**Bryant & Stratton College**

**Liberal Arts Department**

**Project Proposal for an Online ASVAB Preparatory Class**

**Introduction**

The ASVAB Preparatory Class is a course that aims to help military recruits, active duty personnel, and reservists to improve their ASVAB test scores. The purpose of the online ASVAB prep course provided by Bryant & Stratton College is to provide an accessible, interactive, preparatory course to students that require more than independent study coursework, yet cannot commute to a local campus to take the class. This proposal will introduce a multimedia learning design that will cover the components of the course that will aid these students in the pursuit of their military career goals.

**Instructional Design Model**

ADDIE, one of the most common instructional design models, will be the basis upon which this course is created. Because this will be the first course of its kind at Bryant & Stratton, all phases of ADDIE will need to be completed: Analysis, Design, Development, Implementation, and Evaluation (Morrison, et.al, 2007, p. 13). In order to complete this proposal, the instructional design process has commenced. Context and needs analysis has been completed to determine what needs are to be met. Much of the learning design step has been completed in order to determine how those needs will be met. The development, implementation, and evaluation phases have yet to be visited. However, much discussion has been had regarding the resources that will be needed for the completion of these phases.

The design for this course is heavily founded on the basis of Cognitivism. Cognitivists recognize that much learning comes from repetition and reinforcement. “Cognitivists see learning as an internal process of thinking, reflection, abstraction, motivation, and metacognition” (Ally, 2008, pg. 21). Key concepts of Cognitivism that will be used in the design of the ASVAB course are meaningful effect, practice effects, transfer effects, organization effects, and Mnemonic effects (Mergel, 1998, pgs. 6-7). These concepts are ideas that help students remember and process information. For example, Mnemonics, as Mergel (1998) explains, “are strategies used by learners to organize relatively meaningless input into more meaningful images or semantic contexts” (pg. 7). A great deal of the course content will be centered around remembering basic principles and recalling rules, theories, and facts to use in combination with test taking skills to answer solve questions.

**Rationale for use of Multimedia**

Mayer (2001) has a hard time defining multimedia because it means different things to different people. However, he very plainly defines multimedia as “the presentation of material using both words and pictures” (p. 2). Multimedia can be in the form of several different presentations. Some examples of multimedia are live and online PowerPoint presentations, videos, and writing on the blackboard during a lecture, and textbooks. These are all examples of multimedia because they incorporate two or more different kinds of audio, visual, pictorial, and written media.

**Advantages, and Disadvantages of Multimedia Learning**

The use of multimedia has many advantages and fewer disadvantages. Some of those advantages included engagement in learning, accommodation of many learning styles, infusion of prior experience, enhancing literacy, and motivation (Anderson, d., & Bull, P.H., 2011, pp. 40-41). Multimedia learning requires the attention of students and in turn, keeps them motivated and excited to learn. In a study conducted with 1st graders, students were engaged in learning regardless of their learning styles. “The multimedia lessons also met the needs of interpersonal, linguistic, and logico reasoning learners, which are very strong components of literacy” (p. 41). Because multimedia incorporates the use of so many different tools, students were able to learn through “reading, writing, and oral presentations” (p. 41).

Disadvantages to multimedia learning may lie in the inexperience of the learners themselves. Multimedia learning often requires the use of technology, in which case some students are more apt than others. An article by Yan, D. (2011) warns instructors about some of the pitfalls of using multimedia in the classroom. The author points out that multimedia presentations are informative, but sometimes cannot highlight the importance of the lesson. Another interesting point Yan makes is that the stored and formed answers limit students responses. Multimedia presentations, when given in a traditional face-to-face classroom, can be limited in interaction (pp. 166-167).

**Target Group**

While this course will be offered to active duty military as well as civilians, the main population of students will be high school graduates seeking admission into the military. These students will have no college experience and little online learning experience. They will most likely be between the ages of 17 and 18 and will be without their own form of transportation. The age group of this population is technologically savvy and very experienced with the use of computers, the internet, and social media. They are also not far removed from the learning environment. The maximum age for enlistment is 35, so the population will not exceed that age. Many students that enlist without first going to college are those that did not obtain the grades or test scores necessary to attend and/or those that did not enjoy going to school. These students will most likely be self-motivated due to their desire to further their own careers. The instructional design will be that which will cater to the needs of the average high school graduate and will be highly interactive and engaging to keep the attention and maximize the learning of these students.

**Presentation Modes**

The content that will be covered in this course ranges from Mathematics, to spatial Recognition. Because of the wide array of subjects, the material must be presented in several different ways so that all students can benefit from its presentation. This form of repetition will not be overload; rather, it will be an opportunity for cognitive reinforcement. The materials will be taken from several text books and used for the development of learning modules, presented through Drupal, an open source content management system that allows users to create interactive learning modules. Students will be directed each week to the modules, which will be accessible via WebTycho. WebTycho is a learning management system developed at the University of Maryland, University College. The system allows instructional designers and instructors to host the entire class through one centralized location. Student can log into WebTycho to access course content, participate in classroom activities, and contact instructors and peers. The link to Drupal will be stored under the “Course Content” section in the WebTycho system. The coursework on Drupal will be divided up into modules and then weeks, so it is easily navigated by the students. The hypermedia will take on a hierarchal structure such as the ones found in the text of Wang and Gearhart’s Designing and Developing Web-based Instruction (2006). Wang and Gearhart state that hierarchal structures start with general knowledge and move to a deeper level of content. The following is an example of the structure that will be used to deliver the course content:



This image was taken from an article in the series, The Architecture of Open Source Applications (2011, Figure 9.3). Once students have completed their tasks in Drupal, including their assessments, they will return to WebTycho to communicate with their classmates and instructors. Each week will cover one subject featured on the ASVAB test. They will also find on WebTycho access to eChapters of the textbooks, additional exercises that can be completed for practice, and interesting articles that will be used for class discussions.

**Media Selection Criteria**

The model for media selection that will be used is the SECTIONS model, presented by Bates & Poole (2003). SECTIONS represents a number of questions which are to be asked about media choices: students, ease of use and reliability, costs, teaching and learning, interactivity, organizational issues, novelty, and speed (pp. 79-80). Asking questions regarding all of these topics will allow for easier selection of the right media.

Interaction in this course is what sets it apart from other ASVAB prep courses that can be taken independently online. The course content is presented via click through modules, which will require the students’ full attention. Multimedia, consisting of audio, visual, and video will be included. The interaction with other students will be facilitated through conference discussions, study groups, and partnerships. Conference discussions will be held weekly as opportunities for reflection, forums for discussion with the instructors, and student-teaching opportunities. Study groups will be formed so that the students in each group can complement each other. This will help form a sense of community and allow the students to recognize that they are not alone. Building learning communities is important because they provide a social context for the material, they connect the students, and they bridge the gap between school and work (Wilson, et al, 2004, p. 3). These aspects will be very important for the learners in the ASVAB prep class.

**Content and Schedule of Program**

**Course outline**

1. Module 1- Basic Training
	1. “Pre-Course: Warming up”
	2. “Week 1- Eyes on the Prize”
2. Module 2- The Verbal Hurdle
	1. “Week 3- Word Knowledge”
	2. “Week 4- Paragraph Comprehension”
3. Module 3- The Math Crawl
	1. “Week 5- Arithmetic Reasoning”
	2. “Week 6- Math Knowledge”
4. Module 4- The Science and Technical Ladder
	1. “Week 7- Generally Speaking”
	2. “Week 8- The Technological Sprint
5. “Post-Course: The Finish Line”
	1. In this post week students will take their last practice ASVAB of the course and reflect on their progress if so desired

**Roles of Team Members**

|  |  |  |
| --- | --- | --- |
| **Position** | **Role** | **Filled?** |
| **Project Leader/Manager (myself)** | Manage the progress of the project and report to project leader, while also promoting teamwork within departments | YES |
| **Director** | Approve proposal, allocate funds, oversee “bigger picture” | YES |
| **Instructional Designer** | Work closely with faculty and partners to follow ADDIE model and develop a course using tools and resources available | NO |
| **Web/Graphic designer** | Design modules and webpages, as well as graphics and audio that will be used for classroom activities | NO |
| **Lecturer(s)** | Consult on course content, resources, and media | NO |
| **Community Partners- Army, navy, Marines, Airforce, and Coast Guard recruiting offices** | Provide panel participants and students for prototype evaluation. Participate in content development to develop course objectives | YES |

**Role-out plan**

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| --- | --- | --- |
| **Task** | **Resources Needed** | **Dates of completion** |
| Completion of prototype course in Webtycho | Instructional Designer, Peer reviewers, recruiters | 12/1/2012 |
| Final selection of course content | Subject matter experts, instructors, text books, military recruiters | 1/15/2013 |
| Development of learning activities | Subject matter experts, instructors, text books | 2/15/2013 |
| Final implementation and testing | ID, BSC IT technicians, instructors, online learning department support | 3/1- 4/1/2013 |
| Course Begins | EVERYONE | 5/1/2013 |
| Evaluation of Course Effectiveness | Instructional Designer, Faculty | Ongoing |
| Marketing and Advertisement | Military Recruiters, BSC marketing and communications personnel | Ongoing  |

**Conclusion**

This design will be one that requires detail, precision, and tact. While there are many ASVAB courses available to students, this course meets the needs and requirements of a certain type of student that needs an interactive environment in which he or she can learn on his or her own as well as with others, yet in the comfort of his or her own home. It is critical that this design is able to cover a large amount of material in a short amount of time and that the student is able to meet his or her own personal goals for growth and achievement.

**References**

Ally, M. (2008). Foundations of educational theory for online learning. In T. Anderson (Ed.), *The Theory and practice of online learning (2nd Ed.)*pp. 15- 49. Athabasca, CA:Athabasca University Press. *Retrieved from* [http://www.aupress.ca/books/120146/ebook/99Z\_Anderson\_2008- Theory\_and\_Practice\_of\_Online\_Learning.pdf](http://www.aupress.ca/books/120146/ebook/99Z_Anderson_2008-%09Theory_and_Practice_of_Online_Learning.pdf)

Anderson, D. & Bull, P. H. (2011). Using Multimedia Presentations to Promote Literacy in a First Grade Social Studies Classroom. California Reader, 44(4), 37-43.

Bates, A.W., & Poole, G. (2003). *Effective teaching with technology in higher education. Foundations for success.* San Francisco, CA: John Wiley & Sons, Inc.

Ibenez, L., & King, B. (2011). ITK. In A. Brown & G. Wilson (Series Eds.), *The Architecture of Open Source Applications: Volume 2. Structure, scale, and a few more fearless hacks.*

Mayer, R. E. (2001). Multimedia learning. Cambridge: Cambridge University Press.

Mergel, Brenda. (1998). *Instructional design and learning theory*. Unpublished manuscript, Department of Educational Communications and Technology, University of Saskatchewan, Sasketchewan, Canada. 1-24. Retrieved from <http://www.usask.ca/education/coursework/802papers/mergel/brenda.htm>

Morrison, G.R., S. Ross, and J. E. Kemp. (2007). *Designing effective instruction* (5th ed.). New York: John Wiley and Sons. ISBN: 0-470-07426-4.

Wilson, B. G., Ludwig-Hardman, S., Thornam, C.L. & Dunlap, J.C. (2004). Bounded community: Designing and facilitating learning communities in formal courses. In *The International Review of Research in Open and Distance Learning,(5)*3, 1- 22. Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/204/820>

Wang, H. & Gerhart, D.L. (2006). *Designing and Developing Web-based Instruction.* Upper Saddle River, N.J.: Pearson Education.

Yan, D., & Rongchun, L. (2011). The Reflection for Multimedia Teaching. Asian Social Science, 7(2), 165-167.