

## **Dying to Learn: Instructional Design and MMORPGs**

Dr. Rodney P. Riegle  
Professor of Education  
Illinois State University

Mr. Wesley A. Matejka  
Tech Support Specialist  
Illinois State University

In its broadest sense, an instructional system is an arrangement of resources and procedures to promote learning. In this sense, MMORPGs (Massively Multiplayer Online Role-Playing Games) are clearly instructional systems. EverQuest II, for example, is a carefully orchestrated arrangement of resources and procedures in which players must learn vast amounts of information and skills in order to succeed. In its broadest sense, instructional design is the systematic process of developing instructional systems. In this sense, MMORPGs clearly utilize instructional design.

If it is true, as some have argued (Reigeluth, 1996), that traditional instructional design models are not flexible enough to incorporate new learning environments made possible by the Information Age, then it is important for instructional design theorists to develop new, more robust models that will help guide instructional designers who wish to explore and utilize these new learning environments. Toward that end, this paper will 1) examine the applicability of one traditional instructional design model (namely that of Madeline Hunter) to a new kind of educational environment made possible by the Information Age (namely, MMORPGs), and 2) suggest a few of the essential characteristics that Information Age instructional design models must possess.

### **Traditional Instructional Design**

Madeline Hunter's instructional design research has had a profound and persistent influence on educational practice. Hunter found that no matter what the teacher's style, grade level, subject matter, or the economic background of the students an effective lesson contained eight elements that enhanced and maximized learning. The elements, often referred to as Lesson Design, are used today in most teacher colleges and as a reference for judging teacher effectiveness in many school districts.

1. *Anticipatory Set (AS)* – Anticipatory Set is a short activity or prompt that focuses the students' attention before the actual lesson begins. It is typically used when students enter the room or in a transition. A hand-out given to students at the door, review question written on the board, a problem displayed on an overhead are examples of AS.
2. *Purpose* – Purpose refers to the purpose of the lesson, why the students need to learn it, what they will be able to "do", and how they will demonstrate what they have learned.
3. *Input* – Input includes the vocabulary, skills, and concepts the teacher wishes to impart to the students - the "stuff" the kids need to know in order to be successful.
4. *Modeling* – By Modeling, the teacher shows students in graphic form or demonstrates what the finished product of the lesson should look like.
5. *Guided Practice* – In Guided Practice, the teacher leads the students through the steps necessary to perform the skill using the trimodal approach of hear/see/do.
6. *Checking For Understanding (CFU)* – To Check for Understanding, the teacher uses a variety of questioning strategies to determine whether the students "got it" and to determine the pace of the lesson.

7. *Independent Practice* – Independent practice means that the teacher releases students to practice on their own based on steps 3 through 6.
8. *Closure* – Closure is a review or wrap-up of the lesson and includes having the student tell or show what they have learned. (Kizlick, 2004)

Note that within each element of Lesson Design, there are many sub-skills, methods, and techniques - each demanding training, practice, and review in order to attain mastery. This paper will, however, be limited to an examination only of these eight major elements.

### **Traditional Instructional Design and MMORPGs**

The popularity of online RPGs is staggering. There are currently more than 25 million people playing MMORPGs such as The Sims Online, Runescape, City of Heroes, Dark Age of Camelot, Ultima Online, Star Wars Galaxies, Final Fantasy XI, EverQuest, Lineage I and II, and Ragnarok Online (Woodcock, 2005). Perhaps the most famous MMORPG in the Western world is EverQuest, which launched in 1999 and quickly became a huge success. The sequel, EverQuest II, is now the most popular MMORPG in North America and Europe (but trails the Asian-based MMORPGs Lineage and Ragnarok). Each of Hunter's eight elements can be applied to EverQuest II. However, this requires some analogical reasoning. In the discussion which follows, EverQuest II is analogous to the classroom or learning environment, players are analogous to learners, and the game creators or programmers are analogous to teachers.

### **Anticipatory Set**

The Anticipatory Set is executed immediately upon entering EverQuest II by the teacher/programmer via an introductory movie. The player/learner is presented with the history of the world in which the game is set (Norrath, a world beset by war and natural disasters) and informed of the current dilemma (the inhabitants of the two remaining cities are struggling for power and survival) and his/her role (he/she is a refugee picked up by a ship on its way to the Isle of Refuge). Following the movie, the player/learner is asked to make some quick decisions and is provided with immediate feedback on where those decisions will possibly lead. This is called Character Creation, where the player/learner has to make choices that will define his/her social status, capabilities, and career path. The player/learner must choose his/her race, alignment (good or evil), gender, and even physical features; all of these culminating in a symbiote or digital character, through which the host will play/learn. Each player/learner may create up to four separate and completely different symbiote characters. This is only the first anticipatory set (AS) that a player/learner encounters when he/she first begins the game. Each day or each login, the quest or desire of the player/learner may be different and the symbiote character is presented with a new AS. Though the concept of AS exists in MMORPGs, the emphasis on role-playing and the ability to for the player/learner to play different roles is quite different than in a traditional classroom situation where the student is normally stuck with his/her own identity. Since role-playing allows for a deeper understanding of different aspects and points of view, this seems like an important feature which is not accounted for in Hunter's model.

### **Purpose**

Anyone who has ever heard tales of knights and adventurers of old knows that you must defeat great dragons or lay siege to fortresses to prove your worth. The same is required of the traditional student through lessons and tests. These two elements are brought together in EverQuest II in the form of quests. Each quest and each new day brings about a new purpose for the symbiote character. Just as each class may have a new purpose for the student, each time the player/learner logs into the game, his/her purpose may be different: learn something new, achieve a new goal, or acquire a new item or piece of information.

The purpose is presented to the symbiote character via interaction with non-player characters (NPCs). The symbiote initiates a conversation with a digital NPC who then provides him/her with a problem that has occurred in the virtual world of Norrath and what the symbiote must do to solve the problem. Since this is only one part of a greater adventure, the player/learner is made to understand that moving ahead in his/her long-term quest will require the completion of this short-term quest. However, the player/learner is always in control of which quests he/she will attempt as well as when and how he/she will attempt them. Again, the ability for a player/learner to play different characters with different purposes or even to change purposes with the same character is ignored in Hunter's model.

## **Input**

EverQuest II varies from Hunter's model when it comes to "teacher delivered" content. However, input does exist in many fashions throughout the world of Norrath. In the traditional sense of input, there are the vocabulary, skills and concepts that one must learn to adventure successfully. Within the game, there is a shift from teacher-centered to community-centered communication. The concepts of the lesson/quest are taught to the player/learner from the beginning of the game through the early levels by the teacher/programmer. Each little quest created by the teacher/programmer has the explicit purpose of providing the player/learner with the concept that he/she needs to tackle the greater challenges in the game. Skills are often simply provided to the player/learner within the game. However, mastery of the basic skill set that allows the player/learner to take on greater challenges requires practice in using those skills. The most dynamic input that a player/learner receives comes from the other players/learners in the game rather than the teacher/programmer. The vocabulary is created, adapted, shared, and learned by the player/learner from the other player/learners. For example, "Woot, dinged 18 caster." means "Hooray, I just achieved level eighteen as a mage (magician)."

## **Modeling**

Much like the learning and information transfer that took place in the Input phase, the modeling takes its own form due to the communal (rather than teacher-directed) learning that takes place throughout the virtual environment. The EverQuest II programmer/teacher has created a world that allows the players/learners to communicate and learn from each other. The modeling that takes place in an online adventure comes from the communication between adventurers rather than from the programmer/teacher. For example, when one wizard has completed a quest the resulting information and the bounty and reward for that information become the property of that wizard. The wizard can then share that information via chat, or more often via websites and forums, and other players/learners of the same class and profession may research and study that information. When another wizard sees the outcome of a given quest and recognizes the paths, places, and reward for the successful completion of the quest, they can then tackle that particular quest or even bypass it in search of a greater skill or bounty.

## **Guided Practice**

Early in the EverQuest II game there is programmer/teacher-led guided practice. Once the player/learner ventures beyond the initial tutorial world, guided practice falls into the hands of the community of players/learners once more. Initially, omnipresent text and voice explain what the player/learner must do, shows an example of a player/learner who is doing the same (often in the form of an NPC), and finally makes the player/learner repeat the process to gain the desired skill or understanding. This approach alters later in the game as the player/learner is not taught by the programmer/teacher, but by other players/learners in the community in which they exist. The player/learner is required to demonstrate greater mastery of his/her skills as he/she progress through the game and the complexity of the quests increases. These skills have been learned through trial and error by veteran adventurers and are passed to the "noobies" (new adventurers). Facilitating new player/learners to rise to higher levels and skills is

desirable because the higher level quests require the cooperation of many skilled players/learners. Thus, the incentive for this passing of skills is built into the fundamental design of EverQuest II. This incentive for learner-learner guided practice is not built into the traditional educational system and it is therefore not surprising that it neither occurs in real life nor is it a feature of Hunter's model.

### **Checking For Understanding (CFU)**

Both programmer/teacher communication and communal (player/learner-to-player-learner) communication takes place from beginning to end in EverQuest II. However, there is always a point at which the programmer/teacher communication is not sufficient and is, by necessity, augmented by communal communication. In any event, there is always some form of CFU. When one player/learner finds a task to be greater than their realm of skills is able to conquer, he/she is forced to join a group. These groups will then move ahead with the given quest in an attempt to overcome the obstacle together. (Yee 2004) The form of CFU that takes place is most often played out through in-group communication. For instance, if a group of six adventurers are planning on taking on a mob of five or more "agros" (aggressive objects) there must be a constant CFU. If each of the six group members attacks a different agro, the attack is bound to fail; however, if each member communicates and CFU's with the rest of the group, a coordinated attack takes place. If the group fails to CFU before, during and after the battle, they will continue to lose and fail to defeat their opponents. Thus, as is the case with the previous element of Guided Practice, Hunter's model seems to ignore the communal possibilities for CFU. And again, this is likely because communal CFU is deeply embedded into the EverQuest design, but not into traditional classroom practice.

### **Independent Practice (IP)**

The world of EverQuest II provides for a high degree of freedom and practice learning. As the players/learners travel, communicate, form groups, tackle quests, work on personal skills, and so on, the game and the environment teach them in a way that is much more direct than traditional instruction. In addition, failure, which takes the form of dying, is neither unusual nor the end of the quest. Since a player/learner is easily revived after dying, he/she can simply choose to start over again (this time with a better knowledge of how to succeed). EverQuest II allows unlimited time and unlimited attempts to master the content. In addition, the penalty for failure/dying (i.e., an experience debt that must be worked off) is applied to all group members. Thus, there is an incentive for everyone to help members who are in danger of dying for the greater good of the group. But even when the entire group dies, it is viewed as a learning experience that can eventually be used as a springboard for future group success. The communication and communal learning that takes place "in real-time interaction with other users does hold a potent attraction" (DiBlas, Paolini et al. 2003). And once again, this communal facet of IP is not accounted for in Hunter's traditional model of instructional design.

### **Closure**

EverQuest II does not have a traditional wrap-up or review built into it. However, there are ample opportunities for the player/learner to show and/or tell what they have learned. After receiving quest instructions from an NPC and then fulfilling the requirements of the quest, the player/learner then seeks out the same NPC to gain a reward. There is no learner-to-teacher communication that allows the player/learner to show the NPC what they have done or learned. However, completing the quest is direct evidence that the player/learner has mastered the necessary skills and gained the necessary knowledge. In addition, it is in the player/learner's best interests to share (i.e., show or tell) the skills and knowledge that he/she has gained with other player/learners. Thus, in this sense, closure is already deeply embedded into the design of EverQuest II in a way that is usually not present in traditional classroom situations. It could be argued that EverQuest II lacks the opportunity for reflective learning which is what true closure is all

about. However, the upper levels of EverQuest II require a deep understanding of the environment as well as the quest and a complex level of constant communication among players/learners. It could be argued that reflection is not only possible, but absolutely required in order to progress through these advanced levels. Moreover, opportunities for reflection outside of the game exist in EverQuest II forums which nearly all players/learners visit and where many post. Hunter's model does not account for the communal aspect of such virtual environments and consequently lacks the proof of learning concept that takes place in virtual group environments and greater virtual communal environments such as guilds (large collections of adventurers that form bonds and plan quests together.)

### Instructional Design in the Information Age

It is clear that Hunter's traditional instructional design model does not account for certain significant elements of EverQuest II, particularly non-linear/non-coercive learning, learning from role-playing, communal learning, and learning through dying/failure. Furthermore, each of these MMORPG elements provides instructional designers with potentially important instructional tools.

The ultimate revolution in instructional design may have to wait until today's students, who have never known a time without video games or the Internet, become tomorrow's teachers. In the meantime, today's teachers would clearly benefit from exposure to MMORPG design theory and collaboration with MMORPG designers. Make no mistake, MMORPGs have had a profound impact on today's students – they are just dying to learn.

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### Biographical Sketches

**Dr. Rod Riegle** is a professor of education at Illinois State University. He earned a B.A. in education from Wittenberg University and an M.A. and Ph.D. in philosophy of education from Ohio State University. Dr. Riegle is the author of 4 books and 50 articles on a wide variety of topics on every level of education. He has made more than 50 national and international presentations to scholarly organizations and has served as a consultant on information technology to over 40 educational organizations. He developed the world's first online RPC (role-playing course) and has taught more than 3,000 students online.

Address: 123 South Orr Drive

Normal, IL 61761

E-mail: [rpriegle@ilstu.edu](mailto:rpriegle@ilstu.edu)

URL: <http://coe.ilstu.edu/rpriegle/>

Phone: 309-824-2639

Fax: 309-438-8683

**Mr. Wes Matejka** is the acting Director of Technology Services for the College of Education at Illinois State University. He also provides instructional technology support for College of Education faculty. He earned a B.S. in economics from Illinois State University. He is currently a master's student in Instructional Technology Design at Illinois State University and a level 50 Alchemist and

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Mage/Illusionist in EverQuest II. He has participated in three of the last four QuakeCon gaming conventions and gamed with some of the best gamers in the world.

Address: Wesley Matejka

E-mail: [wmatejka@ilstu.edu](mailto:wmatejka@ilstu.edu)

URL: [www.coe.ilstu.edu](http://www.coe.ilstu.edu)

Phone: 309-438-7055

Fax: 309-438-7584