though recognized as a legitimate and positive aspect of teaching and learning, simulations continue to be rarely used by authors for the 2001 SITE annual. Perhaps the wide variation in defining “simulation” in education has contributed to the dearth of studies. The range in availability of hardware, courseware, and software in international locations where many of these investigations were done certainly has contributed to the variation in sophistication of data treatment. Additionally, though the global economy and international testing have moved countries closer in terms of educational goals, differences in educational philosophies have certainly contributed to the issues addressed and undertaken by this year’s contributors. These findings were cited in the 2000 SITE annual and continue to be evident by the lack of submissions in this area.

With only three submissions, the variety of definition is again seen as a strength of this technology driven teaching strategy. The way educators have chosen to define and then implement technology in the classrooms of their districts and countries is as varied as the geographic locations of the schools. Regardless of the complexity or simplicity of the technology available or the cognitive entry level of the personnel proposed for using the innovation, readers can certainly find a situation or discipline that mirrors their own. Reports of technology use for teacher-preparation as well as use with the P-12 students also increase variation.

The Papers

Dwyer and Lopez studied the effectiveness of simulations in learning cycles lessons for middle school students engaged in environmental studies. The Harper & Hedberg CD, Exploring the Nardoo, was used to enhance student performance. Upper elementary and middle school students served as a population for the study. Results of pre-instructional and post-instructional mapping showed a richer variety of concepts and increased linkage of concepts in environmental studies when simulations were included in the instructional plan.

Sarapuu and Pedaste used a simulation, Hiking Across Estonia, (http://sunsite.ee/tour/) developed in the Science Didactics Department at the University of Tartu, to develop students’ higher order thinking skills. Problem-solving and decision making were especially emphasized in the field of environmental studies. Students were assigned to hiking groups after pilot studies were run to determine the most effective simulation process. The virtual hikes in five different communities with seven different environmental problems in each community were the problems of each group. Students were able to click to links of information providing help in addressing the each of the problems. During the hikes, students also came across other problems such as the lack of food and the necessity of determining if plants encountered in a community were safe to eat. Themes of the hikes were connected to the themes present in the State Curriculum of Estonia. Another essential feature of the simulation was developing students’ communication skills in the small groups of the hiking group. Interviews before and after the virtual hikes and observations during the simulations were a part of the evaluation of the activity. Results of the study resulted in several editing changes in the design of the communities and the problems in them. However, results did suggest that the simulation program enhanced higher order thinking skills of the students, especially in the area of the ability to analyze texts and graphs.

Strang and Clark developed a Window-based simulation to assist teachers-in-training with preparation of lesson plans. LP1 was designed to lead students through a decision-making process in creating lesson plans for a specific type of student. Activities appropriate for the assigned student are entered into the simulation. The final step of the simulation involves students to evaluate the effectiveness of the plan for each student. Several weeks after the initial simulation, a debriefing phase is held. This process is helpful in offering students opportunity to hone lesson planning skills with a built-in evaluative phase that improves the process.

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