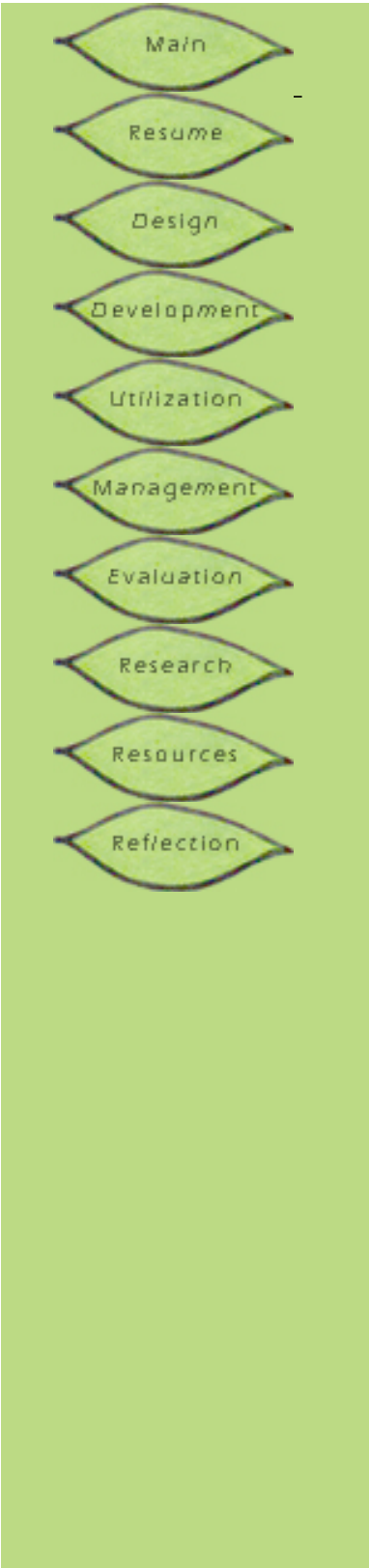




Jessica

an ITMA portfolio

My name is Jessica Hingle and I am a student in Virginia Tech's ITMA program. I am hoping to complete my Master's Degree in 2009. I grew up in Mount Vernon, Virginia, and completed my undergraduate work at Rochester Institute of Technology in 2001. In the past, I have been employed as a software trainer and Help Desk technician, specializing in desktop software support. I currently work for Raytheon NetOps and Information Solutions, where I am a Department of Defense contractor who handles the outreach and education efforts for a division within the Defense Information Systems Agency.



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de·sign

Design is a planning function. Through the design process you specify the conditions that are part of the learning environment.

Standards

1.1 Instructional Systems Design (ISD) - "Instructional Systems Design (ISD) is an organized procedure that includes the steps of analyzing, designing, developing, implementing, and evaluating instruction" (Seels & Richey, 1994, p. 31).

1.2 Message Design - "Message design involves planning for the manipulation of the physical form of the message" (Seels & Richey, 1994, p. 31)

1.3 Instructional Strategies - "Instructional strategies are specifications for selecting and sequencing events and activities within a lesson" (Seels & Richey, 1994, p. 31).

1.4 Learner Characteristics - "Learner characteristics are those facets of the learner's experiential background that impact the effectiveness of a learning process" (Seels & Richey, 1994, p. 32).

The design component of the ITMA program has opened my eyes to the many elements of instructional design that I had overlooked in the past. I had not previously considered the relationship between attributes of the learners and message delivery. This caused me to realize that some of my previous methods and techniques for message delivery were not optimum for my targeted audience. For example, I did not take the learner's prior knowledge or ability to utilize technology into account when creating some of the Help Desk documents. The result was that some users were unable to access information due to physical limitations, such as websites that were not compatible with text readers for learners with visual limitations, and other users were not able to understand the information due to a lack of basic knowledge within the subject. My products were simply off-target for the intended audience and therefore not as effective as they could be. In the future I will consider all aspects of design in order to create a combination that is the most effective.

The following artifacts showcase my experience with design:

Needs Assessment, Strategy, and Objectives

Needs assessment, strategy, and objectives for an instructional product that will teach employee to utilize the installed CD burning software to back up their locally stored files without contacting the help desk for personal assistance. *Microsoft Word format.*



Meets standards:
1.1 Instructional Systems Design
1.3 Instructional Strategies
1.4 Learner Characteristics

Storyboard

Storyboard for an instructional product that will teach employee to utilize the installed CD burning software to back up their locally stored files without contacting the help desk for personal assistance. *Microsoft Word format.*



Meets standard:
1.2 Message Design

Graphics

Selection process for graphics intended for use in a lesson that will showcase the capabilities that the Core Services Team can provide to our government clients. *Microsoft Word format.*



Meets standard:
1.2 Message Design

Needs
Assessment,
Instructional
Strategy, and
Graphics

Needs assessment, instructional strategy, and graphic design for a lesson intended to inform dog owners about the signs, symptoms, and both symptomatic and long term treatments for dogs with allergies. At the conclusion of the lesson, learners will be able to recognize the signs and symptoms of a dog that is experiencing an allergic reaction and administer the appropriate symptomatic and desensitization treatments.
Microsoft Word format.



Meets
standards:
1.1 Instructional
Systems Design
1.2 Message Design
1.3 Instructional
Strategies
1.4 Learner
Characteristics

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de·vel·op·ment

Development is the actual creation of instructional materials.

Standards

2.1 Print Technologies - "Print technologies are ways to produce or deliver materials, such as books and static visual materials, primarily through mechanical or photographic printing processes" (Seels & Richey, 1994, p. 37).

2.2 Audiovisual Technologies - "Audiovisual technologies are ways to produce or deliver materials by using mechanical devices or electronic machines to present auditory and visual messages" (Seels & Richey, 1994, p. 38).

2.3 Computer-Based Technologies - "Computer-based technologies are ways to produce or deliver materials using microprocessor-based resources" (Seels & Richey, 1994, p. 39).

2.4 Integrated Technologies - "Integrated technologies are ways to produce and deliver materials which encompass several forms of media under the control of a computer" (Seels & Richey, 1994, p. 40).

My development process was previously very ad hoc, involving creation and frequent re-creation until the end product was satisfactory, yet far from what was originally intended. Most products were only in a format that I was familiar and comfortable with. Through the ITMA program I have realized how development can be influenced and controlled by the design process, resulting in a more effective development experience. To be specific, with a solid design, development can be streamlined so that the end product is not a "surprise." Additionally, I was exposed to many more mediums that I was previously familiar with. In the future, I intend to utilize this strong relationship between design and development, as well as my knowledge of additional mediums to create a solid process for product creation.

The following artifacts showcase my experience with development:

HTML

The purpose of this lesson, developed in HTML, is to enable employees to utilize the installed CD burning software to back up their locally stored files without contacting the help desk for personal assistance. *HTML and QuickTime format.*



Meets standards:
2.2 Audiovisual Technologies
2.3 Computer-Based Technologies
2.4 Integrated Technologies

Unedited Video Sequence

The video in its current state could be used to gain attention and promote an attitude for the cemetery. *QuickTime format.*



Meets standards:
2.2 Audiovisual Technologies
2.3 Computer-Based Technologies

Edited Video Sequence

The program demonstrates every step in the skill of carving a pumpkin. *QuickTime format.*



Meets standards:
2.2 Audiovisual Technologies
2.3 Computer-Based Technologies

Audio

The topic of this lesson, developed in PowerPoint, is pluralizing words that end in a “y” following a vowel. The lesson is presented in computer-based tutorial format with included audio for further comprehension by students whose reading skills may be lacking.

Microsoft PowerPoint format.



Meets
standards:
2.2 Audiovisual
Technologies
2.3 Computer-Based
Technologies
2.4 Integrated
Technologies

Graphics

The purpose of this lesson, with graphics developed in Photoshop and PowerPoint, showcase the capabilities that the Core Services Team can provide to our government clients. *Microsoft PowerPoint format.*



Meets
standards:
2.2 Audiovisual
Technologies
2.3 Computer-Based
Technologies

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u·ti·liz·a·tion

Utilization includes the use of processes and resources for learning, with the focus on the user's perspective.

Standards

3.1 Media Utilization - "Media utilization is the systematic use of resources for learning" (Seels & Richey, 1994, p. 46).

3.2 Diffusion of Innovations - "Diffusion of innovations is the process of communicating through planned strategies for the purpose of gaining adoption" (Seels & Richey, 1994, p. 46).

3.3 Implementation and Institutionalization - "Implementation is using instructional materials or strategies in real (not simulated) settings. Institutionalization is the continuing, routine use of the instructional innovation in the structure and culture of an organization" (Seels & Richey, 1994, p.47).

3.4 Policies and Regulations - "Policies and regulations are the rules and actions of society (or its surrogates) that affect the diffusion and use of Instructional Technology" (Seels & Richey, 1994, p. 47).

Utilization is an area that I struggled with understanding throughout the course of the ITMA program. I frequently reverted back to thinking of it as utilization of technology in the design and development process, instead of utilization of instructional materials and resources from the learner's perspective. Over time I have readjusted my perspective and now understand the importance of this component. Instruction is centered on the learner and their ability to utilize the materials and resources. If learners are not able to do so, then the instruction is not effective.

I believe that part of the reason I struggled with this section is because I am not a traditional classroom instructor. In the past, I had not interacted with many of the individuals who utilized my Help Desk materials because the job did not specifically request that I do so. With my new understanding, I am going to pay close attention to utilization of materials by the learner and incorporate the findings into the design of documents. I believe this will allow me to create more effective instruction.

The following artifacts showcase my experience with utilization:

Distance Learning Discussion

Describes communication between students as well as with instructors, issues encountered, and how those issues have been resolved. Also, describes the types and uses of media within certain lessons or courses. *HTML format.*



Meets
standard:
3.1 Media
Utilization

Analysis of the Learner and Environment

The "Learner Analysis" and "Context Analysis" sections of this document detail the characteristics of the learner and the environment at DISA, with a discussion of matching instructional materials to their needs. *Microsoft Word format.*



Meets
standard:
3.1 Media
Utilization

Educational Value for the Learner

Analysis of how Shockwave materials add to the educational value of a site, from the perspective of the learner. *HTML format.*



Meets
standard:
3.1 Media
Utilization

Telecommunications Usage

Discusses incorporating telecommunications usage in the educational setting, with focus on characteristics of learners, student responsibilities, the effects of psychological distance, and the selection of appropriate media.
Microsoft Word format.



Meets
standard:
3.1 Media
Utilization
3.3
Implementation
and
Institutionalization

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man·age·ment

Management includes the actual or planned management of projects, resources, delivery systems, or information.

Standards

4.1 Project Management - "Project management involves planning, monitoring, and controlling instructional design and development projects" (Seels & Richey, 1994, p. 50).

4.2 Resource Management - "Resource management involves planning, monitoring, and controlling resource support systems and services" (Seels & Richey, 1994, p. 51).

4.3 Delivery System Management - "Delivery system management involves planning, monitoring and controlling 'the method by which distribution of instructional materials is organized' . . . [It is] a combination of medium and method of usage that is employed to present instructional information to a learner" (Seels & Richey, 1994, p. 51).

4.4 Information Management - "Information management involves planning, monitoring, and controlling the storage, transfer, or processing of information in order to provide resources for learning" (Seels & Richey, 1994, p. 51).

Management is not an area in which I have much previous formal experience, but I am looking forward to applying my knowledge from the ITMA program to a new position this fall. I have grown to understand that all aspects of the instructional design process benefit from some degree of management, so that variables can be controlled and anticipated results more easily achieved. Specifically, I have learned about the aspects that need to be considered when managing information and resources, detailed in the artifacts below, which are both areas that can be applied to my new employment. I feel that the application of these new skills will help me to formalize my processes and procedures, causing them to be more reliable and repeatable.

The following artifacts showcase my experience with management:

Information Management

Showcases planning, monitoring, transfer, and processing of information of the efforts between the Human Resources, Information Technology, and Training departments to accomplish an in depth evaluation of Ethics Training for inclusion in the Raytheon training curriculum. *Microsoft Word format.*



Meets
standard:
4.4 Information
Management

Resource Management

Review of an article discussing cost, maintenance, and management of a system that provides each student in a school system with an individual laptop. *HTML format.*



Meets
standard:
4.2 Resource
Management

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e·val·u·a·tion

Evaluation determines the adequacy of something. This something may be a project, a program, or even a product, and in the end, a value is assigned to the thing.

Standards

5.1 Problem Analysis - "Problem analysis involves determining the nature and parameters of the problem by using information-gathering and decision-making strategies" (Seels & Richey, 1994, p. 56).

5.2 Criterion-Referenced Measurement - "Criterion-referenced measurement involves techniques for determining learner mastery of pre-specified content" (Seels & Richey, 1994, p. 56).

5.3 Formative and Summative Evaluation - "Formative evaluation involves gathering information on adequacy and using this information as a basis for further development. Summative evaluation involves gathering information on adequacy and using this information to make decisions about utilization" (Seels & Richey, 1994, p. 57).

5.4 Long-Range Planning - Long-range planning that focuses on the organization as a whole is strategic planning....Long-range is usually defined as a future period of about three to five years or longer. During strategic planning, managers are trying to decide in the present what must be done to ensure organizational success in the future." (Certo, et al, 1990, p. 168).

In the past, I had understood that products needed to be evaluated internally prior to release, but I was not aware of the wide range of evaluation types that can strengthen products in creation and assist with selecting appropriate existing products. Throughout the ITMA program I learned about problem analysis, criterion-referenced measurement, formative and summative evaluations, and how to utilize the results of these techniques in order to improve products in the future. As a result, my perspective on the types and utility of evaluation techniques has broadened a great deal.

I anticipate that evaluation will be one of the most emphasized task areas in my new employment, so I selected this component for my Project and Report, detailed below, in order to gain additional experience. Throughout the process I encountered some bumps in the road, but I feel that in the end I had a greater appreciation for the amount of work that goes into a full formal evaluation. I have shown the end result to my employer who was very pleased with the effort and intends to continue using the same process in the future.

The following artifacts showcase my experience with evaluation:

Evaluation
Criteria

The categories and subcategories created for a software evaluation checklist intended for use when evaluating software for use in Joint Capability Technology Demonstration division within the the military.

Microsoft Word format.



Meets standard:
5.3 Formative and
Summative Evaluation

Graphic Design
Evaluation

This document evaluates the effectiveness of using graphics in a presentation intended to showcase the capabilities that the Core Services Team can provide to our government clients.

Microsoft Word format.



Meets standard:
5.3 Formative and
Summative Evaluation

Software
Evaluation

Evaluation of Soil Safari, from the Dirt on Soil series, written and produced by Educational Web Adventures.

Microsoft Word format.



Meets
standards:
5.1 Problem Analysis
5.3 Formative and
Summative Evaluation

Project and Report

This paper will discuss historical research in the area of computer-based training evaluation and detail an in-depth formative evaluation of the two computer-based training products:



1. *Business Ethics: An Introduction*
2. *Ethics reConneccion 2008*

The paper conclude with a recommendation as to which training module, or a combination of both, would be best suited for meeting the learning objectives in the Raytheon NetOps and Information Systems employees in their work environments. *Microsoft Word format.*

Meets standards:
5.1 Problem Analysis
5.2 Criterion-Referenced Measurement
5.3 Formative and Summative Evaluation
5.4 Long-Range Planning






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re·search

Includes developing an awareness of approaches and issues in quantitative and qualitative research as it relates to Instructional Technology.

Almost every course in the ITMA program has involved some level of research, from simple quests for information to detailed papers. I have grown to realize that research is not limited to scholarly articles, but rather it extends into practically every area of my employment. I found the Educational Research course, with artifacts below, to be very helpful in teaching me how to create sound reasoning behind my research. In particular, I learned a lot about the types of research techniques that can be utilized to effectively examine information. I did struggle with the technique definitions in the beginning, but after some intense studying I came to understand the concepts. I intend to use these learned skills when creating proposals for training products and curriculum in my new position. I feel that evidence of solid research will strengthen my position and help justify my reasoning when it is presented to my supervisors.

The following artifacts showcase my experience with research:

Selecting Research Techniques	Matching research techniques to posed research questions. <i>Microsoft Word format.</i>	
Quantitative Data	Critique of the article entitled "The Effect of Graphic Format on the Interpretation of Quantitative Data." <i>Microsoft Word format.</i>	
Research Critique	Critique of the article entitled "An Evaluation of Computer-Based Programmed Instruction for Promoting Teacher's Greetings of Parents by Name." <i>Microsoft Word format.</i>	
Instrument Validity	Instrument validity in relation to the study of modern art. <i>Microsoft Word format.</i>	
Research Report	The primary topic explored in this paper is the success of the United States Marine Corps' (USMC) Marine Corps Institute (MCI) correspondence courses. <i>Microsoft Word format.</i>	

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re·SOURCES

Includes identifying relevant resources that are appropriate to use in Instructional Technology.

Resources in My Area of Expertise

A listing of resources that apply to my area of expertise, software programs within the Department of Defense (DoD). *Microsoft Excel format.*



Web Resource Implications

A listing of resources to help deal with the implications of using the web to meet your needs. *Microsoft Excel format.*



Resource Issues

A listing of issues that affect the ability to access needed resources. Microsoft Excel format. *Microsoft Excel format.*



Document Viewing Applications

Microsoft Word Reader

Free download that will allow you to view, print and copy Word documents, even if you don't have Word installed. *Link to website.*



Microsoft PowerPoint Viewer

Free download that will allow you to view full-featured presentations created in PowerPoint 97 and later versions. *Link to website.*



Microsoft Excel Viewer

Free download that will allow you to open, view, and print Excel workbooks. *Link to website.*










QuickTime Viewer

Free download that will allow you to view QuickTime movies. *Link to website.*



re·flec·tion

Variety of narratives documenting personal insight and growth in your journey to becoming an Instructional Technologist.

Preliminary Views of IT	Discusses my preliminary views of Instructional Technology. <i>Microsoft Word format.</i>	
My Needs, the Web, and Education	Reflects on my new understanding of my needs as both a student and educator and how the World Wide Web relates to those needs. <i>Microsoft Word format.</i>	
Use of Video Techniques	Reflects on the use of video techniques in two video sequences. <i>HTML Format.</i>	
Technology in the Classroom	Discusses "The Children's Machine: Rethinking School in the Age of the Computer." by Seymour Papert. <i>Microsoft Word format.</i>	
Systemic Change	Discusses "The Imperative for Systemic Change" by Charles M. Reigeluth. <i>Microsoft Word format.</i>	
Trends and Issues	Discusses "Trends and lissues in Instructional Design" by Robert Reiser and Jack Dempsey. <i>Microsoft Word format.</i>	
Definition of Technology	Discusses how my views of technology have changed over time. <i>Microsoft Word format.</i>	

What is Technology?

Reflects on the definition and context of technology. *Microsoft Word format.*



Inputs and Outcomes of Technology

Reflects on the inputs and predetermined outcomes of technology. *Microsoft Word format.*



My Changing Views of IT

Reflects on how my views of Instructional Technology changed as I progressed through the ITMA program. *Microsoft Word format.*



Applying IT to My Professional Context

Reflects how Instructional Technology applies to my current employment. *Microsoft Word format.*



My Previous Views of Instruction

Reflects on my views of instruction prior to the ITMA program. *Microsoft Word format.*



My Current Approach to Instruction

Reflects on my approach to instruction following the ITMA program. *Microsoft Word format.*



Personal and Professional Reflections

Reflects on how the ITMA program has altered both my personal and professional approaches. *Microsoft Word format.*



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