

Dr. Ymelda Baca
Assistant Professor
Heritage College
3240 Fort Road
Toppenish, WA 98948
509 865-8620

Abstract

What is Bilingual Education, Anyway? Strategies for Helping ELL (English Language Learners) to Succeed in Mathematics and Other Content Area.

Bilingual Education, a complex phenomenon, is not clearly understood. Bilingual Education is not a specific program -- it is a way of being in and understanding world. If we believe that languages express identity, languages are repositories of history, that diversity is essential, and that languages contribute to the sum of human knowledge (Baker, 2001), then we need to find ways to support this in our classrooms.

By validating individual students through accepting and promoting the development of bi-literacy, students will succeed. Not only will the number of dropouts and prison populations be reduced, the number of good grades in school and the number taking AP exams will be increased. This will also result in a smaller number being placed in special education classes. Self-esteem and affective attributes will be supported. And future employability will be augmented. In essence, a disenfranchised population that might have resulted due to lack of validation, will be turned into a population that has much to offer in society.

ELL students are precious resources that need to be nurtured and developed. Instead of focusing on transitioning students to English, we need nurture the development of literacy in two languages, creating bilingual individuals who will be valuable citizens. Language shift occurs through deliberate decisions that directly or indirectly affect languages and reflect political, economic, cultural, social and technological change. But languages are concerned with human culture, human heritage, the value of a garden full of different languages rather than one variety (Garcia, 1992).

So what can be done? We must create opportunities for ELL students to succeed in our classrooms. How is this done? We need to give consideration to ELL construction of knowledge. As learning individuals, they are constantly actively looking for ways to acquire knowledge and information. We need to give credence to their ability to do this. Most learning is intuitive and implicit, and the ELL has a great capacity to do this. The use of two languages and development of two languages may give them cognitive advantages in divergent and creative thinking, as well as mental flexibility (Baca, 1992, Cummins, 2001, 2002, Hakuta, 1996).

ELL student's learning is implicit. Implicit learning, the process of being able to understand an idea without necessarily being able to express it clearly, is one we need to consider. Often, ELL student's learning is intuitive. Intuitive learning, the experience and insight rather than verbal analysis, is another consideration.

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It is important to capitalize on this implicit and intuitive way of knowing and give students the benefit that they are able to conceptualize, rationalize, memorize, and use complex cognitive skills to make sense of the world around them.

Because learning is intuitive and implicit, what we need to do is assume that ELL students are capable of learning at higher levels. We need to give them the tools they need to develop language to promote optimum learning and subsequently, express the knowledge they have acquired.

This can be done by using the following scaffolding techniques and strategies, based on Vygotsky's theory (Coates, 2000).

Modeling – Facilitator (expert adult) or peer demonstrates the process or desired behavior

Bridging – Students make personal links and connections to the mathematics concept at hand.

Schema Building – Assisting students to build and add to their background knowledge of a concept.

Text Representation – Students retell or demonstrate understanding through various venues such as drama, art, music, technology.

Contextualizing Language -- Provide informal definitions, repetition, origins, paraphrase, examples, or apposition.

Metacognitive Development – Providing structures to assist students in reflecting on their own learning, thinking, and work.

What can we as educators do?

1. Become and create advocates on behalf of ELL students and their families
Implement models of teaching that help increase mathematical understanding for ELL students in meaningful and challenging ways;
2. Involve families from diverse cultures in increasing their capacity to do mathematics together, thereby increasing life choices and opportunities;
2. Increase achievement in mathematics specifically for language minority students.

Through development a VOICE dedicated to advocacy on behalf of ELL students, we will be successful in promoting success and biliteracy for students – a win-win situation for individual students and society.