

MIT 500 Self-Instructional Module Product Report Patrick Gunn and Erika Robertson

Report I

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SECTION 1: SUMMARY OF THEORETICAL ASSUMPTIONS

This module applies Mayer's "Designing Instruction For Constructivist Learning" model. This model is most appropriate for teaching information from text, lectures, and multimedia presentations where the learner can work individually, not relying on social interaction. Forensic Anthropology material in the ANT326 course has previously been presented via lecture on class textbook and print material. The material in this module is structured in a way that promotes understanding and interaction of the information to support constructivist learning when the learner actively creates his/her own knowledge by making sense out of the information that is provided.

Included in the above assumptions in this model, this module is directed toward a constructivist learning outcome, rather than for rote learning. Once the Forensic Anthropology student has constructed his/her own knowledge, this knowledge will be later transferred via hands-on lab activities and related quizzes and tests.

In order for the learner to construct knowledge in this environment, the prerequisites for knowledge transfer to occur are skill, metaskill, and will. These cognitive processes are what allow the learner to make sense of the information. The module will provide the opportunity for the learners to use a variety of cognitive process in the construction of the knowledge. Motivation is a key factor. The design of the module will engage the learner through its varied and interesting format, maintain motivation by providing opportunities for success, and develop skills necessary for comprehension. The Forensic Anthropology students are motivated by achieving a good grade in this class, which is necessary for most of the learners' majors. Overall, the learners are motivated to do well in all their classes.

The specific method for designing instruction to be applied in this model is suggested by this theory - Select, Organize, Integrate. This module will demonstrate this method by first **Selecting** relevant material for the learner to focus on. Taken from course text and print material, Forensic Anthropology material will be web-based and will be highlighted via outline, summary, and formatting (i.e. headings, boldface, color). The material is **Organized** for the learner via tables, lists, and images. Finally, the material will be **Integrated** for the learner through connecting verbal and pictorial information and relating to existing knowledge through compare and contrast table.

During the module, the learner will be asked to identify particular forensic data, classify and explain situations relevant to forensic materials provided, list important terms and concepts, and determine factors relevant to the task. Though the Forensic Anthropology material has been selected and presented for the learner, the learner will control the learning process. The learner is not dependent on other student interaction in this module - the learning takes place individually to allow his/her own sense of the material. Cognitive support will be provided to the learner via frequent feedback through assessment tools (such as quizzes) and practice opportunities (such as listing/defining activities) to increase probability of success in achieving the goal.

The ANT326 students will have almost completed the semester of this course before the Forensic Anthropology unit is covered, and therefore have an assumed foundation in Human Osteology. Success in the units leading up to this last unit is expected, as is the learner's entry behavior of being able to identify all bones in the human body. The class is traditionally conducted in lecture format to present information, with little or no student interaction until the hands-on lab immediately following (hands-on learning combined with a mixture of online assignments and lecture is preferred by a vast majority of the students).

SECTION 2: INSTRUCTIONAL GOALS

Needs Assessment:

Actual Performance:

Students who are enrolled in ANT32 do not have prior knowledge in Forensic Anthropology.

Optimal Performance:

100% of students enrolling in ANT326 have basic understanding of Forensic Anthropology.

Needs:

Student needs basic understanding of Forensic Anthropology.

Solutions:

1. Students take prerequisite Forensic Anthropology course
2. Interview students for prior knowledge
3. Training and education before class
4. Provide educational materials to improve skills and knowledge
- 5.

Goal:

Students will demonstrate applying 5 different theories and methods to compare and contrast how forensic anthropology analyses differ from prehistoric and historic skeletal analysis.

Domain:

Intellectual Skills

SECTION 3: TASK ANALYSIS

[Inspiration File](#)

SECTION 4: ANALYSIS OF LEARNERS AND LEARNING CONTEXT (APPENDIX A)

Learner Analysis

Category	Data Sources & Analysis Techniques	Learner Characteristics
Entry behaviors	Attitude data: Questionnaire sent to target learners Interview: Professor of ANT326 course	Learners whose major is Anthropology have taken the ANT210 course, which is recommended, but not prerequisite to course. Learners have knowledge of almost-completed semester of ANT326 before delivery of module
Prior knowledge of topic area	Attitude data: Questionnaire sent to target learners	50% of learners have taken Introduction to Forensic Anthropology course
Attitudes toward content	Attitude data: Questionnaire sent to target learners Interview: Professor of ANT326 course Observation: Observed target learners in class	Learners are interested in and positive about learning new material.
Attitudes toward potential delivery system	Attitude data: Questionnaire sent to target learners Interview: Professor of ANT326 course	Learners have experience learning through live lectures and through online learning. More than 1/2 the learners prefer a mixed-delivery of web-based delivery and live class discussion. Concerns about on-line courses included not being able to hold examples or ask questions, having technical problems, and concern there is less learning on-line.

Motivation for instruction (ARCS)	Attitude data: Questionnaire sent target learners Interview: Professor of ANT326 course Observation: Observed target learners in class	Learners are generally motivated to do well in all their classes. Learners do not feel their success is based on taking prerequisites, but in their general desire to do well academically and be able to use information in their careers.
Educational and ability levels	Attitude data: Questionnaire sent target learners Interview: Professor of ANT326 course	All learners have completed high school. Most learners are traditional students, juniors or seniors. Learners' current grades range from As to Cs.
General learning preferences	Attitude data: Questionnaire sent target learners	More than 1/2 the learners prefer a mix of web-based delivery and live class discussion. More than 1/2 the learners prefer to work alone rather than with others in learning environment.
Attitudes toward training organization	Interviews: Target learners	Learners are positive about their experiences at UNCW and about the ANT326 course and instructor.
General group characteristics	Attitude data: Questionnaire sent target learners Observation: Observed target learners in class	Learners are mostly junior and senior traditional students. Most learners are Anthropology majors, with other majors in the areas of Criminal Justice, Creative Writing, and Chemistry. Most learners are age 18-23. There are 24 learners in target population - 18 females and 6 males. Learners have little interaction with each other with most working independently. There are few active participants in class

Performance Context Analysis

Category	Data Sources	Performance Site Characteristics
Managerial / supervisory support	Observation: Attended ANT326 class	ANT326 professor provides guidance and support to learners by encouraging questions and participation. Provides positive feedback to learner participation.
Physical aspects of site	Site Visit: S&B room 208 Interview: ANT326 professor	Small classroom with 4 lab-style tables. Room has whiteboard, television with VCR. Large number of students prohibited class being held in larger, lower level lab as done in previous semesters.
Social aspects of site	Observation: Attended ANT326 class	Learners work independently and ask few questions during class lecture. Learners individually copy instructor notes from whiteboard and refer to supporting text and print material. Post lecture questions are encouraged by instructor.
Relevance of skills to workplace	Attitude data: Questionnaire sent target learners Interview: Professor of ANT326 course	More than 1/2 learners are taking course as part of Anthropology major, making material very relevant to current schooling. Most learners believe material to be relevant to later career

Learning Context Analysis

Category	Data Sources	Learning Site Characteristics
Number/nature of sites	Site Visit: S&B 221 lab Interview: Student assistant in computer lab	One computer lab located in the Social and Behavioral Sciences building. The web-based instruction will occur over the Internet. Site has 25 PC's available (Pentium III, 128 megabytes RAM, Windows 98, Internet access). Site has 2 whiteboards, 4 PC cameras. There is a student at check-in desk who can provide basic PC support and call for additional technical support if needed. Because there are only 25 PC's, in a class of 24, there is only room for 1 PC to be "down". More than 1 would prevent that many learners from completing instruction. Technical support not immediately available if there is a problem.
Site compatibility with instructional needs	Site Visit: S&B 221 lab Interview: Student assistant in computer lab	Instruction can be delivered via computer-based instruction and web-based delivery. PCs in lab are technologically up to date and all offer internet access. Student assistant offers basic technical support. For more advanced technical problems, OIT department is called. Lab is open 8am - 5pm and 7pm to 11pm, offering flexibility for instructional delivery.
Site compatibility with learner needs	Site Visit: S&B 221 lab Interview: Student assistant in computer lab	Computer lab centrally located on campus. Learners already attend classes in S&B building and are familiar with the layout and with the location of the lab. The lab hours offer flexibility for learners. The lab offers necessary resources to accommodate learners' needs.
Feasibility for simulating workplace	Site Visit: S&B 221 lab Interview: Student assistant in computer lab	Meets needs for instructional delivery. Instructor available for necessary guidance. Like workplace, learners work individually at workstations but have other learners available if collaboration is desired.