

Immersive Learning Simulations

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Since 1980, CPI has supported the work of professionals who work with challenging or potentially violent individuals by providing a relevant, practical behavior management program. It's called the *Nonviolent Crisis Intervention*® training program, and more than six million professionals—spanning from facility administrators to frontline mental health providers to bus drivers—have participated in this program to learn how to resolve conflict at the earliest possible stage. For the majority of this time, training has been Instructor-led and conducted in the classroom. A significant shift in training modality occurred in 2009 with the release of *Nonviolent Crisis Intervention*® hybrid training. Training content and course objectives were retained, but the mode of delivery changed. The option offers flexibility for learners and Instructors. It capitalizes on the strengths of both online and classroom learning.

CPI continues to develop more blended learning options. Wielding online learning techniques supported in the training literature and expanding learning application in the classroom have led to an expanded menu of refresher options. This article will define simulators, cite their effectiveness, and discuss how Certified Instructors may soon use them as part of the Training Process.

Simulation computer programs are being used increasingly in educational and corporate settings. In a report of survey data, the eLearning Guild reports that 70 percent of its members plan to implement more simulations and scenarios (Wexler et al., 2008). These percentages follow from the perceptions of guild members who have already created simulations. When asked to compare simulations with other forms of rich-skill practice, 93.4 percent of the 384 members rated simulations or serious games as being somewhat better or much better.

These numbers suggest a trend toward greater implementation and perceived effectiveness of simulation computer programs. However, one limitation of the survey is that the sample of eLearning Guild members are inherently invested in computer-based learning, and are not representative of the population of academic and corporate learning providers. Peer-review and impartial assessment are needed to validate claims of effectiveness.

What Are Simulation Computer Programs?

Before we explore the survey findings further, we must define simulation computer programs and discuss the theory behind their effectiveness.

According to the literature, simulation computer programs, or what we will deem simulators, consist of two basic interactive activities: games and simulations. The Society for the Advancement of Games and Simulation in Education and Training (Saunders, 1987, cited in Vogel et al., 2006) defines “simulation” as “a working representation of reality . . . that may be an abstracted, simplified, or accelerated model of process.” A “computer game” is defined by Vogel et al. (2006) as an activity that “. . . has goals, is interactive, and is rewarding (gives feedback).” Clark Quinn (2007, cited in Wexler et al., 2008) describes the relationships of these activities. He proposes that a “simulation” is a model of a process; a “scenario” (often involving a story) begins in an initial state and asks the learner to achieve a goal state; and a game maximizes user engagement. Add the element of traditional learning (pedagogy) to this combination, and you have an immersive learning simulation (Wexler et al., 2008).

The theory behind the effectiveness of simulators can be divided into the theoretical effectiveness of simulations and games. In the corporate world, simulations are simplified representations of work realities. They often allow the learner to problem solve, make mistakes, and observe consequences in a virtual world without the costly consequences of the real world. Theoretically, repetition of decision making in this safe environment increases the fidelity of the learning environment and thereby maximizes the probability of training transfer—the application of learning to the job.

Games enhance learner motivation and engagement. Current theory holds that games allow the brain to work more efficiently and process more material (Vogel et al., 2006). Furthermore, learners are theoretically more motivated by games and will thus be more engaged with content.

Discussion of the theoretical effectiveness of simulators leads to the question alluded to earlier: “Do they actually work?” Vogel et al. (2006) performed a meta-analysis on published research, which compared traditional classroom teaching with computer gaming or interactive simulation teaching. The samples included in the 32 studies spanned a broad spectrum from preschool students to adults. Variables included type of activities: 1) Interactive simulation (user must interact with the simulation by choosing or defining parameters of the simulation, then observe the execution) and 2) Game (any computer game that is defined as such by the author or inferred because the activity has goals, is interactive, and is rewarding).

Results showed that overall, interactive simulations and games produced greater cognitive gains and better attitudes than traditional classroom learning. The effect strength was reported to be very significant as the increased cognitive gains and attitudes were consistently found across the different studies. The results of the study support the theory that interactive games or simulations yield positive cognitive gains in a broad range of settings.

This article has uncovered many of the strengths of simulators and perhaps online learning in general, but what do these findings mean for CPI's learners and Instructors? Below is a list of features being considered in CPI's version of a simulator:

Features:

- An immersive learning simulation whereby the learner responds to a virtual client.
- Provision of a scenario of a virtual client with a story and Precipitating Factors, or virtual motivations.
- A virtual client whose emotional escalation or de-escalation is determined by the learner's choices.
- A simulation of models such as the *CPI Crisis Development Model*SM, the *CPI Verbal Escalation Continuum*SM, and the *CPI COPING Model*SM.
- A simulation of limiting setting and Empathic Listening.
- Text and video teaching points and feedback.
- Randomly generated emotional states, behaviors, and responses.

Since CPI continues to release innovative online learning tools, it is mandatory to discuss their utility in the *Nonviolent Crisis Intervention*[®] Training Process. It can be useful to consider online simulations as online versions of situational role-plays insofar as they could allow learners to practice deliberate and informed decision making. Simulations potentially offer learners a means to practice and apply *Nonviolent Crisis Intervention*[®] knowledge in a simulated environment. Here, knowledge would be applied at a level beyond rote memory. A simulator can also be expanded to accommodate a wide array of scenarios in order to depict different work settings for different audiences. Therefore, it is feasible for facilities to customize scenarios and thereby customize the simulator to their needs.

While simulators afford practice of course content, it is important to stipulate that refresher course material is optimal in a blended fashion. A simulator is performed online and in a self-paced manner and thus has limited utility for simulating certain aspects of human interaction (e.g., paraverbals and nonverbal communication). Furthermore, learners are provided a finite number of choices rather than the infinite number of verbal and nonverbal responses present in a real-life situation. The online simulation affords practice of deliberate decision making, not interpersonal communication. Total human interaction can only be practiced in the classroom. Consequently, CPI will continue to adhere to a blended model for its online learning initiatives.

Learning tools such as a simulator serve their role in this model by capitalizing on the strengths of online learning. These objects allow scheduling flexibility for the learner, opportunities for repetition at applying *Nonviolent Crisis Intervention*[®] content, immediate feedback, and self-paced review of course content. A simulator is innovative insofar as it affords online application over rote recall—application expanded by the practice of verbal and physical intervention in the classroom.

In this manner, CPI is innovating online learning with techniques supported in the training literature to create a bridge between online and classroom learning. This bridge adds value to *Nonviolent Crisis Intervention*[®] refresher options and can serve an important role for Certified Instructors as part of their *Nonviolent Crisis Intervention*[®] Training Process.

References

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