THE CHALLENGES EXPERIENCED DURING THE IMPLEMENTATION OF TECHNOLOGY-ENHANCED PROJECT-BASED LEARNING AT A NEW TECH HIGH SCHOOL: A CASE STUDY

ABSTRACT

For students to succeed in a global economy, they must develop the knowledge and skills to prepare them for 21\textsuperscript{st}-century demands. Because there is agreement among educators, parents, and the business community that change is needed in the nation’s schools (Kozma & Schank, 1998; Tirozzi, 2005), various instructional methods should be investigated to determine effectiveness toward helping students develop the knowledge and skill necessary for success in the workplace. One method that has been implemented in efforts to prepare students for success in some schools and in the New Tech High school at the focus of this study is technology-enhanced, project-based learning. Under this approach, students use technology and other 21\textsuperscript{st}-century skills to develop products to show learning. The purpose of this study was to explore the challenges to implementing such a program and the methods used to address those challenges and to determine the impact of technology-enhanced, project-based learning on academic achievement.

Participants included students in Grades 9 and 10, teachers, staff members, and the school administrator. Qualitative data from interviews, observations, and program documentation revealed that a lack of resources and curriculum posed the greatest challenges for stakeholders. Chi-square analyses revealed significant differences in the frequencies of total challenges, limited resources, and curriculum challenges between stakeholder groups. While steps including seeking grants and business partnerships were planned to address some challenges, there were other challenges like curriculum that
could not be changed in the near future. Participants perceived technology-enhanced, project-based learning as having increased students’ technology, research, collaboration, and writing skills. However, an analysis of standardized test data showed that students did not perform better than their counterparts at the district or state levels in the core content areas. The findings of this study add to the research on technology-enhanced, project-based learning and have implications for educators and other stakeholders considering the implementation of technology-enhanced, project-based learning.