

Chapter 7

Project-Based Learning for Students With Intellectual Disabilities

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ABSTRACT

With the push to include all students, despite disability, in the general education classroom, general education teachers need to be trained in ways to adequately educate intellectually disabled students alongside their nondisabled peers. Many students with an intellectual disability are capable of learning in an inclusive environment if provided with proper support, such as through instructional methods like project-based learning. Project-based learning actively involves learners in investigating real-world issues and answering related questions. This chapter focuses on how to use the project-based learning method to teach children with intellectual disabilities within the framework of inclusive education, using biology as an example subject area.

INTRODUCTION

Project-based learning (PBL), which is an instructional method that actively involves learners in investigating real-world issues and answering related questions, has been in existence for many centuries. Confucius, Aristotle, and Socrates all espoused that children should learn by interacting with their environment, asking probing questions, and thinking critically. Dewey (1938) and Montessori (1949/1995) expanded on this perspective by noting that children learn better when they are engaged in their education—literally experiencing it—while being taught to ask questions and think outside the box rather than simply having information transmitted to them via an

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educator. The constructivist theory, developed by Piaget (1968), also supports project-based learning by asserting that children need to learn by investigating topics of interest, collaborating with peers, making inquiries, and reflecting on their experiences. Project-based learning can be widely used in any classroom, in any content area, with nondisabled students as well as with ones who have an identified disability. The most important fact about the project system is that it offers students a chance to create an educational product rather than just study a certain topic.

Students with intellectual disabilities are decreasing in rarity in the general education classroom. In the not-too-distant past, these students were typically educated either in a self-contained classroom within a public-school setting or in a specialty school where educators were trained exclusively to work with them. However, with the push to include ALL students, despite their disability, in the general education classroom, the general education teacher is now required to educate these students alongside their nondisabled peers. This chapter focuses on how to use the project-based learning method to teach children with intellectual disabilities within the framework of inclusive education, using biology as an example subject area.

BACKGROUND

Under IDEA, an intellectual or cognitive disability is defined as “significantly sub-average general intellectual functioning, existing concurrently with deficits in adaptive behavior and manifested during the developmental period, that adversely affects a child’s educational performance” (IDEA, 2004, 34 CFR §300.8[c] [(6)]).

Meeting the special educational needs of students with intellectual disabilities can be a challenge for teachers in the general education classroom, especially if no professional development or training has been provided to them or if they are unfamiliar with the disability. Students who have been diagnosed with intellectual disabilities under IDEA may experience some or all of the following: (a) difficulties interacting with the environment; (b) problems with individual development; (c) slow reception and processing of sensory information; (d) poor memory retention; problems with verbal expression (for example, difficulties in developing verbal generalizations and in naming objects); (e) problems related to the development of voluntary movements (e.g., slowness or difficulties with coordination); (f) late mental development as a whole; and (g) increased fatigability (Afanasyeva, Yeremina, & Morgatcheva, 2008; Shif, 1965; Vygotsky, 1983).

In addition, intellectually disabled students have difficulties with interactions in a social environment (Afanasyeva et al., 2008; Lubovsky et al., 2005; Rozanova, 1978; Shif, 1965). They also demonstrate inadequate self-assessment and over- or underestimation of their own possibilities, abilities, and achievements. This is

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