

To increase the number of persons with hearing disabilities receiving postsecondary degrees in the computing disciplines, the educators seek to engage the computing community in developing and implementing innovative methods to improve the retention of these people. This presentation will outline the rationale for developing interactive Virtual Sign Animated Pedagogic Agents (VSAPAs) to support computer education for deaf and hard-of-hearing college students. Key issues include the topic of computers and communication concept with rich media resources incorporating 3D sign language with facial expression, text, graphics and animation levels. The evaluation aimed at identifying principles for sign language animation and interface design. The three criteria for the VSAPA learning environment evaluation; effectiveness, efficiency; and satisfaction are defined. Usability testing was performed by think aloud protocol implemented with a user group. Subjective usability was assessed with the System Usability Scale (SUS). It was also found that the VSAPA's appearances and social behaviors could motivate, interest, or tutor learners better than a traditional way of teaching. The progress and preliminary outcomes of current research projects which focus on both postsecondary students and pre-service teachers will be discussed.