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CASE STUDY

Using Defined Learning to Enhance Project-Based Learning Experiences in a Rural School District

Stafford Public Schools, Connecticut

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Prepared by MIDA Learning Technologies, LLC for Defined
August 23, 2023

By incorporating Defined Learning's resources, educators can potentially mitigate the time-related barriers associated with developing and organizing PBL activities from scratch while still fostering a rich and engaging learning environment that aligns with the goals of PBL.

Introduction

Project-based learning (PBL) is a teaching method that focuses on the authenticity of work and student-centric engagement to create a rich and effective learning environment. Recent research has highlighted the importance of PBL's impact on skills most frequently sought after by employers, suggesting that skills fall into three categories: learning skills, literacy skills and life skills. While these skills have become increasingly important for post-graduate success, educational testing has not kept pace.

There is a growing body of literature that suggests that PBL, as a teaching method, may be an answer to coupling academic performance to 21st century and SEL skill development. Research suggests that students who engage in PBL perform better on both standardized assessments and project tests than students in traditional direct instruction programs, and that they learn both real-world application of skills and analytical thinking.

To determine how PBL might foster deeper student engagement and promote critical thinking skills in a rural setting and to understand how Defined Learning might solve time-related challenges faced by teachers, Defined commissioned MIDA Learning Technologies, LLC. to conduct an independent study in Stafford Public Schools, CT. Stafford Public Schools, a school district catering to a diverse student population in rural Connecticut, has been progressively integrating Defined Learning throughout its curriculum, aligning it with its vision for holistic student development outlined in the district's Portrait of a Graduate.

Study Design

The adoption and implementation of Defined Learning began in the summer of 2022 with the district's summer camp. Teachers were trained on PBL and Defined Learning prior to the program's launch. During the academic year, time was spent mapping Defined tasks to the elementary mathematics program. Defined Learning tasks were aligned to specific curricular targets, and and projects were incorporated in tandem with traditional classroom strategies to reinforce learning through authentic project-based experiences. Training of teachers continued throughout the year through coaching relationships, and plans were underway to incorporate Defined Learning and PBL as a recurring element in the district's summer program.

District Demographics:

Location: Stafford Public Schools, Connecticut

Number of K-12 Students: 1,375

Number of Schools: 4

Rural Setting

Race/Ethnicity:
- **86% White**
- **0.5% Black/African American**
- **8.4% Hispanic/Latino**
- **0.1% American Indian or Alaskan Native**
- **1% Asian or Asian/Pacific Islander**
- **3.9% Two or More Races**

Free and Reduced Lunch: 22.3%

Although the district was in the process of integrating Defined Learning at various grade levels using diverse projects to meet curricular goals, for the purpose of this case, researchers focused on one particular fourth grade project that had been adopted to support multiple curricular targets. The project titled Miniature Golf Course Designer situated students in the role of creating miniature golf holes. The project was aligned with the district's curriculum in mathematics but touched upon interdisciplinary topics as well.

Data Analysis and Findings

The implementation of PBL supported by Defined Learning yielded encouraging outcomes. The teachers noticed a surge in student engagement and enthusiasm throughout the PBL projects, with students reaching the intended learning outcomes including enhanced collaboration, refined problem-solving skills, and improved student presentation proficiency. This overarching theme of engagement encompassed not only motivation and interest but

also the establishment of tangible real-world connections to classroom learning.

Students' articulated a deepened comprehension of the subject matter and the cultivation of critical skills such as teamwork, critical thinking, and the ability to receive and apply constructive feedback. The teachers agreed that students not only achieved aligned learning targets but also made strides in the development of intangible skills such as collaboration, communication through presentations, and adept problem-solving.

Summary

Defined Learning played a pivotal role in sustaining students' engagement and motivation, mitigating the stress typically associated with long-term projects. The multidisciplinary nature of the projects allowed teachers to seamlessly incorporate various aspects of learning, including persuasive writing, mathematics, technological skills, and communication.

Furthermore, the adaptability of Defined Learning's projects to diverse groups allowed the teacher to scaffold the project and cater to the needs of all students, ensuring inclusivity and active participation. This adaptability was particularly beneficial in ensuring that students could effectively organize their ideas and presentations while building essential skills.

Outcomes of PBL Classes Supported by Defined Learning Resources:

- Collaboration - making sure that all members of the group were involved
- Leveraging technology tools to accomplish tasks
- Adopting problem-solving strategies to come up with solutions to problems and to work together in doing so.
- Students' abilities to clearly present their ideas
- The opportunity to Incorporate multidisciplinary skills while teaching mathematics, such as persuasive writing, technological skills, speaking, and listening.
- The ability to adapt projects through scaffolding to ensure that all students could participate, highlighting the flexibility to tailor the projects to different ages and abilities.

Defined Learning played an instrumental role by providing all of the necessary components to initiate and implement project-based learning experiences. PBL, supported by Defined Learning, connected academic learning with real-world applications, thereby increasing student motivation and engagement. This exemplifies the potential of PBL to rejuvenate classroom learning and, through its integration, better equip students for success in future careers through the development of 21st Century Skills, which are highly sought by employers.

Click here for full report by MIDA Learning Technologies, LLC.

About Defined Learning

Defined Learning offers a comprehensive platform designed to support project-based learning by providing educators with pre-designed, standards-aligned projects that offer real-world relevance and authenticity (Bryant, 2018; Defined Learning, n.d.). These projects encompass various disciplines and real-world career links, allowing teachers to integrate them into their curricula seamlessly. By incorporating Defined Learning's resources, educators can potentially mitigate the time-related barriers associated with developing and organizing PBL activities from scratch while still fostering a rich and engaging learning environment that aligns with the goals of PBL.