Rapid Prototyping: An Alternative for Instructional Game Development

The power of video games in capturing and sustaining the interest and devotion of players to master the task at hand, playing the game over and over in search of a higher level of performance, have raised the interest in investigating ways to create and use Instructional games for training purposes. Csikszentmihalyi (1991) describes the flow state that games draw the players into, a state in which little else matters other than the game-related activities, a state that is very powerful in producing conditions that are sought by instructional designers desiring to create instructional events to train people on a set of Knowledge, Skill, and Ability (KSA) that is effective, sustainable for long-term, and transferable from the learning situation to the performance context. The American military is leading the way on the use of games for training their always evolving needs and always changing populations (Prensky, 2001).

Instructional technology programs that prepare students to be skilled professionals who are capable of assuming leadership roles within the field of training and development in various types of business are including Instructional Game Design courses into their programs. Teaching such courses poses interesting challenges for the instructor. This presentation will discuss the evolution of an Instructional Game Development course, initially offered as a face-to-face and now transformed into an online offering.

The Instructional Game Development course (IGD) in discussion is offered once per academic year as part of a Master Program in Instructional Technology. It was first offered in the fall of 2005. The course was face-to-face for 2 consecutive years and was then transformed to online. On all occasions, students were charged to work in groups to produce an instructional game to attend the need of an external client.

Since the students in the program take IGD as an advanced course, they bring to the learning situation a solid basis of Instructional Design and the principles of systematic design of instruction. Because students were familiar and comfortable in applying development models such as Analysis, Design, Development, Implementation, and Evaluation (ADDIE), to create instructional solutions to solve training needs, for the first three offerings of the course the ADDIE model was proposed as the approach for the development of the instructional game to attend the client needs.

While using the ADDIE model led to some degree of success it also resulted in some anxiety and frustration for the students. Because the large portion dedicated to the planning and structuring of game, to complete the analysis and design phases the groups ended up planning very complex game designs to, very often, find out that they could not develop the planned solution for lack of technical expertise and/or time. Adopting the rapid prototype as the development model has led to a higher rate of completion of the solution and the design of more realistic games to be developed. As they produce and test the prototypes and develop the content, interacting with the client and target population for whom they are developing the instructional games, the students also report an extra gain of confidence.

This presentation will include examples of instructional games produced in these classes and will discuss the differences inherent in the two approaches.
References

