

CHESTER PARK ELEMENTARY SCHOOL OF INQUIRY (CPESI) PROJECT-BASED LEARNING INITIATIVE

Summary

The goal of Project-Based Learning at CPESI is to improve student learning - especially for students who are at risk for academic failure - through authentic and engaging learning experiences.

Chester Park Elementary School of Inquiry (CPESI) is a Title I school where 90% of the 435 students receive free or reduced lunch and 34% do not meet expectations on the Palmetto Assessment of State Standards (PASS) test. Designated a high-need school, CPESI was chosen to serve as a Professional Development School (PDS) as part of the Winthrop University School Partnership Network. This regional network works to improve the quality of teachers in high-need districts in upstate South Carolina by providing innovative, collaborative professional development to pre-service and in-service teachers. The overarching goal of the partner schools within the network is to improve student learning, with a particular focus on students who are at-risk for academic failure. As a PDS site, CPESI has a Winthrop Faculty-in-Residence who works at the school two days per week to collaboratively develop and implement an individualized program or initiative to support the network's goals. CPESI chose to dedicate time and resources towards a project-based learning initiative with school faculty to support the school and the district by training and mentoring other sites. Moving into year three of the project, CPESI teachers are engaging in classroom transformation to a project-based environment, providing staff development for two partner schools, and delivering presentations to professional groups and teacher education associations at the local, state, and national levels. CPESI students are also engaged in transformation by participating in authentic learning experiences that culminated this year in a presentation of data and artifacts to over 300 family and community members in what now will be an annual Math and Science Fair.

Demographics

- *Target Settings:* Elementary schools
- *Target Groups Served:* All students, with a particular emphasis on students who are at-risk for academic failure
- *Districts Served:* Chester Park Elementary School of Inquiry, Chester County School District, Winthrop University School Partnership Network

Research and Evaluation

What national or other research was considered during the development of this program/initiative?

Describe the evidence that shows the program/initiative works.

Project-based learning or problem-based learning (PBL) has been utilized for over 40 years across different disciplines. Meta-analysis of studies conducted from 1976 to 2007 compared PBL curriculum to a traditional curriculum (Strobel & van Barneveld, 2009; Walker et al., 2009). Findings indicated that PBL was superior when it comes to long-term retention, skill development, and satisfaction of students and teachers, while traditional approaches were more effective for short-term retention. PBL stimulates critical thinking and has the potential to create more in-depth understanding in areas such as science and math when students are engaged in learning activities that integrate in-class and on-line technology resources. PBL is effective with all populations of students including those at risk for academic failure in underperforming schools similar to those at CPESI and other Partnership Network schools (Boaler, 2002; Marx et al., 1997; Moore et al., 2002). Despite this evidence, teachers are often reluctant

to adopt this instructional practice. Research suggests this may be due to various contextual factors such as ineffectively delivered staff development, limited access to technology, lack of support, and no opportunity to interact with colleagues (e.g., Davis, Fuller, Jackson, Pittman, & Sweet, 2007; Windschitl, & Sahl, 2002).

For successful sustainability of any school-wide initiative, providing specific, targeted teacher professional development is critical. A survey of CPESI teachers indicated needs related to instructional technology and working with diverse learners (second language learners, learners with special needs, and learners living in poverty). Teachers and the Winthrop Faculty in Residence (WFIR) chose project-based learning (PBL) to support these needs and established conditions (Spencer & Logan, 2003) in which teachers, students, administrators, and university faculty could work collaboratively. After program implementation and longitudinal professional learning support, teachers overwhelmingly saw PBL as a positive instructional approach (83% on an anonymous survey) and had confidence in their ability to manage a project-based classroom (89%). Over 88% of CPESI teachers viewed PBL as having a positive impact on student learning and motivation.

Year one of the project resulted in gains in all classrooms piloting the PBL initiative. The average pre-assessment score was 51.5%. Students demonstrated significant growth averaging 84% on the post-assessment. In year two, CPESI implemented project-based learning school-wide, 13 classes and 251 students. Students averaged 46% on the pre-assessment and saw growth to 86% on the post-assessment (assessments were content-based and aligned with state benchmarks). The culminating event in year two was the Math and Science Fair, in which all pre-K-through-5 classes participated. Teachers and students presented their work, including performance data and artifacts, to over 300 family and community members.

Resources

- *Annual Cost:* Initial implementation requires technology purchases
- *Funding Sources:* Research and Inquiry Grant (\$1562.15) from the Winthrop University-School Partnership Network, school professional development budget
- *Staffing Needs:* External support for professional learning needs (supplied through the Partnership Network)
- *Infrastructure/Equipment Needs:* Mobile technology (laptops) works best for student engagement in various environments; however, project-based learning can occur through stationary labs or with other media
- *Partner Organizations:* Winthrop University

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