

## Chapter 15

# Virtual Environments and Serious Games: Teaching Cross-Cultural Communication Skills

**K. A. Barrett**

*Distance Education Consultant, USA*

**W. Lewis Johnson**

*Alelo, Inc., USA*

### ABSTRACT

*The Alelo language and culture game-based training has been successfully applied in the K-16 education, government, and military sectors. With increasing globalization of business and widespread use of the Internet, this same approach is applicable for corporate education. The chapter will suggest how virtual environments using cross-cultural simulations that include communicating with virtual avatars could be adopted for corporate use to effectively train and educate employees in cross-cultural communication, as well as other skill sets.*

### INTRODUCTION

With the globalization of the corporate sector has come the need for employees to know language and culturally appropriate ways of communicating with foreign counterparts. Moreover, shrinking budgets and the increasing need for contact with partners abroad have made it necessary to provide alternatives to standard classroom training for other skills,

such as leadership and technical training. Corporations have been providing face to face training in brick and mortar classrooms for many years. Yet gone are the days when companies could send an employee for a weeks-long training program. Virtual worlds (VW), also referred to as virtual or 3-D environments, provide a less costly alternative to host complex human interactions than face to face simulations. VW are persistent, computer-simulated environments where one or more user(s) interact

DOI: 10.4018/978-1-61520-619-3.ch015

synchronously through avatars, digital representations of themselves (Shaw, 2009). Indeed, avatars can behave like natural humans (Bricken, 1991). Furthermore, through their avatars, users can experience events and activities unknown to them in the real world. Advances in technology have now made it possible for learners to engage in highly interactive instruction via the Web. A new trend is the low-cost delivery of training courses via the Web that use VW to create real-life simulations of situations employees will encounter on the job.

One of the most effective pedagogies underlying these environments is based upon socio-cultural learning theory, which suggests one learns through interacting with virtual avatars in a non-threatening 3D environment. This aspect has been shown to be important to adult learners, who are often intimidated by the live language classroom experience (Johnson, Wang, & Wu, 2007). According to Lave & Wenger (1991), learning is most productive when situated within context in courses that are results-oriented and task-based. The presence of learners in a simulated world where they engage in tasks with other people makes it more likely that learning will transfer back to their place of work.

Virtual environments and socio-cultural theory intersect in the creation of serious games. As Susi, Johannesson, & Backlund, (2007) defines them, serious games are digital games used for purposes other than mere entertainment. Immersive serious games use VW to create safe, yet engaging, virtual environments in which learners can develop a desired set of skills. Studies have shown that a virtual 3D space can be more conducive to learning real-world capabilities than other, more conventional teaching methods (Susi, et. al., 2007). Serious games are especially helpful for military training, as they provide secure areas in which one may develop the skills necessary to carry out dangerous missions. In fact, playing America's Army, the first serious game used for military training, actually improved new recruits' performance on range tests (Zyda, 2005). Because

of the merits of serious games, the serious game industry is only expected to grow over the next several years (Susi et al., 2007).

Based on evidence supporting the use of serious games to teach cross-cultural communication, Alelo has developed courses that are designed to help learners in the military, corporate, and private sectors quickly acquire basic communication skills in foreign languages and cultures. In these courses, immersive, interactive 3D video games simulate real-life communication, allowing users to role play with animated "socially intelligent virtual humans" that recognize the user's speech, intent, gestures and behavior. The virtual agents are used to teach communicative competency and cultural awareness. Cultural protocols involve cultural knowledge, sensitivity and awareness — including non-verbal gestures, etiquette, and norms of politeness — that are critical for successful communication. For example, as part of the military training programs, learners must use their new knowledge of the target language and culture to complete missions including civil affairs, house cordon and search, entry check point, crowd management, team training, and information gathering. If a learner struggles to complete his mission, the virtual agents help him perfect his skills until he reaches the necessary linguistic and cultural level of competency.

Culture and language training is just as relevant for the military world as it is for the corporate world. This common necessity indicates the emergence of a unilateral need for intercultural collaboration skills. In the corporate sector, cross-functional and trans-national teams often must learn to negotiate meaning to achieve project goals. Similarly, in Tactical Dari, servicemembers learn how to work together with the Afghan people to accomplish a project (See Figure 1). No matter the sector, today's global community increasingly requires an efficient method of acquiring cross-cultural communication skills.

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