Critique of “Rethinking the Technology Integration Challenge: Cases from Three Urban Elementary Schools.”

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The qualitative study I have selected to critique is published in an instructional technology oriented scholarly peer-review journal. In this study “Rethinking the Technology Integration Challenge: Cases from Three Urban Elementary Schools..” Staples, Pugach, & Himes (2005) investigated how three urban elementary schools in Midwest, in partnership with a local, publicly funded multipurpose university, used a similar array of materials and human resources to improve their integration of technology. Data sources for this qualitative study included participant observation, school personnel interviews, documents of technology related events and activities, and children’s and teachers’ technology artifacts. The analysis of the data showed that there are three scaffolds that appear to have a significant influence on technology integration: namely, alignment with the curriculum/mission, teacher leadership, and public/private roles for technology recognition.

The authors began by literature review on research of technology integration into schools. They pointed out that a lot of studies were conducted to exam the effectiveness of technology use in various contexts and that there were also a bunch of research to investigate the barriers to technology integration and the conditions under which integration might best occur. They then pointed out that the integration of technology in classrooms still lags behind expectations for its use. The authors further pointed out that, although a lot of research studies have been conducted, fewer research studies have paid close attention to contextual variables and factors that might impact the nature and the degree of technology integration in schools, particularly urban schools.
By reviewing the relevant literature with logical transitions from one topic to
topic, the authors presented limitations in the research on technology integration and
logically established the justification and importance of the problem of technology
integration and necessitated a study on it. Then, the authors proposed their purpose for
this investigation – finding out how schools might more effectively plan for the
introduction and integration of technology. However, the authors did not give any theory
or conceptual frame to ground this study. Overall, the introduction was effective and
appropriate.

The authors provided sufficient detailed description for the context for the
subjects – three mid-sized urban schools in the Midwest. The research is pure qualitative
research. The research procedures were also described in sufficient detail. Multiple
sources of data were gathered across the three years of the project, including (1) field
notes and logs from participant observation in classrooms, staff development activities,
discussions with principles and teachers, and meetings and school events, (2) interview
with school personal both during (informal, unstructured interviews) and at the
conclusion (formal semi-structured interviews with a common interview schedule) of the
project, (3) timeline and chronicle of technology-related priorities and events, and (4) a
compilation of technology artifacts produced by the children and teachers such as
iMovies, slideshows, computerized drawings, and written work. The data were then
assembled by school. Each piece of data, which existed primarily as written text, was
read and analyzed by investigators. As tentative themes surfaced from the data, each
theme was discussed, and alternate explanations were also explored until consensus was
reached for each case. Then cross-case analysis was conducted until a finite set of themes was developed that characterized all three cases. The authors did not indicate whether all investigators were properly trained, and whether there was a check to see if they administered the investigation properly. They did not mention whether they considered subjectivity and whether had obtained informed consents from subjects. But, overall, the research methods were employed appropriately and the investigation was properly conducted.

The results for each of the three case studies was organized by a brief description of the school, technology context prior to the project, then agents of technology growth during the project period, followed by changes and future directions for the school. Finally, cross-case analysis followed the individual cases. In order to protect the identity of the schools, pseudonyms replaced the actual school names. Data were displayed and discussed in the narrative of the results section. The analysis of qualitative data suggested three scaffolds that support technology integration: commitment to the curriculum, teacher’s leadership, and public/private roles for technology. The authors did not refer back to the research purpose and questions. Overall, the presentation of the results was adequate.

The authors discussed and explained main findings but not in lieu of the relevant literature cited in the introduction section. Based on the results of this study, the authors concluded that the ability of school staff, through professional development activities, to use technology well – using technology in the service of the curriculum – is crucial to
effectively integrating technology into schools. At the end of the discussion section, the authors made suggestion for future research design: existing matches between technology and the curriculum and the presence of lack of alignment, whether or how technology and curriculum are connected in the process of professional development, etc.

To sum up, taking into account what has been presented above, I may safely come to the conclusion that Staples, Pugach, & Himes’s research article displayed all the features which can be usually found in a high quality research article and therefore can be classified as a high quality research article. In my point of view, there was no obvious flaw in this research article except the limitations of not mentioning the examination of subjectivity and whether having obtained informed consents from subjects. The report is worthy of publication in a reputed academic journal.

References: