Gender Differences in Preservice Teachers’ Self-Perceptions of Technology Skills

This study examined preservice teachers’ perception of their technology skills through a survey of the NETS performance profiles for teacher preparation and technology competency survey.

Objectives and Purpose
The purpose of this study was to determine if a gender difference existed in the degree to which preservice teachers perceive their technology skills. More specifically, this study asked the question “Do male preservice teachers have more confidence in their technology skills than female preservice teachers?"

Rationale
Many researchers in the past 20 years have found higher computer achievement by males. Research findings have also demonstrated that many people view technology as a field belonging to “males.” Although attitudes and trends are slowly changing, this study addresses the perceptions of students who developed attitudes and beliefs during the last two decades. Therefore, it is reasonable to believe that these attitudes have influenced the self-perceptions of today’s current preservice teachers.

Significance of the Study
Computers and technology have been associated with males in a number of areas including advertising, software, and teaching. The computer science field is dominated by males. In schools, computer classes are associated with math or the math departments where research has already demonstrated that females have been disadvantaged. The attitudes and self-perceptions of preservice teachers that were developed in the past two decades will dictate their behaviors towards students. Since more females enter the teaching profession, more female teachers will serve as role models. Consequently, it is important for future male and female teachers to have equal confidence in their technology abilities.

Perspective or Theoretical Framework
Attitudes effect actions. Prospective teachers enter preservice education programs with views about teaching and learning that were formed from their experiences as students. In addition, attitudes are influenced by a variety of other sources including socialization and university experiences. It would seem that self-perception of technology skills by preservice teachers would effect their use of technology in the classroom.

Methodology and Data Sources
Over two hundred preservice teachers participated in the study. The subjects were sophomores, juniors, and seniors who were elementary, secondary, and special education majors. The participants were enrolled in one of two foundations courses: “Field Studies or “Principles of Teaching.” Students in these courses were chosen for this particular study because the courses were taught by this investigator and represented a cross-section of preservice teachers at this institution.
In order to assess the self-perception of preservice teachers in various areas, two different surveys were conducted. The “Field Studies” students (n=43 males and 84 females) were given a 12-item list of hardware and software competencies. The “Principles of Teaching” students (n=25 males and 81 females) were asked to rate their competencies on a 5 item Likert-type scale using the 41 performance profiles of the NETS for teacher preparation.

Results
Preliminary results indicate that there was no difference in how males and females perceived themselves on either survey. In the 12-item hardware and software survey, males had higher self-rating in 7 of the 12 categories. In the NETS performance profile survey, males had a higher rating in 23 of the 41 categories. There will be further analysis of the data.

Limitations of the Study
This study was obviously limited to a select population that was not randomly assigned or chosen. The study was also limited in the ratio of males to female. Although these populations may be representative of the preservice teacher population of this university and other universities, more research is needed to support or reject any findings of this study.

Future Development of this Study
Data from this study will be further analyzed using both descriptive and inferential statistics. In addition, both surveys in this study will be administered to approximately 200 student preservice teachers enrolled in “Educational Computing and Technology” during this semester. The final report will be prepared in December, 2002.