

LITRE Report

Summary of 2004-06 LITRE Grants

Scott M. Fitzpatrick
Department of Sociology & Anthropology

I. Introduction and Background

My 2004-06 LITRE grant projects focused on developing ARCHAInteractive, a web-based archive for teaching both upper-division and lower-division archaeology courses (see <www.ncsu.edu/project/archae>). Working with staff from the Distance Education and Learning Technology group, the goal was to construct inquiry-based assignments that complement lecture and in-class discussion to help students learn about world civilizations and the theories and methods archaeologists use in their research.

During Spring term 2005, the framework for ARCHAInteractive was built and two modules developed for my *Environmental Archaeology* course. These modules included one entitled “Radiocarbon Dating” and the other “Environmental and Cultural Changes at the Grand Cay Site”, both of which guided students through different problem solving exercises. As students progressed through each module, they were confronted with a variety of maps, photographs, survey and excavation data, interactive timelines, film clips, and other archaeological resources specifically developed to analyze various methodological or theoretical issues. Some of the topics approached included: 1) examining and calibrating radiocarbon dates; 2) interpreting maps and ancient artifacts; 3) analyzing archaeologically recovered information; 4) projecting outcomes of past social behavior; and 5) suggesting reasons for why particular scenarios occurred.

In 2005, I received another LITRE grant to continue developing modules as part of ARCHAInteractive. For this grant I focused on building a module entitled “Coyote Wash Pueblo” for my ANT 253 (Introduction to Prehistory) course which is taught to approximately 120-150 students per year. In this module, students were given a map of a pueblo residential structure commonly found in the American Southwest along with dates and artifactual information. Students were also provided with timelines, maps, and photographs of artifacts and archaeological sites. They were then asked to answer three questions regarding how this particular structure was built, its chronology, and the spatial arrangement of pottery within the site.

II. Assessment of Student Learning – Simple and In-Depth Online Surveys

According to student assessment surveys (see Appendix A), these modules had significant learning impacts. For example, in Module 1 (Radiocarbon Dating), students were asked questions regarding the organization and structure of the module, whether it was interesting and/or piqued their interest in the topic, and whether the technology was helpful and appropriate for accomplishing the task. As noted from the survey (see Appendix B), students were overwhelmingly positive about this module and based on the results, felt that the technology was appropriate, helpful, and enhanced their knowledge of the software and topic.

More detailed responses from students on Module 1 (see Appendix C) also indicate that overall, they felt that the “web-based structure made it easier to access and understand”, “made ... abstract concepts more intelligible”, and “enabled [them] to greatly understand interrelationships between climatic variations and human interaction, as well as a better understanding of the overall impact of humans on environmental changes.” These responses were also typical of the other modules developed for ANT 495 and ANT 253 (see Appendices D, E, and F).

By attacking specific case studies and different methodological and theoretical issues in the course modules I helped to develop, students received in a real sense “hands-on” experience using archaeological data and computerized techniques to discover how people lived (e.g., settlement patterns, house construction), what they ate (e.g., combining tools with paleoenvironmental data such as pollen), why trade and exchange systems played such an important role in the sociopolitical development of human societies, and how these and many other facets of human cultural behavior changed worldwide.

III. Assessment of Student Learning – Portfolios

The integration of these course modules into my courses has had several immediate impacts – students gained a greater appreciation for learning archaeology and world prehistory and were introduced to a package of skills necessary for analyzing and interpreting archaeological data. There are also good prospects for achieving my longer-term goals of facilitating greater student-instructor interaction and a transition from the standard lecture format common for these types of classes to ones that also include interactive, data-oriented, inquiry-based learning to help foster curiosity and critical thinking.

To better assess the impact that these modules were having on student learning, I developed a series of scoring rubrics based on both a general impressions assessment and a category-based assessment (see Appendix A). As

an example, my Environmental Archaeology course Module 2 was worth 50 points which was graded based on report organization, analysis, and spelling and grammar. A random selection of six of the ten submitted projects revealed the following grades:

Table 1. Module 2 grading rubric results (ANT 495 – Environmental Archaeology) – Spring 2005

Category (points)	Student 1	Student 2	Student 3	Student 4	Student 5	Student 6
Report organization (15)	14	13	5	15	14	14
Analysis (25)	22	22	5	15	24	23
Spelling and Grammar (10)	10	10	7	10	9	10
Total	46	45	17	40	47	47

Module 2 for this course was built so that students could use knowledge gained from the first module which focused on radiocarbon dating. During the course of learning how to calibrate and interpret radiocarbon dates, students became very interested in why certain types of materials (e.g., charcoal, shell, human bone) would be calibrated differently based on environmental or dietary factors. Although the first module entailed learning and using two different software programs to help answer specific questions, students quickly learned how to operate the programs and navigated their way through different archaeological scenarios from around the Caribbean and Pacific. Not only did they have to correctly incorporate hypothetical data into the software, but properly select the proper variables based on site location and sample type to come up with the correct answer.

It was immediately apparent that students, although confronted with an unfamiliar package of data and software, were eager to try and find the suitable variables that would lead them to the correct answer. Many students, although working independently at isolated computer workstations, frequently interacted with each other, trading suggestions and helpful hints. This also gave me the opportunity to walk around class each day to answer questions. And, because we had reserved a computer lab for our own use during class hours, enabled other students working nearby to interject or comment on suggestions I or others had made about various aspects of the module. This open learning environment and accessibility of faculty with students, in my opinion, greatly enhanced the learning of the material. Judging from survey responses and student interaction during class time, it also appeared to be a beneficial strategy for answering complex questions that otherwise would have had to have been independently answered by themselves outside of class. Although not all of the modules I have developed are meant to be done during the regular class period (e.g., ANT 253 – Coyote Wash Pueblo), those that are have the added advantage of increasing student-instructor interaction which, in this case, helped significantly, especially as it pertained to more complex issues in archaeology.

IV. Assessment of Impact on Faculty

The development of the computer-based modules as part of ARCHAInteractive definitely increased the time needed to prepare for class, although this was partly a result of having to build the architectural framework for where the modules would be accessed. Nonetheless, once the modules were built, this did free up some time to focus more on lecture material and in-class discussions that complemented what was currently being done for the module assignments. Because the modules for my advanced class required time in the computer lab to learn new software, the time needed for preparatory work was negligible after the modules were built and tested. Overall, I was very satisfied with how the modules worked – they were designed to enhance ease of use and to encourage the acquisition of information from both internal and external data sources (e.g., providing weblinks to outside sources). I also did not need an excessive amount of training as I was already familiar with most of the programs used to build and use the modules. Those aspects of module design and organization that I was unfamiliar with was supported by technical support services very efficiently.

IV. Assessment of Technical Challenges

For the most part, there were very few technical challenges that needed to be overcome, at least as far as module development was concerned. There have been some minor glitches in terms of the software used as part of the module assignments, but these were addressed fairly quickly and never significantly delayed the implementation or use of any of the modules in either of my courses.

V. Lessons Learned

The implementation of the projects has been time-intensive in parts, but thoroughly enjoyable. The key to successfully building these modules has been coming up with good ideas that are interesting, thought-provoking, and which utilize a host of different technologies to capture the attention of the user, while ensuring that what they are learning is useable outside of the classroom environment. Creating a series of online survey assessments definitely facilitated the acquisition of data to help structure future module development. And, the scoring rubrics were an easy way to demonstrate to students what they needed to work on in future module analyses and project presentations.

V. Potential Applications at NCSU

The architecture that was developed for my archaeology course modules could definitely be used by others on campus who seek a relatively simple means for students to learn new information based on questions that follow and inquiry-based approach. Not only are the modules easy to use, but synthesize a large corpus of information that encourages the user to select alternative hypotheses based on a number of different variables that can be selected by the instructor. In general, the modules would probably best fit within a natural science curriculum such as biology or chemistry.

Table 2. Participants in Module Development and Use (includes only those who completed assessments).
 [Course enrollment for ANT 495 = 12; ANT 253 (Spring 2005) = 98; ANT 253 (Summer 2006) = 15.]

Category	Freshman	Sophomore	Junior	Senior	Other	Total
ANT 495 (Spring 2005)	0	3	3	5	0	11
ANT 253 (Spring 2006)	35	18	21	12	4	90
ANT 253 (Summer I 2006)	0	1	4	2	2	9
Total	35	22	28	19	6	110

VI. Summary

Overall, the main objective of ARCHAInteractive is to aid in the discovery and understanding of how different cultures around the world operated and evolved by: 1) asking specific questions about how past societies functioned (e.g., how did early cities manage waste?); 2) linking the data with a particular site or environmental context; 3) using a set of real or hypothetical archaeological data; and 4) developing models to test whether certain variables are responsible for particular outcomes (e.g., was drought a major factor in the collapse of the Mayan civilization?). Overall, the first stages of ARCHAInteractive, supported by funds from LITRE, has been a major step in making my courses more interactive and interesting using advanced web-based technologies and facilitated the learning process for students by giving them a broader understanding of how archaeologists decipher and interpret information in a logical and critical way.

APPENDICES

APPENDIX A: Summary of LITRE Grant Assessment (2004-06)

APPENDIX B: Student Responses for Module 1 (Radiocarbon Dating) in ANT 495 *Environmental Archaeology* (Spring 2005).

APPENDIX C: Student Written Responses for Module 1 (Radiocarbon Dating) in ANT 495 *Environmental Archaeology* (Spring 2005).

APPENDIX D: Student Assessment Responses for Module 2 (Grand Cay) in ANT 495 *Environmental Archaeology* (Spring 2005).

APPENDIX E: Student Responses for Module 1 (Pueblo Chronology) in ANT 253 *Introduction to Prehistory* (Sections 001 and Q) (Spring 2006).

APPENDIX A: Summary of LITRE Grant Assessment (2004-06)

Project Assessment

Assessment of my 2004-06 LITRE projects was done through instructor surveys, student self-assessments, and portfolios of course module assignments. For example, students were required at the end of each module to answer in an exit interview whether: 1) the assignment was overly difficult or easy; 2) sufficient data and instructions were provided to satisfactorily complete the tasks; 3) the knowledge gained from the exercise piqued their curiosity and gave them a new and interesting way of looking at archaeological data; and 4) the module, by virtue of its computerized approach, provided them with information that was useful and applicable across disciplines. Below is a sample of how I assessed student progress and completion of the course modules developed through my LITRE proposal.

Assessment Summary

The assessments I used, and the responses from students during exit interviews, demonstrated that they were able to grasp complex interrelationships between archaeologically recovered data, analytical concepts, and theoretical practice. Based on the results, it was clear that undergraduates, by virtue of the “hands-on” computer-based approach offered by the interactive modules, had a greater opportunity to explore these concepts and relationships than that offered by simply reading textbooks or listening to classroom lectures. Survey results were overwhelmingly positive as can be seen from results listed in the Appendices below.

DATA FOR ASSESSING PROGRAM OUTCOMES

Portfolios of student work

- Selected assignments for *Environmental Archaeology/Introduction to Prehistory*

Student self-assessments

- Ten-to-fifteen minute in-class exercise in which students are asked to identify and explain two major archaeological research methods.

Objectives and Student Learning Outcomes

1. Students were able to explain the interrelationships among the social, cultural, biological, and environmental bases of human behavior.
 - Exit interview questions to be added to the existing instrument:
 - 1) “How did the Module help you become aware of the interactions between human groups and their environments?”
2. Students were able to examine data sources and apply major archaeological concepts:
 - a. to demonstrate that majors can define major archaeological concepts in such a way that shows a firm grasp of the concepts.
 - Exit interview question to be added to the existing instrument:
 - 1) “How did the Module help you understand how archaeologists examine different data sources?”

- b. to demonstrate that majors can apply archaeological concepts to specific situations showing that they are able to (1) describe the concepts to organize and make sense of what they find in specific situations and (2) identify specific situations to exemplify and amplify major archaeological concepts.
 - Portfolio of selected exams or other assignments from all 400-level courses
3. Students were able to analyze various theoretical perspectives in archaeology and formulate an appreciation for the historical development of the discipline as a social science.
 - a. to demonstrate that majors understand the major theoretical perspectives of archaeology.
 - Portfolio of selected assignments from *Environmental Archaeology/Introduction to Prehistory*
 - b. to demonstrate that majors can appreciate the contribution of the major theoretical and methodological perspectives to the development of archaeology as a discipline
 - Portfolio of course modules for *Environmental Archaeology/Introduction to Prehistory*.
4. Students were able to select and assemble specific research methods appropriate to different archaeological questions.
 - a. to demonstrate that majors can identify, define, and give examples of various methods used in archaeological research of past societies.
 - Exit interview question to be added to the existing instrument:
 - 1) “In what ways did the web-based structure for the Module enable you to better understand archaeology from an environmental perspective?”
 - 2) “In what ways were the technological aspects of the Module helpful or unhelpful? For example, did the use of visual aids, web-based datasets, and maps help you to figure out solutions for the proposed questions?”
 - b. to demonstrate that majors can recognize and interpret research methodology in archaeological literature.
 - Portfolio of selected assignments from *Environmental Archaeology/Introduction to Prehistory*.
5. Students were able to compare, design, and apply the skills learned from the course to gain an appreciation for cultural differences through knowledge of major forms of social organization from an archaeological perspective.
 - Instructor survey of students’ abilities

SCORING RUBRIC

I also devised a scoring rubric that could be used for course modules and exams for *Environmental Archaeology/Introduction to Prehistory*. The rubric is a combination of a general impressions assessment and a category-based assessment.

1) General Impressions Assessment (exams and modules)

Aspects of the former allowed me to ensure that there is a high level of consistency between answers given in the exams and modules and that certain criteria are followed which represent different levels of performance or quality. A formal descriptive guide was provided and devised based on the following:

Exceptional – The work goes well beyond the task assigned. The final report is truly impressive, complete, and well-thought out. The scientific analysis is well motivated and is clearly supported by the data presented. Extensions or provocative new ideas are included. Reference material, where used, is extensive and appropriate.

Strong – The work in the final report fully engages the major scientific principles embodied in the topic. The material is complete and presented clearly. Data are sound and are well chosen or presented to convey information. The scientific analysis makes good use of the data presented. The report demonstrates a clear understanding of the fundamental issues of the topic(s) being explored. Reference material is appropriate for the topic being discussed.

Additional Categories: Average, Weak, Poor

2) Category-Based Assessment (modules only)

The modules are fairly complex assignments with many different facets of analysis, a categorical guide is also needed in which I can weight categories in terms of importance and create scales for grading such as “organization”, “analysis,” etc. One of the goals of these modules was to get students to approach archaeological questions from many different angles. Datasets that students were provided with in the modules helped to answer both specific and general questions, but their interpretations may differ depending on a host of factors.

Course Module I (50 points total)

1. Report organization (15 points)
 - a. clear, logical organization with smooth transitions
 - b. good development and explanation of points
 - c. conclusion which emphasizes points and clinches arguments
 - d. overall validity of argument
2. Analysis (25 points)
 - a. all data are considered and evaluated
 - b. appropriate analytical techniques are used
 - c. data are thoughtfully connected and examined
 - d. conclusions are adequately explained
3. Spelling and Grammar (10 points)
 - a. report is edited with consistency and accuracy
 - b. for every 3 major spelling or grammatical errors, 1 point will be deducted.

EXIT INTERVIEWS

Exit interviews for each module were online. Examples of exit interview questions are provided below.

1) Online Exit Interviews

Please answer the following:

5 = exceptionally good

4 = good

3 = average

2 = below average

1 = unsatisfactory

Year in School	Gr	Sr	Jr	So	Fr
Major	(dropdown list of all majors)				
Gender	M	F			
1. The module was interesting and informative.	5	4	3	2	1
2. The module was well organized and structured.	5	4	3	2	1
3. The data was useful for answering the question(s).	5	4	3	2	1
4. The module piqued my interest in the topic(s).	5	4	3	2	1
5. The module's format (e.g., web-based) helped in learning the topic(s).	5	4	3	2	1
6. The technology was appropriate (e.g., visual aids)	5	4	3	2	1
7. My overall experience was enhanced as a result of the module's technological design.	5	4	3	2	1
8. The instructor was helpful when I had questions.	5	4	3	2	1
9. I am more knowledgeable about the topic(s).	5	4	3	2	1
10. I am comfortable using the software (if applicable)	5	4	3	2	1

1) Written Exit Interviews

Your instructor is interested in identifying ways to improve the learning environment at NC State. Please respond to each of the following questions with honesty and candor. Your feedback is greatly appreciated.

- 1) How did the module help you become aware of the interactions between human groups and their environments?
- 2) How did the module help you understand the issues archaeologists confront when trying to examine different data sources?
- 3) In what ways were the technological aspects of the module helpful or unhelpful? For example, did the use of visual aids, web-based datasets, and maps help you to figure out solutions for the proposed questions?
- 4) How would you improve the structure and/or design of the module? Would your learning of the topic(s) have been easier, harder, or the same if it were done using a format that did not involve web-based resources?
- 5) Was the module overly difficult, too easy, or adequate for learning the assigned topics?
- 6) How did the module improve your understanding of archaeology?
- 7) What did you enjoy most about the module?
- 8) What did you enjoy least about the module?
- 9) Would you recommend that this module be used again in future classes?
- 10) Any further comments you would like to add?

PROGRAM ASSESSMENT CYCLES

Frequency of data to be gathered: Data related to one or more outcomes will be collected each semester.

Timetable for data to be analyzed: Data collected each semester will be analyzed by the end of the following semester.

APPENDIX B: Student Responses for Module 1 (Radiocarbon Dating) in ANT 495 *Environmental Archaeology*, Spring 2005.







Questions and responses (11 submissions by 11 users)

1. What is your classification?

[View individual answers](#)

Multiple Choice

11 responses

Freshman		0	0.00%
Sophomore		3	27.27%
Junior		3	27.27%
Senior		5	45.45%
Graduate Student		0	0.00%
Other: Please Explain		2	18.18%

2. In which of the following course(s) are you currently enrolled?

[View individual answers](#)

All That Apply

11 responses

Environmental Archaeology		11	100.00%
Island Archaeology		0	0.00%
Intro to Prehistory		0	0.00%
None of the above		0	0.00%

Please answer the following questions by indicating your level of agreement:

(Instruction)

Learning Impact






(Question Set)

3. The module was informative and interesting.

[View individual answers](#)

Likert Scale (Multiple Choice)

11 responses






Strongly Agree		7	63.64%
Agree		4	36.36%
Neutral		0	0.00%
Disagree		0	0.00%
Strongly Disagree		0	0.00%

4. The module was well organized and structured.

[View individual answers](#)

Likert Scale (Multiple Choice)






11 responses

Strongly Agree		3	27.27%
Agree		6	54.55%
Neutral		2	18.18%
Disagree		0	0.00%
Strongly Disagree		0	0.00%

5. The data were useful for answering the question(s).

[View individual answers](#)






Likert Scale (Multiple Choice)
11 responses

Strongly Agree		4	36.36%
Agree		5	45.45%
Neutral		2	18.18%
Disagree		0	0.00%
Strongly Disagree		0	0.00%

6. The module piqued my interest in the topic.

[View individual answers](#)






Likert Scale (Multiple Choice)
11 responses



















Strongly Agree		4	36.36%
Agree		3	27.27%
Neutral		3	27.27%
Disagree		1	9.09%
Strongly Disagree		0	0.00%

7. The module's format (e.g. web-based) helped in the learning of the topic(s).

[View individual answers](#)

Likert Scale (Multiple Choice)
11 responses






Strongly Agree		5	45.45%
Agree		4	36.36%
Neutral		1	9.09%
Disagree		1	9.09%
Strongly Disagree		0	0.00%

8.	The technology was appropriate (e.g. visual aids). View individual answers	Likert Scale (Multiple Choice) 11 responses
Strongly Agree		6 54.55%
Agree		3 27.27%
Neutral		2 18.18%
Disagree		0 0.00%
Strongly Disagree		0 0.00%
9.	My overall experience was enhanced as a result of the module's technological design. View individual answers	Likert Scale (Multiple Choice) 11 responses
Strongly Agree		5 45.45%
Agree		5 45.45%
Neutral		0 0.00%
Disagree		1 9.09%
Strongly Disagree		0 0.00%
10.	The technology used in the class (e.g. web-based interaction) improved and enhanced my learning experience more than if I had not used it. View individual answers	Likert Scale (Multiple Choice) 11 responses
Strongly Agree		6 54.55%
Agree		4 36.36%
Neutral		1 9.09%
Disagree		0 0.00%
Strongly Disagree		0 0.00%
11.	The instructor was helpful when I had questions. View individual answers	Likert Scale (Multiple Choice) 11 responses
Strongly Agree		8 72.73%
Agree		2 18.18%
Neutral		1 9.09%

Disagree		0	0.00%
Strongly Disagree		0	0.00%






12. I am more knowledgeable about the topic(s).
[View individual answers](#)

Likert Scale (Multiple Choice)
 11 responses

Strongly Agree		7	63.64%
Agree		4	36.36%
Neutral		0	0.00%
Disagree		0	0.00%
Strongly Disagree		0	0.00%

13. I am comfortable using the software (if applicable).
[View individual answers](#)

Likert Scale (Multiple Choice)
 11 responses

Strongly Agree		6	54.55%
Agree		4	36.36%
Neutral		0	0.00%
Disagree		0	0.00%
Strongly Disagree		1	9.09%

**APPENDIX C: Student Written Responses for Module 1 (Radiocarbon Dating) in ANT 495
Environmental Archaeology, Spring 2005.**

Questions and responses (4 submissions by 4 users)

- 1. In what ways did the module help you become aware of the interactions between human groups and their environments?** Text Answer
4 responses
[View individual answers](#)
- This module helped me notice how much of an impact a marine diet has on dating human bone. In order to correctly date the bone, one would have to know the percent of the group's diet that is marine. This puts a numerical value on how much they relied on the coastal and marine environment.
- It enabled me to greatly understand interrelationships between climatic variations and human interaction, as well as, a better understanding of the overall impact of humans on environmental changes.
- The module presented variations in the generation of radiocarbon dates based on specific changes to environment, processing, etc.
- it really did not made be aware of humans and their evironments because I already knew the interactions existed in the world.
- 2. In what ways did the module help you understand the issues archaeologists confront when trying to examine different data sources?** Text Answer
4 responses
[View individual answers](#)
- This module showed that dating is a very particular calculation. It was interesting to notice how the results can be skewed by marine resevoir effects.
- It helped me to realize just how convoluted the field can be with contamination problems, differential layers, etc.
- The module illustrated the fact that archaeologists obtain data from various sources.
- It help me understand that there is some guess work involved in achaeologists work and that no date is absolutely correct like some stats in other fields of study. It just allowed you go through the critical thinking process and make the best decessions and concusions on the data.
- 3. In what ways were the technological aspects of the module helpful or unhelpful? For example, did the use of visual aids, web-based datasets, and maps help you figure out solutions for the proposed questions?** Text Answer
4 responses
[View individual answers](#)
- Once we were shown how to complete the module, it was relatively easy to figure out and answer the questions. The marine resevoir site was easy to understand and display the local variations. The graphs helped show comparisons between terrestrial and marine samples of human bone.
- All aspects of the module helped reinforce the general idea of what we were attempting to learn.
- Having the calib program online was particuarly helpful.
- All of the technological aspects were helpful in all phases of the project but I did not think the resourvour affects part of the project could need some work on to better display the project.
- 4. How would you improve the structure and/or design of the module? Would your learning of the topic(s) have been easier, harder or the same if it were** Text Answer
4 responses

done using a format that did not involve web-based resources?

[View individual answers](#)

I think it is fine the way it is.

It would have obviously helped if I were actually exposed to a site, but the web-based module was fairly comprehensive and enlightening within its own right.

The web-based structure made it easier to access and understand.

I would stick to the web base structure and design in the project because learning these things in a lecture would not get your thinking patterns in the process and therefore not really have a hands on approach to the subject. The improvement I would make is maybe have a samples set of data that could be used as a walk through for the whole class.

5. Was the module overly difficult, too easy, or adequate for learning the assigned topics?

Text Answer
4 responses

[View individual answers](#)

I believe it was adequate considering comparisons needed to be made for the sites and contextual information.

I thought it was pretty well formed and understandable.

The module was adequate for learning the assigned topics.

The module was adequate for the beginning and learning how to input the data into the various programs.

6. In what ways did the module improve your understanding of archaeology?

Text Answer
4 responses

[View individual answers](#)

It helped me realize the type of work done after being in the field. I still find it interesting.

It ultimately mademore abstract concepts more intelligible.

The module demonstrated the kind of issues that an archaeologist must consider in the analysis of data.

It made realize that achaeologists have to well skilled in other fields and make the best logical conclusions about their research when reporting dates.

7. What did you enjoy *most* about the module?

Text Answer
4 responses

[View individual answers](#)

Learning how to calibrate was interesting.

I enjoyed incorporating the learned material into a proactive simulation.

The use of multiple dating programs,

na

8. What did you enjoy *least* about the module?

Text Answer
3 responses

[View individual answers](#)

If I had to do it again, I would use oxcal instead of calib. Calib was easier to enter the data, but oxcal would have cut the time it took to change dating options and make graphs.

It was somewhat time consuming.

I felt that given more time to write up the project it would have made it a little bit easier for me.

9. Would you recommend this module be used again in future classes?

Text Answer
4 responses

[View individual answers](#)

Yes

Yes.

I would recommend it.

Yes, because it gives you a hands on approach to the material and not bore you death in lecture going over technical terms.

10. Any further comments you would like to add?

Text Answer
3 responses

[View individual answers](#)

NO.

The oxCAL program corrupted the word files into which the oxcAL graphs were inserted.

Just wish I had a little more time to work on the project that is all.

APPENDIX D: Student Assessment Responses for Module 2 (Grand Cay) in ANT 495 *Environmental Archaeology*, Spring 2005.






Questions and responses (8 submissions by 8 users)

1.	What is your classification? View individual answers		Multiple Choice 8 responses
	Freshman	<input type="checkbox"/>	0 0.00%
	Sophomore	<input checked="" type="checkbox"/>	2 25.00%
	Junior	<input checked="" type="checkbox"/>	2 25.00%
	Senior	<input checked="" type="checkbox"/>	4 50.00%
	Graduate Student	<input type="checkbox"/>	0 0.00%
	Other: Please Explain	<input checked="" type="checkbox"/>	2 25.00%
2.	In which of the following course(s) are you currently enrolled? View individual answers		All That Apply 8 responses
	Environmental Archaeology	<input checked="" type="checkbox"/>	8 100.00%
	Island Archaeology	<input type="checkbox"/>	0 0.00%
	Intro to Prehistory	<input type="checkbox"/>	0 0.00%
	None of the above	<input type="checkbox"/>	0 0.00%






Please answer the following questions by indicating your level of agreement: (Instruction)

Learning Impact (Question Set)

3.	The module was informative and interesting. View individual answers		Likert Scale (Multiple Choice) 8 responses
	Strongly Agree	<input checked="" type="checkbox"/>	4 50.00%
	Agree	<input checked="" type="checkbox"/>	4 50.00%
	Neutral	<input type="checkbox"/>	0 0.00%
	Disagree	<input type="checkbox"/>	0 0.00%
	Strongly Disagree	<input type="checkbox"/>	0 0.00%
4.	The module was well organized and structured. View individual answers		Likert Scale (Multiple Choice) 8 responses

Strongly Agree		4	50.00%
Agree		4	50.00%
Neutral		0	0.00%
Disagree		0	0.00%
Strongly Disagree		0	0.00%






5. The data were useful for answering the question(s). Likert Scale (Multiple Choice)
[View individual answers](#) 8 responses

Strongly Agree		4	50.00%
Agree		3	37.50%
Neutral		1	12.50%
Disagree		0	0.00%
Strongly Disagree		0	0.00%






6. The module piqued my interest in the topic. Likert Scale (Multiple Choice)
[View individual answers](#) 8 responses

Strongly Agree		2	25.00%
Agree		6	75.00%
Neutral		0	0.00%
Disagree		0	0.00%
Strongly Disagree		0	0.00%

7. The module's format (e.g. web-based) helped in the learning of the topic(s). Likert Scale (Multiple Choice)
[View individual answers](#) 8 responses






Strongly Agree		7	87.50%
Agree		1	12.50%
Neutral		0	0.00%
Disagree		0	0.00%
Strongly Disagree		0	0.00%

8. The technology was appropriate (e.g. visual aids). Likert Scale (Multiple Choice)
[View individual answers](#) 8 responses

Strongly Agree		6	75.00%
Agree		2	25.00%
Neutral		0	0.00%
Disagree		0	0.00%
Strongly Disagree		0	0.00%






9. **My overall experience was enhanced as a result of the module's technological design.** Likert Scale (Multiple Choice)
8 responses

[View individual answers](#)

Strongly Agree		4	50.00%
Agree		4	50.00%
Neutral		0	0.00%
Disagree		0	0.00%
Strongly Disagree		0	0.00%






10. **The technology used in the class (e.g. web-based interaction) improved and enhanced my learning experience more than if I had not used it.** Likert Scale (Multiple Choice)
8 responses

[View individual answers](#)

Strongly Agree		5	62.50%
Agree		3	37.50%
Neutral		0	0.00%
Disagree		0	0.00%
Strongly Disagree		0	0.00%

11. **The instructor was helpful when I had questions.** Likert Scale (Multiple Choice)
8 responses






[View individual answers](#)

Strongly Agree		5	62.50%
Agree		3	37.50%
Neutral		0	0.00%
Disagree		0	0.00%
Strongly Disagree		0	0.00%

12. **I am more knowledgeable about the topic(s).** Likert Scale (Multiple Choice)

[View individual answers](#)

8 responses






Strongly Agree		2	25.00%
Agree		6	75.00%
Neutral		0	0.00%
Disagree		0	0.00%
Strongly Disagree		0	0.00%

13. I am comfortable using the software (if applicable).

Likert Scale (Multiple Choice)







[View individual answers](#)





8 responses

Strongly Agree		4	50.00%
Agree		3	37.50%
Neutral		1	12.50%
Disagree		0	0.00%
Strongly Disagree		0	0.00%

APPENDIX E: Student Responses for Module 1 (Pueblo Chronology) in ANT 253 *Introduction to Prehistory* (Sections 001 and Q), Spring 2006.

Questions and responses (90 submissions by 90 users)

1.	What is your classification? View individual answers		Multiple Choice 90 responses
	Freshman		35 38.89%
	Sophomore		18 20.00%
	Junior		21 23.33%
	Senior		12 13.33%
	Graduate Student		0 0.00%
	Other: Please Explain		4 4.44%






2.	In which of the following course(s) are you currently enrolled? View individual answers		All That Apply 90 responses
	Environmental Archaeology		0 0.00%
	Island Archaeology		0 0.00%
	Intro to Prehistory		89 98.89%
	None of the above		2 2.22%



















Please answer the following questions by indicating your level of agreement:

(Instruction)

Learning Impact

(Question Set)

3.	The module was informative and interesting. View individual answers		Likert Scale (Multiple Choice) 90 responses
	Strongly Agree		25 27.78%
	Agree		53 58.89%
	Neutral		12 13.33%
	Disagree		0 0.00%
	Strongly Disagree		0 0.00%

4.	The module was well organized and structured. View individual answers	Likert Scale (Multiple Choice) 90 responses
	Strongly Agree	 39 43.33%
	Agree	 42 46.67%
	Neutral	 8 8.89%
	Disagree	 1 1.11%
	Strongly Disagree	 0 0.00%
5.	The data were useful for answering the question(s). View individual answers	Likert Scale (Multiple Choice) 90 responses
	Strongly Agree	 24 26.67%
	Agree	 50 55.56%
	Neutral	 10 11.11%
	Disagree	 4 4.44%
	Strongly Disagree	 2 2.22%
6.	The module piqued my interest in the topic. View individual answers	Likert Scale (Multiple Choice) 90 responses
	Strongly Agree	 23 25.56%
	Agree	 38 42.22%
	Neutral	 25 27.78%
	Disagree	 4 4.44%
	Strongly Disagree	 0 0.00%
7.	The module's format (e.g. web-based) helped in the learning of the topic(s). View individual answers	Likert Scale (Multiple Choice) 90 responses
	Strongly Agree	 31 34.44%
	Agree	 41 45.56%
	Neutral	 15 16.67%

Disagree		3	3.33%
Strongly Disagree		0	0.00%

8. The technology was appropriate (e.g. visual aids). Likert Scale (Multiple Choice)
[View individual answers](#) 90 responses

Strongly Agree		40	44.44%
Agree		43	47.78%
Neutral		5	5.56%
Disagree		2	2.22%
Strongly Disagree		0	0.00%

9. My overall experience was enhanced as a result of the module's technological design. Likert Scale (Multiple Choice)
[View individual answers](#) 88 responses

Strongly Agree		22	25.00%
Agree		44	50.00%
Neutral		20	22.73%
Disagree		2	2.27%
Strongly Disagree		0	0.00%

10. The technology used in the class (e.g. web-based interaction) improved and enhanced my learning experience more than if I had not used it. Likert Scale (Multiple Choice)
[View individual answers](#) 90 responses

Strongly Agree		30	33.33%
Agree		34	37.78%
Neutral		24	26.67%
Disagree		2	2.22%
Strongly Disagree		0	0.00%

11. The instructor was helpful when I had questions. Likert Scale (Multiple Choice)

[View individual answers](#)

88 responses

Strongly Agree		35	39.77%
Agree		36	40.91%
Neutral		16	18.18%
Disagree		0	0.00%
Strongly Disagree		1	1.14%

12. I am more knowledgeable about the topic(s).

[View individual answers](#)

Likert Scale (Multiple Choice)

90 responses

Strongly Agree		30	33.33%
Agree		49	54.44%
Neutral		9	10.00%
Disagree		2	2.22%
Strongly Disagree		0	0.00%

13. I am comfortable using the software (if applicable).

[View individual answers](#)











Likert Scale (Multiple Choice)

90 responses

Strongly Agree		42	46.67%
Agree		34	37.78%
Neutral		12	13.33%
Disagree		2	2.22%
Strongly Disagree		0	0.00%

APPENDIX F: Student Responses for Module 1 (Pueblo Chronology) in ANT 253 *Introduction to Prehistory* (Sections 001 and Q), Summer I 2006.

Questions and responses (9 submissions by 9 users)






1.	What is your classification? View individual answers		Multiple Choice 9 responses
	Freshman		0 0.00%
	Sophomore		1 11.11%
	Junior		4 44.44%
	Senior		2 22.22%
	Graduate Student		0 0.00%
	Other: Please Explain		2 22.22%
2.	In which of the following course(s) are you currently enrolled? View individual answers		All That Apply 9 responses
	Environmental Archaeology		0 0.00%
	Island Archaeology		0 0.00%
	Intro to Prehistory		9 100.00%
	None of the above		0 0.00%






Please answer the following questions by indicating your level of agreement:

(Instruction)






Learning Impact

(Question Set)






3.	The module was informative and interesting. View individual answers		Likert Scale (Multiple Choice) 9 responses
	Strongly Agree		7 77.78%
	Agree		2 22.22%
	Neutral		0 0.00%
	Disagree		0 0.00%
	Strongly Disagree		0 0.00%
4.	The module was well organized and structured. View individual answers		Likert Scale (Multiple Choice) 9 responses

Strongly Agree		4	44.44%
Agree		4	44.44%
Neutral		1	11.11%
Disagree		0	0.00%
Strongly Disagree		0	0.00%






5. The data were useful for answering the question(s). Likert Scale (Multiple Choice)
[View individual answers](#) 9 responses





















Strongly Agree		4	44.44%
Agree		4	44.44%
Neutral		1	11.11%
Disagree		0	0.00%
Strongly Disagree		0	0.00%

6. The module piqued my interest in the topic. Likert Scale (Multiple Choice)
[View individual answers](#) 9 responses

Strongly Agree		4	44.44%
Agree		2	22.22%
Neutral		3	33.33%
Disagree		0	0.00%
Strongly Disagree		0	0.00%






7. The module's format (e.g. web-based) helped in the learning of the topic(s). Likert Scale (Multiple Choice)
[View individual answers](#) 9 responses

Strongly Agree		5	55.56%
Agree		3	33.33%
Neutral		1	11.11%
Disagree		0	0.00%
Strongly Disagree		0	0.00%

8.	The technology was appropriate (e.g. visual aids). View individual answers		Likert Scale (Multiple Choice) 9 responses
	Strongly Agree		6 66.67%
	Agree		3 33.33%
	Neutral		0 0.00%
	Disagree		0 0.00%
	Strongly Disagree		0 0.00%
9.	My overall experience was enhanced as a result of the module's technological design. View individual answers		Likert Scale (Multiple Choice) 9 responses
	Strongly Agree		8 88.89%
	Agree		0 0.00%
	Neutral		1 11.11%
	Disagree		0 0.00%
	Strongly Disagree		0 0.00%
10.	The technology used in the class (e.g. web-based interaction) improved and enhanced my learning experience more than if I had not used it. View individual answers		Likert Scale (Multiple Choice) 9 responses
	Strongly Agree		4 44.44%
	Agree		5 55.56%
	Neutral		0 0.00%
	Disagree		0 0.00%
	Strongly Disagree		0 0.00%
11.	The instructor was helpful when I had questions. View individual answers		Likert Scale (Multiple Choice) 9 responses
	Strongly Agree		7 77.78%
	Agree		2 22.22%
	Neutral		0 0.00%
	Disagree		0 0.00%
	Strongly Disagree		0 0.00%






12. I am more knowledgeable about the topic(s).
[View individual answers](#)

Likert Scale (Multiple Choice)
9 responses

Strongly Agree		6	66.67%
Agree		3	33.33%
Neutral		0	0.00%
Disagree		0	0.00%
Strongly Disagree		0	0.00%

13. I am comfortable using the software (if applicable).
[View individual answers](#)

Likert Scale (Multiple Choice)
8 responses

Strongly Agree		6	75.00%
Agree		1	12.50%
Neutral		1	12.50%
Disagree		0	0.00%
Strongly Disagree		0	0.00%