

Assignment 2 – Review of Technology
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A Predetermined Output I Have Produced Using Technology

In the Project & Report module of the ITMA program at Virginia Tech, I produced an e-learning program in Adobe Flash CS4. The program was called the Global Office Products Virtual Store and was a simulated store environment intended to train newly hired retail associates on the fundamentals of their job within the first 30 days of employment.

Process Employed to Produce the Output

Production of the Virtual Store multimedia program was a complex process. It began with a single idea that I prepared into a formal project proposal, including a description of the final project outcome, specific objectives that I would accomplish as a result of work performed on the project, the materials and methods that I would use to create the project, justification for the project, and the criteria by which the project would be evaluated. I used the keyboard to input the information into Microsoft Word on my desktop computer. I used Firefox to access the online materials and grading rubric for the proposal assignment. I used the mouse to interact with the computer and all of these components to produce the final document.

I used the same type of procedure to produce other documents as I moved through the Instructional Design process with the project. One of the primary documents was the design report, which included the needs assessment, goal statement, goal analysis, instructional analysis, learner analysis, context analysis, objectives and assessment items, instructional strategy, content organization and presentation, and authoring and delivery. Producing this document also involved the same steps of using the keyboard and mouse to interact with Microsoft Word and Windows 7 to create a printable document. It also involved additional research and consideration in determining why the multimedia program was needed, who it was intended to reach, what it was intended to accomplish, and how I would measure its effectiveness. These components are all part of the instructional design and development process, in which I moved through the phases of assessing needs to identify the goal; conducting instructional, learner, and context analyses; writing performance objectives; developing assessment instruments; and developing an instructional strategy.

Once the analysis and design phases were completed, I moved into the development process, in which I took the design report and began to build the components to bring it to fruition. This involved interacting with the keyboard and mouse to create multimedia components in Flash, to program the primary and secondary logical components using ActionScript, to incorporate the design elements into a working multimedia program, and to create and deploy an evaluation instrument (also a Word document) to determine

how the multimedia program could be improved. I then repeated various parts of the process to perform the revisions and submit the final product.

Inputs & Resources Used to Produce the Output

I used numerous resources to produce the final product. Some of these resources included the computer, hard drive, keyboard, mouse, monitor, Windows 7, Adobe Flash CS4, Adobe Dreamweaver CS4, PhotoFiltre, Dia illustration software, BitKinex for uploading files, DVD burner and burning software, web browsers, and Microsoft Word & Excel. I also used a photo library of store images, as well as TextAloud speech synthesis software. Some of the inputs included the analysis and design research and documents that were created during the analysis and design phases of the Instructional Design process. Inputs also included the project proposal and feedback comments from the instructor. Other inputs and resources included tutorials and books that I used to learn how to program in ActionScript 3.0 and to appropriately use a simulation and game product to support effective learning. All of these inputs were direct drivers of the development process. In fact, the final product would have been extremely limited in its quality and effectiveness without these crucial inputs.

Body of Knowledge Required to Produce the Output

To produce the Virtual Store multimedia program, I had to know the basics of using a computer (such as using a monitor, keyboard, and mouse), creating documents using Microsoft Word and Excel, and printing documents. I had to know how to use Adobe Flash to create both the graphical and multimedia components as well as the programming components. I had to know the ActionScript 3.0 language and how it can be used to create a multimedia program. I also had to have an idea of what I wanted to accomplish in the program.

Looking beyond the aforementioned knowledge required to create any multimedia program, I had to know what my specific program was intended to accomplish. I had to have an idea that was appropriate for a multimedia program. With this particular program being an instructional program, I also had to know what I needed to do in order to make a genuine learning experience. I had to have knowledge of the instructional design and development process, which took my idea from a proposal, to an analysis of the needs and creation of an instructional goal for a specific audience, to creation of performance objectives, formation of an instructional strategy, and finally development of the end product. I had to have knowledge of what an instructional strategy should look like and how to use it; I had to know how to write measurable performance objectives; I had to know how to chunk information into manageable units so that learners can focus their attention appropriately. I had to have knowledge of appropriate evaluation strategies and how to use the results to improve instruction. I had to know how games and simulations can be used to support an effective instructional strategy. Finally, I had to know how to burn DVDs, upload files to a web server, and how to test multimedia programs in multiple environments to ensure they perform satisfactorily.

Context of Producing the Output

I primarily used my home office to produce the multimedia program. In my office I have a number of computers and monitors, as well as all the resources previously identified. On my main desk is my primary computer which I used to do most of the work. The office is in the basement of my home and is a quiet, supportive environment in which to do the in-depth analysis and work required to produce the multimedia program. My wife, who is also an online student, shares the office space using another computer and we were often working on various tasks at the same time.

In order to test functionality from within different environments, I also used secondary sites, including my office at work, my parents' computer room, and my work laptop.

A Specific Technology Used to Produce the Output

Perhaps the most important technology used to produce the output was the instructional design and development process. I chose to discuss this technology because it was the primary roadmap that guided all the activities involved with producing the output. In thinking of Roy's classifications, the instructional design and development process does not really seem to fit into one particular category. It falls within the category of an organized body of knowledge, because regardless of the intended final product, the same process flow is used to move from an original idea, through analysis and design, to a fully developed product. The instructional design and development process also falls into the category of the products of organized knowledge, since each phase of the process results in products that are used as inputs in the next phase or perhaps a previous one due to its iterative nature. The process also deals with applying organized knowledge, both in terms of knowledge of how people learn and how to best support that learning, as well as in terms of how to produce the various elements required throughout the instructional design and development process, and how to translate from theory to an effective instructional product.