had the previous two years data available in a statistical spreadsheet. Students (preservice teachers) had completed their questionnaires during their group meetings with the Certification Officer who helped them complete their paperwork needed for teacher certification upon graduation. The instructors (college professors who advised and mentored each class) were given the set of questionnaires for their students and completed them during the week after finals or during the following summer.

Design and Data Analysis

Bivariate correlations were done comparing each competency with the technology competency. The alpha level for the Pearson r was set at .05 for each one-tailed test.

Results

The purpose of this study was to assess the correlations between preservice teachers and self-ratings of their technology skills and their self-

ratings of other teaching skills. There was also an interest in the instructors' (faculty) ratings of these preservice teachers. The descriptive results are presented in Figure 1 (preservice teachers) and Figure 2 (faculty ratings).

The preservice teacher skill rating that was most highly correlated to their technology skill was their ability to evaluate and find good teaching materials and resources ($r = .31, p < .001$). The other aspects rated had statistical significance but were very low ($r = .14$ to $r = .20$). See Figure 1.

However, the instructors' ratings of the preservice teachers' skills showed a much higher correlation between their technology skills and the other teaching skills hypothesized to be related (design units, assess learning, listen & respond, self-evaluate, find materials). See Figure 2. In addition, they are all statistically significant; the p values are all less than .001.

Discussion

This study provides a glimpse into the relationship between ratings of technology ability and ratings of other teaching competencies. The result indicates that there is a relationship between using technology in teaching and other teaching skills. This result is consistent with the findings of previous research (Furst-Bowe, 1992; Litvin, 1998; Moore, 1991; Rother, 2003; Ruthen & Hennessy, 2003; Wibowo, Albohali & Solak, 2002). However, since the participants in this study were chosen purposely and conveniently (from Georgia College & State University), caution is warranted in generalizing the results to the preservice teachers and present teachers of America.

Results indicated that the experienced teachers perceived the correlation much higher than did preservice teachers, which suggested that GC&SU faculty think that the technology in a teaching job is more important than did the preservice teachers. This study used 232 students (preservice teachers) and eight instructors (faculty) in the study.

Both present teachers (faculty) and preservice teachers (students) all perceived that the relationship between technology skills and ability to find teaching materials was very high among the five teaching competencies assessed. The previous research mentioned, conducted by Litvin (1998); Moore (1991); Wibowo, Albohali & Solak (2002), has also shown that using technology in a teacher's job can help the teacher to find teaching materials, which is consistent with the result of this study.

The results of this study indicated there was a positive relationship between the ability to use technology and the successful implementation of teaching skills in preservice teachers. It suggests that teachers who want to

improve their teaching skills should pay more attention to the use of technology in their teaching job. Another recommendation is that the government should fund the development of the use of instructional technology in education. Considering the limitation of the study, much more research is warranted.

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