

Darielle Timothy
SCED 546
Dr. Anna Monteiro

Cultural Analysis Plan

As science, technology, engineering, and mathematics (STEM) become necessities in our modern society, availability of rich science instruction for all students must be commonplace in our education system. Access to quality science education is most often determined by one's economic status, race, or language background [CITATION Nat12 \l 1033]. Furthermore, teachers are not well informed of the influences that language development and culture impose on student learning[CITATION Lee08 \l 1033]. It is imperative that educators are aware of these achievement gaps so that proactive actions are utilized, ensuring that English Language Learners (ELLs) are provided equitable opportunities to succeed in science education. To maintain a high level of science education that supports ELLs' language development and science knowledge, this cultural analysis plan will examine active measures that can be implemented to support educators in developing a deeper understanding and sense of their students' cultural background in the context of STEM education and culturally relevant practices.

Teachers that make the effort to fully understand the importance of ELLs' home culture have unique opportunities to allow new learning to be meaningful and relevant. Cultural connections can be a powerful strategic tool that enables ELLs to combine their prior cultural experiences with new academic expectations[CITATION Lee131 \t \l 1033]. It is not sufficient for teachers to only have a firm grasp of science content and practices, but "explicit knowledge about cultural diversity is imperative to meeting the educational needs of ethnically diverse students"[CITATION Gay02 \p 107 \l 1033]. In order to purposefully deepen my understandings of my students' cultural make-ups, an action plan comprised of specific strategies and tools should be put in place to address the diversity in my own classroom.

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Morning meeting time that is built in for personal and informal communication about students, their cultural connections to science education, and prior experiences is a flexible tool for teachers to use as a means for gathering data about their students' cultural identities (NGSS, 2013; Webb & Wilson, 2013). Through the implementation of morning meeting routines, students have ample opportunities to share their own cultural experiences, personal connections and can present cultural artifacts as it relates to different science concepts. Furthermore, morning meeting routines encourage culture connections between home and community and the school. The daily gathering of the class can elicit opportunities for family members to participate during the school day to inspire cultural connections to science education. It also helps to develop a sense of empathy in students in terms of how each student's culture relates or has contributed to the nature of science.

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