Chapter 21

Creating Sustainable Project–Based Learning Through Teacher Professional Development

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ABSTRACT

This chapter highlights the effectiveness of teacher professional development to expand and support the implementation of project-based learning. Teacher professional development is essential for the growth of teacher content comprehension in the educational environment, confidence, and refining instructional learning segments. The purpose was to increase the capacity and implementation of project-based learning through teacher professional development that afforded distinctive methods in which teachers acted as a team with a variety of learning tasks, assessments, tools and materials. Consideration was given to educational collaboration and support, the influence of teacher mindset and self-certitude, resource impediments, and improving student participation. The results denoted valuable inferences of how professional development for teachers could guide the function of project- based learning in the learning environment.

INTRODUCTION

University graduate faculty grapple with the issue of providing meaningful effective professional development that is central to increasing teacher pedagogical knowledge, instructional strategies for diverse learners, and broad-minded dispositions. Features of effective professional development should be pertinent to the intended classroom with an emphasis on student learning, should demonstrate effective teaching practices, teacher participants should be involved and the facilitator should respect and utilize the experiences of the teacher participants (Pringle, Mesa, & Hayes, 2017). The aim of the targeted professional development was for teachers to gain knowledge about the project-based learning process, experience,

and study about teaching with project-based learning and differentiation, and then, implement project-based learning. The professional development phases included an online project-based learning course, a weeklong summer project-based learning seminar, and a four-month long implementation of a project. Researchers have posited that professional development of moderate length can have substantial and enduring impact on teaching and learning (Cordingley, Higgins, Greany, Buckler, Coles-Jordan, Crisp, Saunders, & Coe, 2015).The value of increasing teacher knowledge and experience in conjunction with teacher professional development opportunities often guide the restructuring of instructional strategies for differentiating learning that may lead to significant gains in student achievement (Wilson, 2013).

The purpose of professional development for teachers is to gain knowledge about (a) the project-based learning process, (b) investigate, select resources, develop assessments, and experience teaching with project-based learning and differentiation, and then, (c) design, implement, and assess project-based learning in the classroom to increase student learning within a professional development learning community.

BACKGROUND

The Buck Institute for Education (2018) defined project-based learning as an instructional approach in which students begin with a driving question and continue with inquiry research to reveal or ascertain evidence to answer the driving question. Students expand understanding and capabilities by functioning for an extended period of time examining and responding to meaningful, engrossing, and multifaceted inquiries or challenges. Duke (2016) described project-based learning as students going beyond the usual investment of time and school requirements for a project to create an invention, answer the driving question, or solve a real problem.

Traditional teaching concentrated on increasing knowledge through the memorization of facts and the retention of this new knowledge. However, there is disconnect between the everyday times that students live and the way students learn. Educators are challenged with students expecting an instructional system that differentiates student flow learning that is global, interdisciplinary, inquiry-based, and mindful. The Partnership for 21st Century Skills (P21), a national advocacy organization focused on imbuing 21st century skills into education, helping students master core subjects and become skilled at life and career skills, learning and innovations skills, key content themes, and information, media and technology skills.

Project-based learning is an uncertain and challenging task in many cases, with undiscovered project outcomes, and the attributes of the process depend generally on elements such as team structure and skill representation which is intricate to control in the curriculum (Sillaots & Fiadotau, 2018). The Organization for Economic Co-operation and Development (OECD) supports policies that will advance the economic and social welfare of people globally. The Organization for Economic Co-operation and Development (OECD) created the conceptual Learning Framework of 2030 to build a common foundation of knowledge, skills, dispositions and values in countries throughout the world to shape a more promising future. This concept also encouraged educators to plan for the future and nurture innovative learning environments that aim for inclusive student progress and enable adjustments in education environment. By aligning knowledge, skills attitudes and values, the key competencies will be internalized and lead to action on a global scale.

Future learning will employ project-based learning strategies to connect and impart the skills needed with diverse students. Educators must be informed about the benefits of project-based learning, and how project-based learning will afford a productive means to meet curriculum standards (Wellen, 2018).

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