

Weaving the Internet and Literacy into Teacher Education

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Overview

- This quantitative and qualitative study examined pre-service teachers' knowledge, use, and attitude toward technology in course work and integrating it into current or future teaching activities.
- 58 Literacy students at LIU created WebQuest assignment.
- Models and instruction were framed by Dodge (1997, 2001).
- Technology survey data were used at beginning and end of semester.

Purpose of Research

- In an attempt to prepare explicit guidance to preservice teachers for the use of technology, it was decided to integrate WebQuest as a course requirement for pre-service undergraduate and graduate literacy courses. Preservice teachers need to develop technology skills necessary for classroom instruction; and the integration of WebQuests would provide Internet lesson resources. It was important WebQuests were not used merely as electronic worksheets or URL resources.

Research Questions

- How can the design of WebQuests improve knowledge and technology skills of preservice teachers?
- Will preservice teachers apply WebQuest knowledge into future field experiences?
- Can the use of WebQuests as a technology tool enhance learning and create different types of learning experiences?

Contextualization of Research

- The popularity in schools, recommendations of Moursund and Bielefeldt's (1999) survey, and Brown's (2006) report on innovative learning solutions for preservice teachers supported a decision to integrate WebQuests as a course requirement in literacy courses at Long Island University's School of Education.

Review of Literature

- Moursund and Bielefeldt's (1999) survey reported the inability of university faculty to model knowledge and skills in integrating technology.
- Researchers (Boulware & Reinhartz, 2005; Davis & Falba, 2002; Milson & Downey, 2001) have suggested weaving technology into methods courses.
- Pierson (2004) - Three one-credit hour courses need to be taken over three semesters before student teaching.
- More explicit technology supported lessons are needed (Ertmer 2003).

Methodology

Participants

58 Preservice teachers

Undergraduate (n=22)
Graduate (n=36)

Instrumentation

Quantitative Survey - Pre & post Likert scale

Qualitative - Post test open ended questions

Procedure

Pre-test

Faculty demonstrations of
WebQuest design

Student cooperative learning
groups to design WebQuests

Presentations

Post test

Analysis of Data

- Paired t-test for reporting technology attitude, skills, and knowledge.
- Cross tabulation between time 1 (pre) and 2 (post) was calculated.
- Data were reported as means and t values.
- Qualitative data included analysis of preservice teacher attitude, improved knowledge, as well as WebQuest in practice.

Findings

- Attitudes
- Student designed projects $t(57) = 2.73, (p < .01)$
- Opportunities for students to engage in real problems $t(57) = 2.13, (p < .05)$
- Skills
- Use of software with children $t(57) = 2.40, (p < .05)$
- WebQuest project $t(57) = 14.92 (p < .001)$
- Selecting appropriate technology for task $t(57) = (p < .01)$

Qualitative Findings

Student responses were positive

Response Question # 1

81% found that WebQuests influenced their ideas about teaching and learning

Response Question # 2

66% indicated they would use a WebQuest in the future

16% said they would "maybe," or "possibly" use WebQuests

Implications

- Preservice teachers need to have more opportunities for skill development and ability to infuse technology into course work.
- Faculty should meet and review course syllabi for technology integration.
