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Technology to Enhance Learning in the Multi-Lingual Classroom

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Research and various studies have shown that using multimedia in the classroom increases creativity, innovation problem solving and improves communication between people. Technology addresses equity and access issues for learners. Technology allows educators to refine teaching strategies and learning processes, and to be more inclusive of all types of learning styles regardless of native language. Technology effectively shrinks the world by sharing knowledge and experiences. This is easily observed in the multicultural and multilingual classroom represented today.

The diversity that we see in our classrooms is a result of cultural differences sprouting from ancestral origin, home language, religious training, and/or learning style. Traditional diversity in the classroom has been redefined and been enhanced by immigration, which brings differences, of political, social and economic values. Contrary to traditional beliefs that the classroom served as a melting pot for students, now it is a kaleidoscope of the many different students that are in it. To meet the needs of the new classroom the teacher must change and reach out to the students, and use approaches that can touch all students.

Technology is one effective method because it facilitates acceptance by encouraging cooperative learning and equal communication opportunities by the users. Use of technology by the students will facilitate communication and builds language skills that are vital for success in the classroom and out of school. Learning to work with others as one acquires and learns a new language is in the classroom. Using multimedia technology offers opportunities for individualized

instructions in a classroom with learners of a new language at various language proficiency levels and different learning styles, and thus therefore making effective use of instructional time.

On the other hand diverse learning styles are not limited to ethnicity or linguistic cultures. Multiple intelligences and learning styles transcend diversity and are present in all humans. Educators must refrain from using traditional ethnic stereotypes and misinformation about ethnicity. The problem of how to teach and reach all students regardless of ethnic or linguistic diversity centers on the issue of communication.

Information technology makes it possible to address learning preferences through creating learning environments that feature integrated and thematic curriculum, collaborative learning, and emphasize language acquisition and literacy skills to meet the challenge of cultural and linguistic diversity (Garcia, 1994). Shared experiences provide students the opportunity to make sense of science phenomena through multi-sensory incidents. Using technology to provide a common experience “bridges” the language gap and provides a common place for language acquisition to occur. By establishing cooperative learning environments, students may contribute to the learning group and gain acceptance and enhance their self-esteem so that they may not feel like "outsiders."

The cooperative nature of learning with technology can provide students with opportunities to demonstrate their strengths and gain status that would be difficult in traditional competitive-based class environments. Using collaborative

learning software or active learning students can become involved in researching and presenting solutions to their own local concerns. Technology can simulate real-life environments and promote learning by doing.

Technology can assist the teacher in crossing the language barrier that exists in a diverse classroom. According to the 2000 census over 80 percent of children (6-17 years) use computers at school (U.S. Census Bureau, 2001). As Internet usage increases the opportunities to reach the diverse student population are limitless. The teacher acts as a facilitator of learning when using technology in the classroom. The teacher can guide students to learn about sites and open new experiences for the students. A powerful tool the teacher may use is a language translator, which translates text and web pages from one language to another language. School leaders using free online translation services can offer limited English language parents access to school web pages and other community related resources. The accuracy of these programs may be an issue as they are software programs and not human translators (Slowinski, 2000). They are available for use and can be an effective support system for learning and communication.

Websites and programs that I have found to be useful are:

- http://www.worldlingo.com/products_services/worldlingo_translator.html
- http://multilingualcenter.com/translations.html
- http://www.lai.com/glossaries.html
- The Power Translator Pro 7.0 by L & H Speech Products.
- And the http://babelfish.altavista.com/translate is an excellent service.

More websites can be found by conducting an internet search, as they appear and disappear in the Internet world.

Technology can address equity issues by providing individualized instruction, and use of software to address individual student learning, and expedite learning which allows students to work at their own pace with immediate feedback. Using technology can promote student esteem by providing new-language learners positive experiences.

The multimedia technologies offer the possibility of making abstract subject matter more concrete through pictures and sound so that students who do not think on an abstract level are better able to understand. Integrating technology with our curriculum provides a holistic approach of delivering content to students with different ways of learning. Various teaching strategies support the use of technology i.e.: the Gregorc Style Delineator; Bernice McCarthy's 4MAT; and Howard Gardner's Multiple Intelligences (Tipton, P.E., Bennett, C.K. and Bennett, J.A. 1996). When they are used in conjunction with off-computer techniques to enhance motivation and strengthen learning opportunities, the different learning styles of students are addressed.

Current data and authentic learning opportunities can be brought into the classroom through the Interne. Students can access current information on the Internet's databases, international library card catalog systems, image files, weather maps, and software. Thornburg (1989) claims "technology can be used to allow each student to learn virtually any subject through his or her dominant intelligence while increasing the facility of the other intelligences as well". By

using technology to address student needs and learning styles, positive experiences in the classroom will be initiated and sustained.

A practical application with integrating technology in the classroom is using personal digital assistants (PDAs). These electronic devices when equipped with graphic organizers, electronic dictionaries and word processing programs can assist students in a multitude of learning tasks. The PDAs can help the students take notes, record lab data and even produce short audio-visual files. These electronic “helpers” will provide new language learners the ability to interact more effectively in class, acquire language skills and improve their science learning.

A new approach to learning science is the application of microcomputer-based-laboratory (MBL) applications as PDAs. These new and powerful learning tools allows students to take out to the learning sites a hand-held computer with electronic probes, interfacing boxes, and software that can measure and collect data with out language being a limiting factor (Hollenbeck, 2003). These pocket PC’s will allow students to measure temperature, motion, force, pH, sound, light, and pressure with relative ease. Schools that have used the MBLs in their curriculum have reported success as shown in several reports and on manufacturer’s websites. The manufacturers of the Palm Personal Digital (www.palm.com), Pasco, the xplorer model (www.pasco.com) and Texas Instrument (www.education.ti.com) have websites that are willing to assist educators with their portable technology (Hollenbeck, 2003).

This use of technology will create an environment that fosters student learning and self-esteem, and empowers educators to go beyond the traditional boundaries. The internet and technology opens the world and beyond to creativity and imagination. The new technology provides teachers with tools to address equity and access issues, to accelerate students' linguistic and conceptual development, to provide support for students who learn in different ways, and to create authentic and meaningful learning experiences. Students are able to interact and fully participate in their learning as they build language skills and cultural awareness.

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