

**Assignment 3 – Instructional Technology**  
Mark Rash | [markrash@vt.edu](mailto:markrash@vt.edu) | January 24, 2011

*Reflective Activities*

**Describe and discuss how you viewed instructional technology prior to beginning this program and whether or not your view has changed.**

Prior to my experiences in the ITMA program, I viewed instructional technology as ways that technology can be used in education. I thought of instructional technology as technological solutions to learning problems. Since my view of technology itself was inadequate, my view of instructional technology was also inadequate, because my preconceived notion was that instructional technology must be primarily about designing technical learning solutions, such as multimedia programs. My view has changed as a result of the ITMA program, as I have discovered that instructional technology is all about systematically organizing information, activities, and media in order to facilitate learning. I also have learned that instructional design is a subset of instructional technology, whereas I had previously assumed that instructional technology was essentially “instructional design using computers and multimedia.”

**Discuss whether or not the definition of technology given in Lesson Two can be extended to provide a meaningful definition of instructional technology. Think beyond simply words that are alike in each definition. Does the extension of the definition provide an accurate description of instructional technology?**

The ITMA definition of technology can certainly be extended to provide a meaningful definition of instructional technology. Instructional technology begins with a relevant body of knowledge – that of the subject matter to be taught (or at least an overall goal or idea that will be further explored throughout the application of instructional technology to the situation at hand), as well as that of the instructional design and development process and learning theories. Because instructional technology would not be occurring without a specific end result in mind, it also involves the willful application of that knowledge to specific resources that can help bring about the desired result (i.e. the instructional goal).

The instructional design and development process is purposeful and replicable, as it involves a series of phases that lead from an initial goal statement, through analysis, design, development, implementation, and evaluation. Instructional Technology is applied within a specific context, which is thought of in terms of the learning environment, performance environment, and the learners themselves. Finally, achievement of the instructional goal is the predetermined output or outcome. I feel this extension and application of the definition is an accurate description of instructional technology because it covers all the aspects of the given definition of technology and it covers all the aspects of instructional technology.

**Think more about the outcomes of instructional technology. In your view, do you, as an instructional technologist, produce outcomes and, if so, what are they?**

There are a number of outcomes of the various components of instructional technology,

many of which are used as inputs in other phases. For instance, the instructional design process results in creation of specifications in the form of a design document that will be used to develop a learning solution. The final outcome of instructional technology could be an instructional product of some kind, whether it is a self-guided multimedia program or a classroom learning experience. The final outcome could also be thought of in terms of structured knowledge, processes, and ideas used in an attempt to facilitate learning. As an instructional technologist, I produce outcomes such as instructional materials, facilitator guides, participant workbooks, instructional multimedia computer programs, job aids, web sites to support instructors in the classroom, and activities to support learning. I produce outcomes intended to help the learner achieve the instructional goal. In this sense, the structured approach and processes of instructional technology are more important than a potential physical product.

**Think about the instructional design process as a form of technology. What is the predetermined outcome of the instructional design process? Is the outcome the same every time the process is conducted? If not, do resources, processes, and knowledge have any effect on the changing outcomes?**

The predetermined outcome of the instructional design process is a set of specifications that will be used to develop an instructional solution. This outcome is then fed into the development process, which in turn results in implementation and evaluation. The final predetermined outcome of the instructional design process is an instructional solution, which could be a lesson plan to be used by an instructor, an instructional multimedia program for self-guided use by the learner, a collection of job aids or similar devices intended to help learners achieve specific objectives in the performance environment, facilitator guides to help instructors lead classroom instruction, and participant workbooks and handouts for use by learners in the classroom. In other words, the final predetermined outcome of instructional design is some sort of instructional product consisting of materials, learning objectives, and events that are intended to occur to enable learners to achieve the instructional goal.

The specific outcome is not the same every time the instructional design process is conducted, since the instructional goal, performance objectives, learning and performance contexts, and audience will likely be different each time. Additionally, the resources that will be available to the instructional technologist and to the learner will likely be different in each situation. Still, if an effective learning solution is to be developed, the processes involved with instructional design will be the same. The instructional technologist will analyze the needs and establish an instructional goal; analyze the goal to identify requisite skills and skills to be taught; analyze the learners, performance environment, and learning environment; write performance objectives and assessment items; create an instructional strategy; develop and/or select instructional materials; evaluate instructional effectiveness; and revise materials accordingly.

**Decide if you agree with the statement that learning is not an outcome of the instructional technology process. Explain your justification for this position.**

I agree that learning is not an outcome of the instructional technology process. The instructional technologist uses the process to do everything she/he can to facilitate

learning; however learning is a process that is internal to the individual learner. Unfortunately, even the best-designed outcome of instructional technology does not guarantee that effective learning will occur in every learner. Despite the best efforts of the instructional technologist, there are still other variables at work, including the learners' interest and capabilities, and the learning environment, as well as other issues that may be outside the instructional technologist's control.

### *Applied Activities*

#### **Describe a predetermined output or outcome you produced by instructional technology.**

I recently designed and developed a multimedia instructional program for call center associates in my organization. The 30-minute self-paced instructional program was intended for all Customer Service associates who support customers in our small business segment. The subject of the program was the recently revised return policy. This gave the program two overall purposes – informing associates of the updated policy and helping associates understand and react appropriately to specific decision points when executing the policy in given return scenarios.

#### **Describe how instructional technology was applied to produce that predetermined output or outcome. In addition, describe how the instructional design process, as a subset of instructional technology, affects you to produce the predetermined output or outcomes.**

The business made the decision to revamp the return policy, thus the topic was mandated for training and did not need analysis in terms of deciding whether an instructional problem existed. I used instructional technology to produce the predetermined output by adapting the organizational goal into an instructional goal. Due to past experience with the audience, performance context, and learning context, limited analysis was required; however I performed analysis of the instructional goal in order to fully understand exactly what kind of training solution needed to be developed. After this analysis, I continued using instructional technology to write specific, measurable performance objectives upon which all of the instructional materials would be built. I then wrote assessment items to correspond with the objectives. I worked with the project business partner to finalize and receive signoff on an instructional strategy that would be appropriate for the audience and subject matter.

Once the strategy was in place, I moved into the development phase, which involved establishing how I would gain learner attention, establish relevance for learning the material, build confidence in the learners, and provide opportunity for learner satisfaction as a result of learning the new skills. The development phase also involved creating the actual multimedia program in Adobe Flash, setting up the lesson in the

Learning Management System, reviewing the program with subject matter experts and potential learners to solicit feedback for improving the program, and making revisions based on that feedback.

After developing and finalizing the program, and receiving final signoff from the business, I implemented the program by adding it to the learning system library and requesting Workforce Planning to schedule the associates to take the lesson. Once the program ran for about a month, I worked with my business partners to evaluate how well the associates were applying the new return policy to real situations they face on the job – primarily with the help of supervisors and quality assurance personnel who monitored customer calls.

**Describe what inputs or resources were used in the process of producing the outcome.**

The primary input used for producing the multimedia program was the new return policy itself. Secondary inputs included feedback and additional detail from my business partners. Some of the resources that I used included my laptop, keyboard, mouse, monitor, Microsoft Word, Adobe Flash CS4, Adobe Photoshop, Adobe Dreamweaver, SAP Learning Solution, and the corporate intranet site.

**Describe the body of knowledge you employed to perform the application and/or produce the outcome.**

In reflecting back on the project, a great deal of knowledge was required to produce the outcome. Beginning with the basic, I had to know how to use a computer – everything from turning the computer on, to interacting with it using a keyboard and a mouse, and using the Windows operating system. I had to know how to use Word, Flash, Photoshop, Dreamweaver, and SAP LMS. I had to know how to program using ActionScript 2.0, how to build and publish multimedia components in Flash, and how to integrate the two in order to produce a usable product.

Beyond the technological skills required to produce the outcome, I also had to know the instructional design and development process, with particular emphasis on my employer's approach to the model, which follows the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) model. I had to know how to take business lingo and break it down into manageable chunks that my learners could comprehend and apply easily and accurately on the job. I also had to know my business, audience, and subject matter.

**Discuss the specific context in which the application of the body of knowledge to appropriate inputs occurred.**

My office in the call center was the primary context in which I applied knowledge to appropriate inputs for production of the multimedia program. My office is in the same

call center in which the learners access the multimedia program and is the same environment in which the learners are expected to perform the objectives covered. This allowed me to understand my audience, learning environment, and performance context as I worked through the instructional design and development process to create the multimedia program. The call center environment was the context in which I applied the body of knowledge to the various inputs required to produce the final outcome.