Sharon B Walen (walen@math.boisestate.edu), Dept. of Mathematics and Computer Science, Boise State University, 1910 University Drive, Boise, ID 83725-1555, Steven R Williams (williams@math.byu.edu), Mathematics Education Department, Brigham Young University, TMCB, Provo, UT 84602, and Bradley E Garner* (garner@math. boisestate.edu), Dept. of Mathematics and Computer Science, Boise State University, 1910 University Drive, Boise, ID 83725-1555. Pre-service Teachers Learning Mathematics with Calculators: A Failure to Connect Between Current and Future Practice.
This study uses the theoretical perspective of Heidegger's modes of engagement to describe individuals' contrasting views about the use of calculators. This action research involved finding out when pre-service teachers (our students) use calculators and when they believe students should use calculators. These students studied mathematics in a reform setting, yet many failed to make the connection between their use of calculators to further their own understanding of mathematical principles and their view of how their future students could utilize technology in a similar manner. We also asked the students about their preferred computational method (mental, pencil/paper, or calculator) for various rational number arithmetic problems. Our data demonstrates that, in contrast to the commonly held belief about students' overuse of calculators, most did not rely exclusively on the calculator. Implications of our study for teaching include the idea that if we want our prospective teachers to use technology effectively in their future teaching, it is not enough to use technology effectively in our own teaching. We must also challenge our students to openly examine their beliefs in this area, perhaps with simultaneous experience in P-12 classrooms. (Received September 14, 2000)

