

Underserved Populations Technology Tip Sheet

Shawn Cressler, SJU – Applying Learning Theories to Interactive Technology Module 3

Tip #1: Allow the options for the software to send performance information and reports of progress to parents or guardians	Targeted Population: Students with Attention Deficit Hyperactivity Disorder (ADHD)
Promotes Inclusion: Research has indicated that students with ADHD respond more positively to parental feedback than students in the general population. Keeping parents and guardians in the loop will afford them the chance to participate in their student's education.	
Examples: Parents could provide instructors with contact information and when the student completes a lesson, a unit of study, or simply a session with the software the program can email or even text message a parent with a personalized progress report. The messages could also contain suggested praise for a student such as, "Tell, <<insert name>> how proud you are they have mastered improper fractions," or perhaps, "<<insert name>> struggled with converting fractions to decimals today, remind them to keep trying."	
Tip # 2: The program should allow learners to display information in multiple languages as the bulk of humans on Earth do not speak English as a primary language	Targeted Population: English as a Second Language Learners and Recent Immigrants (Voluntary Minorities)
Promotes Inclusion: Allows students with limited English proficiency to participate in more complex activities. Switching between languages to view menus would allow ESL students to build a vocabulary set for using a program in both their native tongue and English.	
Examples: http://www.solidworks.com/sw/education/cad-faq-students.htm#6 Solidworks produces CAD software that allows the user to virtually design of many types of 3D objects. This software is available in a number of different languages to accommodate learners/users whose primary language is not English.	
Tip #3: Create software that is personalizable and customizable for individual users.	Targeted Population: Female Students
Promotes Inclusion: A report from the AAUW indicates that female learners respond better to games that allow them to customize their experiences such as creating a character/avatar or selecting music, or making decisions whether to work individually or cooperatively.	
Examples: http://shop.leapfrog.com/leapfrog/jump/Didj/category/Didj Leap Frog Diji allows users to earn points to customize their handheld learning game experiences. http://www.whyville.net/smmk/top/gates Whyville is a science website that allows for the use of customizable avatars in problem solving, simulation and modeling tasks.	
Tip #4: Link the software or content to a pool of appropriate mentors, or provide information for students and teachers to implement a related mentoring program.	Targeted Population: Involuntary Minorities
Promotes Inclusion: Research from John Ogbu indicates that one strategy for student adaption to and accommodation in education is for minority students to work with a mentor. Mentors provide encouragement, act as examples, and provide advice and counsel when students are faced with tough decisions in their education	
Examples: http://www.icouldbe.org/standard/default.asp This website facilitates connections between professionals in hundreds of different occupations and at risk students	
Tip #5: Allow for instructions to be delivered in multiple formats to accommodate learners whose learning style requires more than text to understanding a task	Targeted Population: Visual/Spatial, Verbal/Linguistic, Kinesthetic Learners
Promotes Inclusion: By providing more than simple texted based instructions the software will allow learners with different learning styles or intelligences as labeled by Howard Gardner succeed.	
Examples: Learners should be able to select from standard text based directions, or an audio component that reads the instructions aloud, a demonstration possibly in the form of an embedded video which demonstrates how the task is to be completed. It would be helpful for kinesthetic learners if tasks were explained using a walkthrough which requires the student to mimic mouse and keyboard movements as part of the directions or explanation.	