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IT 500: **Principles of Instructional Technology**
Initial Design Project
September 24, 2008

Brad – Let me start by saying that I have thought your project was a good idea from the first time I heard about it. That being said, my experience with military jargon, military concepts, and even people in the military is extremely limited on a good day. Not that I'm not appreciative of those who serve, quite the contrary. As you know I do everything I can to work with my students who are in the military and are deployed. I have great respect for all of you – I simply am ignorant about the military. So, many questions I ask may seem very simple to you, but I simply don't know, don't understand, or don't have the background to contextualize what it is that you are trying to explain in your paper. I do feel that your paper is very good. I found very few "holes" but I did ask a lot of questions. I told most of the other students in IT 500 to work towards answering or eliminating my questions as they worked toward the next unit check. However, I'm not sure that's something you are allowed to do. I know much of what you do is classified. So, if you can't describe something further, perhaps it would simply be easier to send me an email and tell me that you can't describe something rather than spend a great deal of your time trying to re-phrase something to eliminate my question without really answering it. Does that make sense?

The Design Project:

This instructional design project will consist of creating an instructional unit explaining to end users, the American Soldier, the process of installing, configuring and utilizing the United States Army's Common Access Card (CAC) that is currently being fielded and used to sign electronic documents sent via Army Knowledge Online (AKO) My Forms.

Background:

The background of this design project stems from the need to instruct Soldiers currently serving in the United States Army, particularly within my command, at this time to sign electronic documents sent via AKO My Forms. The need arises from various places to include advances in technology to include updated Army hardware, software, databases, networks and most notably a Department of Army Directive stating that all Soldiers will begin utilizing this

new technology to sign and submit documents beginning in fiscal year 2009. That does not mean that the entire system will be fully functional, however, what it does mean that it will be online and that company commanders, such as myself, who are responsible for the training within their companies will need to ensure that the entire program is properly implemented and that all Soldiers are aware of, have the resources and have been properly trained on how to utilize the tools to sign and submit any documents as required by the Army or the Department of Defense.

Design Model Selection:

For this particular design project, the Robert Gagne, Guided Approach to Instructional Design Advising (GAIDA) Model was selected as Mr. Gagne's most significant contributions were primarily within the field of instructional design were in regards to improving military education and training. He is credited with key instructional developments in military training and instruction that are still widely used today. Many of his early works and theories have been widely disseminated throughout all levels of academia and education and have been translated into what is now know as widely known as computer based training or distance learning.

Weren't you going to combine two models? This is absolutely fine with Gagne's alone. It just seems like I remember reading on the discussion board that you were going to combine Gagne's with one other model.

Guided Approach to Instructional Design Advising (GAIDA) Model:

(1) Gaining attention (reception)

(2) Informing learners of the objective (expectancy)

(3) Stimulating recall of prior learning (retrieval)

(4) Presenting the stimulus (selective perception)

(5) Providing learning guidance (semantic encoding)

(6) Eliciting performance (responding)

(7) Providing feedback (reinforcement)

(8) Assessing performance (retrieval)

(9) Enhancing retention and transfer (generalization)

Using the above model, guided instruction will be developed that consist of analyzing the requirements of the above design project, selecting appropriate media to convey the information to the Soldiers and designing the instructional units that will primarily serve as instructor classroom based or downloadable self-taught computer based training or distance learning.

Common Access Card (CAC)

(1) <u>Gaining attention (reception)</u>

    a. Instruction and/or instructor will provide historical information regarding the CAC and what its intended purpose is for and what the future purposes and uses will be for the card.

    b. Instruction and/or instructor will provide examples of the current CAC to provide a frame of reference and to point out key features of the card that Soldiers need to be aware of prior to moving forward with instruction.

    c. Instruction and/or instructor will have a question set for Soldiers relating to the basic features of the CAC.

Similar instructional sets will be utilized to gain the attention (reception) of the Soldiers for each required subset or lesson. For example, an instructional set will **be** developed on the CAC Reader, which is a piece of hardware that attaches to the Soldier's computer and is used in conjunction with the card to digitally sign electronic documents once the software learned

in this design project is properly installed and configured. (See Item 5 Providing learning guidance)

(2) Informing learners of the objective (expectancy)

    a. Inform the Soldiers that they will be receiving instructor classroom based or downloadable self-taught computer based training or distance learning on how to properly setup a personal computer for using a CAC. **So are you designing three separate mechanisms for delivery? It sounds like it here 1) traditional, 2) paper modules, 3) web based. Am I reading that correctly?**

(3) Stimulating recall of prior learning (retrieval)

    a. Prerequisites for this particular group of learners have already been determined through various forms of testing both through public and private educational institutions as well as individual internal military training school and internal evaluations and methods. It has been determined that the primary learning tasks for this unit will be organized into detailed step-by-step procedures. Soldiers within this command have received previous instructor classroom based or downloadable self-taught computer based training or distance learning utilizing AKO as well as hand-on real-time training. In addition this unit is a training unit, so it also assumes that Soldiers who have been with the unit for awhile have at least some proficiency with AKO as well as the Department of Army Directive stating that all Soldiers will begin utilizing this new technology to sign and submit documents beginning in fiscal year 2009.

(4) <u>Presenting the stimulus (selective perception)</u>

    a. Soldiers will be emailed a direct link via AKO alerting them to a new training requirement in their Knowledge Collaboration Center (KCC). A simplified downloadable one page CAC installation and registration instruction sheet will be made available covering this design project. Since the Soldiers will not be able to access the program from home until after the program is installed they will not be able to physically view or utilize the software, however, as discussed previously Soldiers have used this software at the unit and have had the new CACs for some time. They have just recently been required to begin utilizing them to sign documents although it is not a requirement to do some from home at this time, many have a need and desire to do so for many reasons that is where the need for this guide arose.

(5) <u>Providing learning guidance (semantic encoding)</u>

    a. Step-by-Step instructional units will be created for each of the below topics:

        i. Installation of Department of Defense Security Certificates

        ii. Installation of Middleware

        iii. Installation of CAC Reader

        iv. Registration of CAC with Browser

        v. Register CAC with AKO

These step-by-step instructional units will be developed in a manner that allows for them to be utilized at home by individual Soldiers via the internet or at their units in a computer lab or within distance learning environments with terminal services. **Okay earlier I thought you were creating 3 different versions of this instruction. Now I think it sounds like you are creating one instructional unit (with the 5 modules as listed above) and**

Comment [SoE14]: Okay, this is just a brief overview of what will be covered, right? You are not anticipating that you can fit all of your instruction on one piece of paper, are you?

Comment [b15]: Yes, you are correct the instruction will not fit on one piece of paper. However, I realized after sitting through hours of instruction, reading about all of this myself and fumbling through it myself that much of it can be consolidated down once general understanding is achieved and anchoring in the learner.

Comment [b16]: This is kind of confusing. If the Soldier cannot access the program from home, how are they going to install it??

Comment [b17]: At this time, all of the software is located on-line in secure locations, which can be accessed by Soldiers via AKO for download. The problem is that what is known primarily as the Middleware or Software is located in different places and has to be installed in a certain order, so that it functions correctly and that is what I am attempting to overcome in my instruction as most Soldiers just like people do not read and just click and install and assume that everything will work. Therefore, when it does not work they complain and give up stating that the system broke, software failed, etc… and find every excuse to try and revert back to the way that they were most comfortable with for so many years.

Comment [SoE18]: Okay, I have totally misunderstood your project up to this point. This equipment that allows soldiers to electronically sign…I wasn't thinking it would be at the soldier's homes. I was thinking it would be on bases – at the PX, etc. So this instruction that you are designing will be massively distributed throughout hundreds of homes? This is much, much bigger than I had envisioned.

Comment [b19]: In my units case and at this point in time, I am and will be able to put restrictions on who is able to view and receive the instruction via AKO. All Soldiers within the Army and other Military branches will know that the site exist on AKO, however they will have to request and justify access through me. At this time, my unit consist of approximately 150 Soldiers.

then you are going to make this one instructional unit available to the soldiers in a variety of ways. Is this correct? The reason behind this is because many units have computer labs established and the labs are still not set up for CAC use. This instruction will permit unit commanders to bring untrained Soldiers who may not be familiar with AKO or CACs at all into an Army lab or connect with them remotely from home and they will be able to receive bottom-up instruction. In a terminal service environment an instructor would be able to demonstrate how to install each of the outlined software packages and configure them as needed while a Soldier watches on their own monitor. After performing each installation and configuration, the instructor would be able to remotely monitor a Soldier as they perform the required setup and configuration operations as well. **And this is real-time, correct? So this type of instruction would require an enormous amount of man hours, given the amount of people who will need this training by 2009. This one to one setup does not seem feasible – or at least not fiscally responsible.**

(6) <u>Eliciting performance (responding)</u>

    a. Since this design project is primarily intended to be one where Soldiers will be learning via the internet in a downloadable self-taught computer based training or distance learning environment it will be left up to them to ensure the tools demonstrated are properly configured on their computers. A step-by-step practice exercise will be created and provided to ensure that the above software is properly installed and configured and they that can in fact electronically sign a document with their CAC.

Comment [SoE20]: I don't understand the significance of this. Can the soldiers not do the instructional unit if the computer lab doesn't have CAC use set up? I thought the instruction was to teach this. Are you saying that it needs to be set up before they can even learn about it? If so, that seems counter productive. Surely I am misunderstanding this.

Comment [b21]: Yes, the point of instruction is to teach exactly that, how to set up the CAC system, weather for home use, at the unit, in a lab environment it needs to be set up exactly the same using the same steps and process. The problem is that I may not have the appropriate administrative rights to install software at the unit level or in a lab that is why this project is focused on home installation only and I will better define that in my final draft.

Comment [b22]: At this time, I am only responsible for the training and man-hours within my command which is 20 Soldiers in my Company and overall 150 within our Battalion. Yes, this is an Army wide initiative, however it is being tackled on many different levels and many different approaches.

Comment [SoE23]: So you are referring to parts i, ii, and iii above, correct?

Comment [b24]: Yes

(7) Providing feedback (reinforcement)

    a. A 2/334th (S3) Training Portal will be created and maintained within AKO to facilitate and assist Soldiers throughout this training process. The AKO training portal will include areas that allow for constant collaboration such as a message centers, forums, knowledge centers, membership directory, training links, training calendar, and end-user feed-back section with polls, surveys and comment section. In addition, Soldiers will have access via AKO to countless troubleshooting forums should they experience problems with their individual CAC and this unit of instruction will also be posted on AKO with a direct link for both Soldier and technical support access during normal AKO business hours.

(8) Assessing performance (retrieval)

    a. Soldier must electronically sign a document via AKO MyForms and practice routing or emailing the signed form to a fellow Soldier or Supervisor for review.

    b. As the Commander dictates

(9) Enhancing retention and transfer (generalization)

    a. Soldiers holding key leadership positions will be required to take and pass the training with 100% accuracy and have access to readers at home for use.

    b. Key leaders will then become train-the-trainers and work to ensure that Soldiers having difficulties understanding CACs and AKO as well as how to digitally sign documents in general know how to and are comfortable with the technology.

    c. Work toward assigning administrative and maintenance type roles to Soldiers within the command to update and monitor content posted on 2/334th AKO (S3) Training Portal to further facilitate retention and transfer of content. **This sounds like real**

Comment [SoE25]: Is it important for me to understand what this is? If so, I have no idea.

Comment [SoE26]: Never mind, you just explained the portal! I should keep reading. Sorry.

Comment [b27]: Please refer to Initial Design Project Check Point 2 email Screenshots AKO Portal with additional information.

Comment [b28]: All Government forms are now housed on-line and can be accessed using PureEdge Forms Software. The public URL is http://www.army.mil/usapa/ for your review and to assist in your understanding. Through AKO My Forms Soldiers can also access all of the forms however from a secure location from which they can edit, save, sign and route them to others within a secure government

Comment [SoE29]: Did you intend to add more here and forgot? It makes no sense to me as is.

Comment [b30]: Since it will be left up to individual unit commanders to determine how they will want to determine how they will want to access their individual Soldier's performance it will be how they dictate. I will basically make recommendations in my design project on how they can assess performance, however since each one is independently in charge and responsible for their Company they may want to access it differently or deviate from my recommendations.

Comment [b31]: Yes, Soldier's within my command, holding key leadership positions will be held to a 100% standard and in my command key leaders only account for 5 positions.

Comment [SoE32]: Is this your criteria or the military's?

Comment [SoE33]: Is this something you will asses with a survey? Or are you meaning this in an informal way? The key leaders will simply make sure that soldiers under them have "got it". Is this what you mean?

Comment [b34]: Yes, the key leaders will simply make sure that they are tracking the Soldiers they are assigned to train by the Army.

data manipulation. Earlier when you were talking about soldiers practicing to use the CAC to electronically sign, it sounded like it was a practice document – not a real government document that had serious consequences if someone messed up the process. However, what you have written for letter C above sounds like real data manipulation within the program. Is that correct? If so, what happens if a soldier messes that up?

<u>**Conclusion:**</u>

Overall, this design project will go along way in helping the Army and the Soldiers at all experience levels fully understand and appreciate the CAC and AKO My Forms. The primary problem with them both at this time is that the Army failed to properly train the Soldiers on what **was** expected and how implementation would affect their day-to-day operations of their jobs and military occupations, therefore many Soldiers have been dragging their feet and have been unwilling participants in taking a hold of and embracing this new technology until the last minute. The Army's technology advances so fast that it is hard even for the most novice user to keep abreast of recent updates and changes. It is expected that since commanders are all educated, in charge and paid well that they are to just go implement and do it like it was yesterday. Although the time deadline is not that tight it just seems that way as the amount of information is overwhelming, the pace of technology is staggering; no training for the implementers and the next version or release is already on the way! **Almost sounds like a Windows upgrade.** ☺

Comment [b35]: Even though, AKO is DOD wide and a vast network it is individualized and each Soldier can set up and control their own piece of the network and database, thus limiting who has administrative, editor and user rights to manipulate data and the content within the portal.

Comment [b36]: Basically, as indicated I will do better to more clearly define that this project is more specifically aimed at assisting Soldier's at home and at my unit level within my company for starters, so it does not seem so broad as the Army!

Comment [b37]: Here I am alluding to Soldiers who have been in for some time and not necessarily newer Soldiers as new recruits are receiving this training and all of this is being established except for the home use aspect as they are not to that point in their career yet, however they are more receptive and technologically savvy then the older Soldiers who I am trying to retrain at this time?

Comment [SoE38]: What do you mean by this?

Comment [b39]: It is a clichés and I will avoid it in the actual instruction and get to the point as it is confusing for those outside of the Military. Basically, it means that it should have already been done even though we the Officers in charge do not even know what we are doing yet!

Brad – the only thing I'm thinking of as I finished reading your document is this: It's not clear to me what your objectives are. I understand the over arching goal of having soldiers understand how to successfully use the CAC to electronically sign documents. However, I'm sure there are objectives within that goal. Perhaps something like:

Understands the need for electronic signatures.

Understands how to operate the CAC equipment.

Understand how to access documents needing to be signed, etc.

But I don't see any of those objectives outright stated. Am I missing it? Was it listed somewhere and I just read right through it? If so, please tell me where to look.

I really feel like you did an outstanding job on this proposal. It was far better than many I received in this class. Thank you for your effort. Hopefully all of my basic questions won't frustrate you.

References

Kearsley, G. (1994). *Conditions of Learning (R. Gagne)*. Retrieved Sep. 28, 2008, from
    http://tip.psychology.org/gagne.html.

Pedroni, L. (n.d.). *Robert Gagne*. Retrieved Sep. 28, 2008, from http://www.my-
    ecoach.com/idtimeline/theory/gagne.html.

Okay, the multiple comment boxes got to be too much for me (not to mention we were out of room), so I switched to another word document. Hopefully you don't mind.

In your b25 comment on page 5, you said "Middleware or Software is located in different places and has to be installed in a certain order, so that it functions correctly and that is what I am attempting to overcome in my instruction". This seems really crazy to me. Why would you have different pieces of software located in different places? Is there a security issue? I understand the sequencing piece, but the different locations really threw me. I would think this would be a pretty big obstacle as far as instruction. At SIUE we have been focusing this year on removing "artificial barriers". I think having pieces of software located in different areas would be an artificial barrier and would inhibit learning. Not that it can't be overcome (and I'm certain you have no control over the location), but it is an issue you have to deal with.

In your b27 comment you said that you have about 150 soldiers under you. How many of these soldiers do you anticipate will want to receive instruction via AKO?

Comment b29: This makes perfect sense. I am understanding more and more as you explain each item.

Comment b30 & quote from your document page 6: You say, "would be able to remotely monitor a Soldier" but this doesn't necessarily mean that you would monitor every soldier, correct? I think when I first read this I thought you were intending to monitor every single soldier and I thought that was incredibly time intensive. However, I think I misunderstood. You will have the ability to monitor each soldier, but you would necessarily HAVE to monitor each soldier, correct?

Comment b35: Yes the AKO training portal makes a lot more sense now with the screen shots and your answers to my questions. When I taught at Indiana State, the students had to utilize something called "My ISU Portal" and it looked very similar to the screen shots you sent me. It's all making sense now.

Comment b38: Makes sense. I have no arguments.

Brad:
Having all of the feedback you gave me through your comments really does help me understand. Of course, typical of me, I did throw in a few more questions in comments.

As you move forward with this design project, you will need to:
1) Create the instruction. Since your unit of instruction appears to be quite large, I would recommend that you pick one piece of it, like "Installation of CAC Reader" and design instruction for that small piece.

2) Include supporting documentation. Things like a step by step breakdown of the lesson, learning activities, assessment, etc. Any supporting documentation – like the 1 page instruction sheet that you talked about earlier – all need to be included with your instruction.
3) Objectives. I would like to see objectives for the lesson. What do you want the soldiers to learn in this one specific segment of the training?
4) Assessment. Include the assessment that you will use at the end of instruction to measure whether the objectives were met.
5) Evaluation. Typically in I.T. we differentiate between assessment and evaluation. Assessment is what you do to see whether the learners met the objectives of the unit. Evaluation is what you do to determine whether the unit was successful (mostly meaning "Did the participants like it?"). I'm not sure that's appropriate for your unit. It seems like the military doesn't really care whether the learners "like" the training. What is more important is whether the learners are able to "use" the training. So, if it's not appropriate, I understand. However, if it is appropriate, I would also like to see some type of evaluation added to your unit of instruction.

I know this is a lot to throw at you all at once, so if you have questions, just let me know.