Overcoming Pedagogical, Social/Cultural, and Attitudinal Barriers to Technology Integration in K-5 Schools

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Overcoming Pedagogical, Social/Cultural, and Attitudinal Barriers to Technology Integration in K-5 Schools

Lisa Durff, PhD

Abstract

In this qualitative multiple case study, I interviewed educators to determine how they overcame barriers to technology integration. The findings showed that a triadic force of personal, behavioral, and environmental factors work together to influence technology integration. The present study may contribute to social change by increasing the knowledge of barriers preventing integration of technology into the elementary classroom.

Relevant Literature

Conceptual Framework

Social cognitive theory of Bandura (1986) and groundwork by Ertmer (1999) on barriers to technology integration.

- Bandura’s theory can be visualized as a triangular model with personal, behavioral, environmental factors interacting to determine a person’s actions.
- The barriers to technology integration perceived by educators are influenced by these same factors Bandura delineated in his social cognitive theory.

Research Questions

How do K-5 teachers overcome barriers to technology integration in one rural Northeastern district?

1. How do K-5 teachers overcome attitudinal barriers to technology integration in one rural Northeastern district?
2. How do K-5 teachers overcome social/cultural barriers to technology integration in one rural Northeastern district?
3. How do K-5 teachers overcome pedagogical barriers to technology integration in one rural Northeastern school district?

Procedures

The research design was a qualitative multiple case study. Purposive sampling was used to identify participants. The sample included 14 educators in the northeast, 4 males and 10 females. I conducted interviews with these educators, had interviews transcribed, and sent transcriptions to participants for member checking. The results revealed the attitudinal barriers, social/cultural barriers, and pedagogical barriers that impede technology integration into their classrooms.

Data Analysis

Methodology: Qualitative Multiple Case Study

Data Collection: Interviews with 14 educators in the rural northeast

Data Analysis: Open coding identified themes and patterns.

Using the multiple case study approach, I gathered data from interviews with educators in 3 schools and looked for contextual clues in that data to answer the research questions. Data were analyzed using open coding to identify rich themes and patterns.

Findings

The findings revealed that teachers who overcame barriers to technology integration did so in three areas. They overcame attitudinal barriers, social/cultural barriers, and pedagogical barriers. During the interviews the following themes emerged for:

- Research Question 2: Required Software, Status Quo, and Unvalued.

Limitations

A limitation of the study may be that participants taught in the rural northeastern area of the United States. Studies conducted in other countries reveal 1st order barriers impede technology integration while 2nd order barriers impede technology integration in this country.

Different patterns, categories, and themes may have emerged in the data had the sample population been drawn for urban districts, districts in different geographical locations, or from international locations.

Conclusions

The results of this study are most applicable to:

- Administrators who wish to support teachers in successfully overcoming barriers to technology integration support by
  - scheduling professional development focused on the use of technology in-house;
  - enabling teachers to attend conferences outside of the school building;
  - providing asynchronous online trainings;
  - encouraging collegial sharing;
  - offering technology support to teachers; and
  - avoiding the stigma of requiring specific software or hardware use.

- Teachers who overcome barriers to technology integration benefit from
  - improved efficiency in differentiating instruction;
  - communicating with parents; and
  - organizing student groups.

Those who talked with peers, shared ideas, and supported each other could overcome barriers to technology integration on their own.

Social Change Implications

By increasing the knowledge of how to overcome barriers preventing integration of technology into the K-5 classroom, strategies to lower these barriers may be designed so teachers increase the use of technology for student learning, motivation, and engagement.

Chair: Dr. Maryfriend Carter, 2nd Member Dr. Paula Dawidowicz, URR Member Dr. Gary Lacy