

Executive Summary

Continuing with policies developed with the current Liberal Studies Program, while also responding to concerns raised in the 1997 North Central Association Site Visit, the Liberal Studies Committee (LSC) has developed a comprehensive plan to assess student learning outcomes related to the Liberal Studies Program.

Given the size and complexity of this task, the LSC created an Assessment Subcommittee and delegated to this committee the task of developing this assessment plan. In responding to this assignment the Assessment Subcommittee developed two three-phased approaches to the assessment of liberal studies, both focused on the assessment of liberal studies skills. In Alternative A the Subcommittee proposes to create a Pilot Project (Phase 1) that will serve as a prototype to test data acquisition and analysis procedures with a focus on three Liberal Studies skills: critical reading, effective writing, and effective oral communication. A small number of academic units will be selected for the Pilot to increase the value of the piloting process. Revising protocols based on the lessons learned from the Pilot, Phase 2 will expand the assessment to a larger set of departments to test the robustness of the procedures. In Phase 3, the assessment procedures will be implemented across all units.

Alternative B compresses the assessment timeline by eliminating the second set of academic units used to help revise protocols and procedures and instead moving more quickly to a full implementation of the assessment procedures. Phase 2 then becomes a crucial component of the plan in that no opportunity will exist to test the scalability of the protocols before full implementation.

Both alternatives are schedule to begin in January 2005. Alternative A will continue through Summer 2008 while Alternative B will be completed approximately on year earlier, Summer 2007.

A major goal of this assessment plan is to create an open and transparent process. To help achieve this goal, part of the effort described here will include creating a detailed Communications Plan to inform all impacted constituencies about and encourage their involvement with the entire assessment process. This Plan will also create multiple and on-going opportunities for individuals and groups to review and comment on procedures, protocols and plan outcomes.

A key element in the success of either alternative is the availability of course-imbedded assignments usable in their current form, or with relatively minor revisions in structure or grading rubrics as assessment tools. Such availability will vastly decrease the cost of the assessment process and reduce or eliminate the need for additional assessment measures implemented inside or outside classroom situations. These two advantages will, we believe, help increase the incorporation of the assessment process into the culture of the institution.

Faculty will be involved throughout the process, starting with the creation of this plan. Faculty will also serve to help identify appropriate course embedded assignments, develop rubrics, and assess assignments.

Northern Arizona University	Liberal Studies Program Assessment of Student Learning
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Introduction

Following the 1997 North Central Association (NCA) Site Visit, reviewers made the following observations:

- “There is no evidence that students use their [liberal studies] opportunities for choice to achieve breadth, depth, or synthesis rather than merely to find a convenient class schedule. The catalogue statement specifies general learning outcomes with little regard to the foundation or discipline studies areas except in a most general sense.” (NCA, 1998, p.36)
- “Assessment of student learning outcomes appears to occur only within individual courses, and there is no evidence that this information is fed back to affect the adjustment of curriculum delivery in liberal studies courses, rather than as a foundation or major program courses. So far, lacking a coherent and fully articulated set of learning objectives for the Liberal Studies curriculum, there are no pre-tests, mid-level tests, or post-tests to demonstrate whether students actually learn or benefit from the Liberal Studies choices or to permit faculty to adjust the curriculum and its delivery.” (NCA, 1998, p.36)

In response, several methods for assessing the Liberal Studies Program were implemented including an internally-developed electronic portfolio system for collecting writing assignments, the requirement of a strengths and goals essay in the freshman UC 101 course, and the addition of questions in institutional surveys concerning skills and themes addressed in the Liberal Studies curriculum.

In 2002, the electronic portfolio and collection of the strengths and goals essay were discontinued. These decisions were made for several reasons, including:

- technical difficulties related to the internally-developed e-portfolio system;
- inadequate human and financial resources assigned to ensure collection and analysis of data;
- the initial analysis of the available writing assignments concluded that the authenticity and fairness of this assignment for UC101 and Junior level writing courses were in doubt since these courses focused on academic writing skills, while the initial assessment strategy used an add-on assignment which required reflective writing;
- instructions for the assignment were inconsistent across courses, making an unbiased analysis of the assignments difficult to achieve and difficult to analyze;
- no feedback mechanisms were in place to utilize assessment results to improve the Liberal Studies curriculum.

However, much was learned from these efforts. The use of an electronic system for collecting student work still appears as the most manageable approach and we will continue to explore efficient and sustainable methods for assessing embedded assignments.

Liberal Studies Mission and Goals: Citizenship

The NAU Liberal Studies Program is designed to assist students in developing the necessary skills of citizenship, including the ability to successfully engage in and have a commitment to life-long learning. That is, students graduating from NAU need both the skills and a broad understanding of key issues that will allow them the opportunity to participate fully in public debates about the pressing issues of the time and become more aware of the challenging problems that they face as they move into a range of careers following graduation.

To be well prepared to meet the demands of living in an increasingly complex society, students are asked to consider global themes of Environmental Consciousness, Technology and Its Impact, and Valuing the Diversity of Human Experience (Appendix A).

The Liberal Studies Program requires that students gain a broad educational base by taking courses from various distribution blocks. These blocks include Lab Science, Science/Applied Science, Social and Political Worlds, Aesthetic and Humanistic Inquiry, and Cultural Understanding (Appendix B). Also, recently approved University requirements (outside of but related to the Liberal Studies program) require all students to successfully complete one course with a focus on U.S. Ethnic Diversity and another course that addresses issues of Global Diversity.

Student development, progress, and life-long learning will be facilitated by acquiring the following nine skills:

- Effective oral communication
- Critical reading
- Effective writing
- Critical thinking

- Quantitative and Spatial Reasoning (revised title: Methods of formal analysis)
- Effective use of technology
- Creative thinking
- Scientific reasoning
- Ethical reasoning

To date, only the first three of the skills listed above have operational definitions (Appendix C).

Assessment Plan Goals

Two goals exist for this assessment plan:

1. To initially assess the achievement of NAU students in three of the core Liberal Studies skills: 1) effective writing, 2) effective oral communication, and 3) critical reading as currently defined and later to expand this assessment to the remaining skills, distribution blocks, and themes.
2. To create a more cohesive curriculum of study and analytical procedures that ensure the assessment of defined outcomes that inform adjustments to the curriculum.

These goals require research, the findings of which will provide information that will serve to formulate recommendations to address the following three questions:

- 1) To what extent are courses and embedded assignments that state they teach effective writing, critical reading, and/or effective oral communication aligned with the outcomes defined during the 2003-2004 academic year by the Liberal Studies Committee?
- 2) How should issues of non-alignment between courses and defined outcomes be addressed?
- 3) What expectations should be established for course content, assessment, and the broader curriculum? Specifically, to enhance the cohesiveness of the curriculum, what changes should be made to the existing expectations (for faculty, departments, etc.) for submission and acceptance of courses into the Liberal Studies Program?

Assessment Plan Structure

The Liberal Studies Program Assessment Plan is structured in three successive phases of activity.

Phase 1

As detailed below, Phase 1 has three concurrent components.

- The first component is a Pilot Project that will identify methodologies and procedures that can be used to most effectively and efficiently address the first goal of the assessment plan.

- The second component is a Content Analysis that will identify the alignment between Liberal Studies skills as they are now defined and syllabi of current Liberal Studies courses. The Content Analysis is projected to be completed by the end of Phase 1.
- The final component is continued work by the Liberal Studies Committee on defining the Quantitative Analysis skill.

At the conclusion of Phase 1, the findings of the Pilot Project will be reported to the Liberal Studies Committee Assessment Subcommittee (LSCAS). During this phase, the Liberal Studies Committee will also begin work on defining the Critical Thinking skill.

Based on the findings of both the Content Analysis and the Pilot Project, as well as other Liberal Studies Committee efforts, the LSCAS will recommend policy changes to the Liberal Studies Committee. Any changes approved by the Liberal Studies Committee will be forwarded to the appropriate governing committees and offices.

Phase 2

Phase 2 has two possible tracks (Alternative A with Phase 2a and Alternative B with Phase 2b; figures 1a and 1b, respectively), depending on the success of Phase 1. In Phase 2a, the processes and procedures developed during the Pilot Project will be implemented in a sample of departments. Following the implementation, the processes and procedures will be evaluated and adjusted, as appropriate.

In Phase 2b, the Pilot Project will be directly expanded to all academic units on campus, focused on the three skills used in the Pilot. The exact protocols for this full expansion will be developed to address such issues as the appropriate frequency of assessment for a given set of skills, how courses should be selected, for large enrollment course, the appropriate sampling scheme to obtain a representative and statistically appropriate sample, etc.

The decision to select alternative 2a or 2b will rest on the following three criteria:

- 1) the degree of alignment between skills as defined in Liberal Studies and those in embedded assignment;
- 2) degree to which rubrics in embedded assignments match those developed in the Liberal Studies assessment process
- 3) willingness of faculty to engage in assessment process.

Phase 3

Phase 3 also follows two potential paths, Alternative A and Alternative B. In Alternative A, Phase 3a follows directly from Phase 2a, above. In Phase 3a the framework developed during the Pilot Project will be replicated in the remainder of departments in the University in a phased approach. Again, following each implementation year, the processes and procedures will be evaluated and adjusted, if appropriate.

The procedures to implement Phase 3b, the step following Phase 2b, will depend on the sampling protocols developed in the Phase 2b. For example, Phase 3b may focus on revisiting units for a second set of skills or revisiting a sampling of units for the second set of skills while continuing to revisit

The Phase 2b and 3b (Alternative B) path will allow for a faster implementation of the assessment plan, but has greater uncertainty at this point and will continue to have this uncertainty until we have gathered and analyzed the results from Phase 1

Figure 1a. Liberal Studies Assessment Timeline: Alternative A

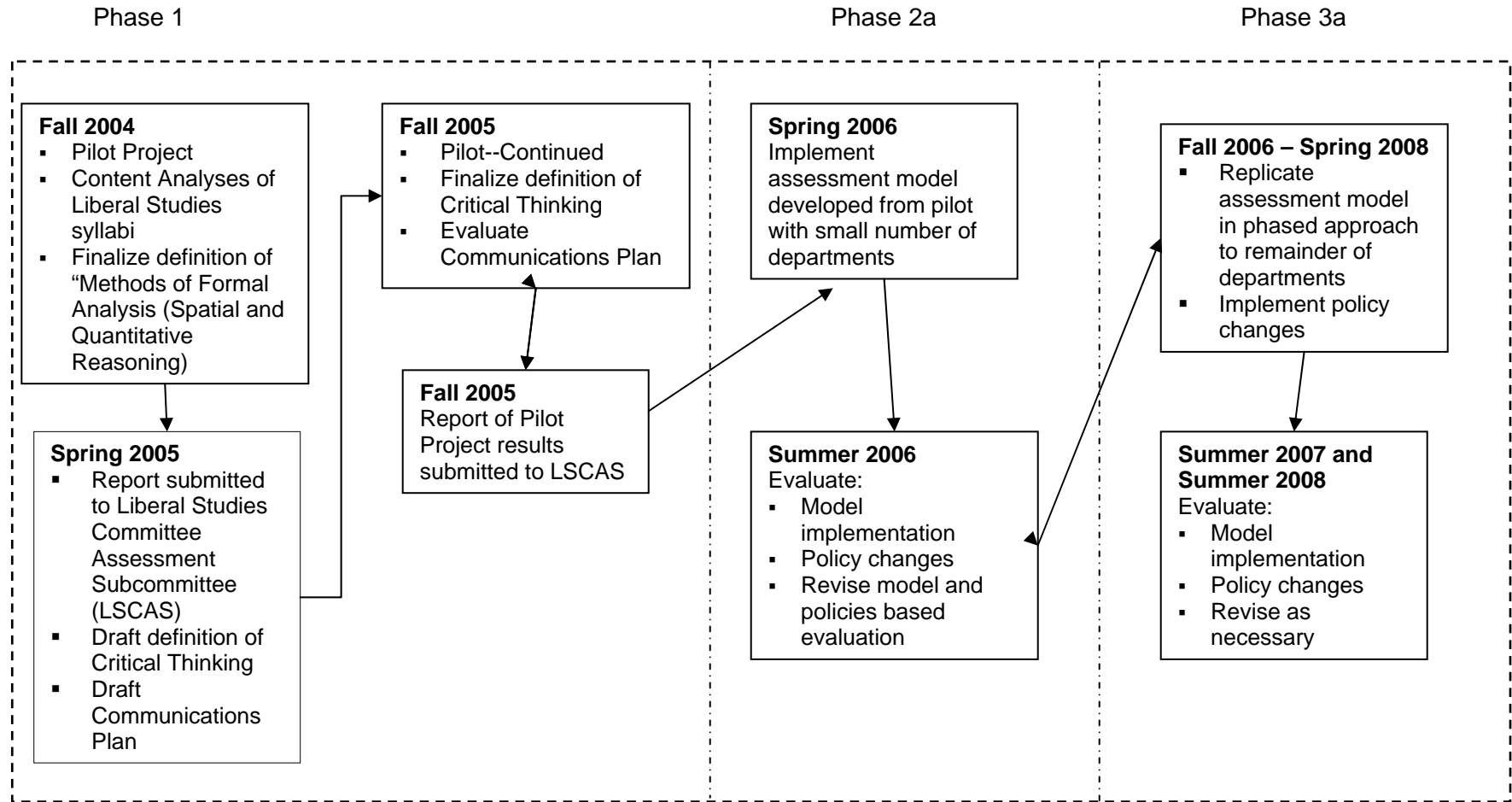
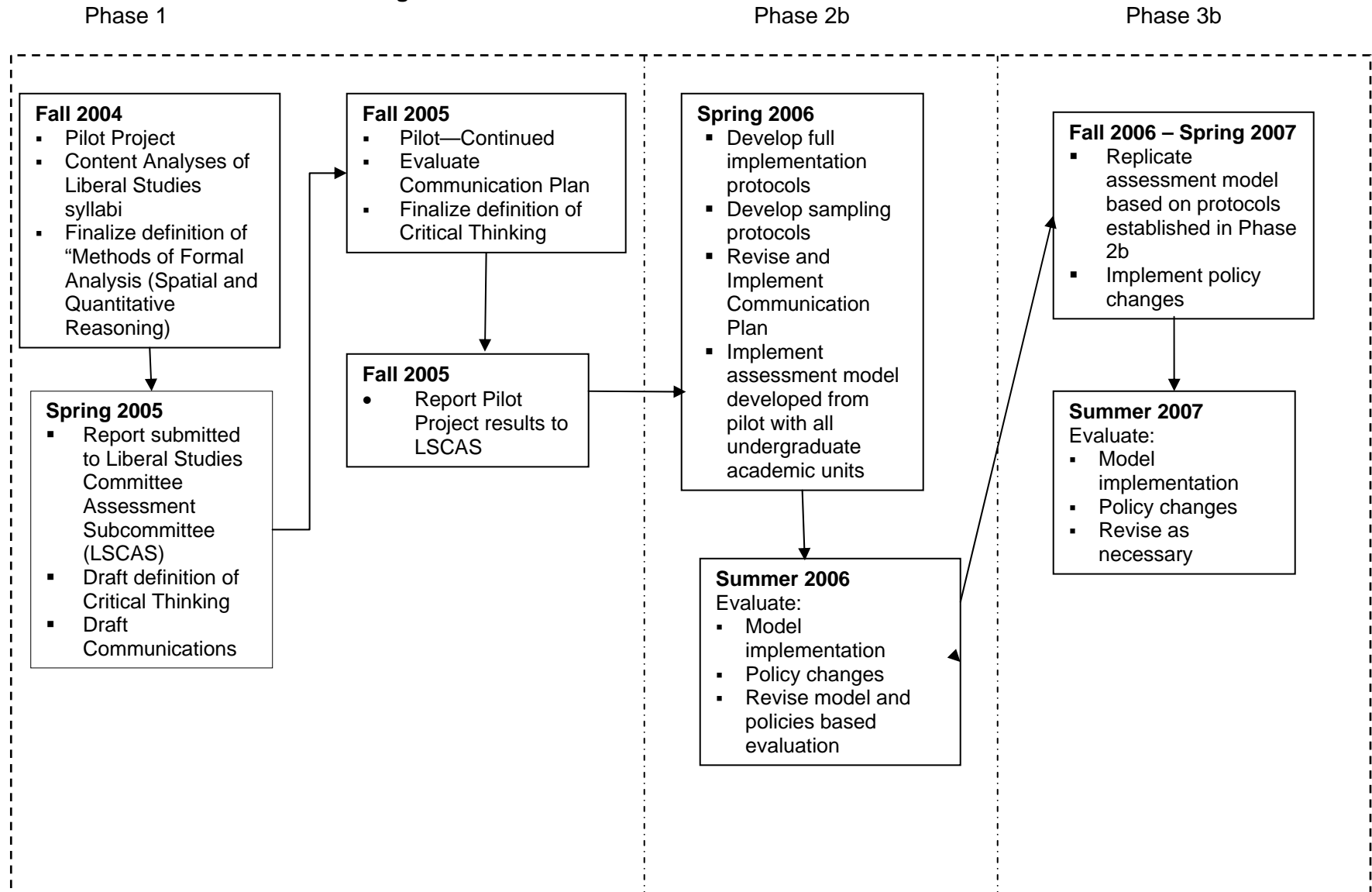


Figure 1b. Liberal Studies Assessment Timeline Alternative B



Phase 1: Pilot Project

The purpose of the Pilot Project is to determine the research methodologies and procedures that will address the first goal of this assessment plan and serve as a prototype that will assist in establishing an efficient, effective, and sustainable assessment program. At present, we anticipate that the Pilot Project will include the following activities:

1. Develop a draft Communication Plan that will assist in the effective implementation of the assessment procedures established through this Pilot Project
2. Conduct a content analysis of Liberal Studies course syllabi to determine the congruence between the skills identified in these courses and the currently-defined Liberal Studies skills. Congruence will be identified based on a direct 'presence or absence' comparison between syllabi skills and Liberal Studies skills.
3. Based on the results of the above content analysis, identify and recruit participants for the Pilot Project at the department and faculty levels. We will use a stratified sampling procedure to help ensure a wide distribution of course types, e.g. size, type (lecture or seminar, for instance), and mode of delivery (traditional, interactive instructional television/cable/satellite, web enhanced, full web) with a target population of those courses and programs exhibiting congruence.
4. Interview faculty members teaching the courses and undergraduate degree programs identified in step 3 to determine the actual alignment between defined Liberal Study skill outcomes and the outcomes in embedded (i.e. existing) assignments and to determine faculty and degree programs' willingness to participate in this process.
5. Create appropriate rubrics (hereafter, 'new rubrics') for the skills of effective writing, critical reading, and effective oral communication based on Liberal Studies skill definitions, those already used by NAU faculty, and the literature, using faculty consultants.
6. Establish evaluation criteria to compare existing course rubrics for embedded assignments with the new rubrics created in step 5, using faculty consultants.
7. Identify assignments where strong alignment exists between embedded assignment rubrics and the new rubrics, using faculty consultants. Determine the willingness of faculty to adopt the new rubrics for future assignments.
8. Establish procedures for data collection and analysis and data scoring (e.g., Should the data collected from the targeted courses be scored by the instructor teaching the course, by other faculty members external to the course, or by other designated scorers?) for assignments where new rubrics have been adopted.
9. Collect, compile, and analyze data, transforming these data into usable information to inform further decision making.
10. Determine how indirect data sources can be used to triangulate the direct data being collected. We will use NAU's Senior Survey and online delivered course evaluations whenever possible to collect indirect data from students regarding their perceived achievement level in the three currently-defined Liberal Study skills. The Office of Academic Assessment, the Liberal Studies Committee Assessment Subcommittee, and the Liberal Studies Committee will work with the Office of Planning and Institutional Research to determine appropriate questions. A process will be created for adding questions to course evaluations and their subsequent use in the Pilot Project, subject to approval by targeted faculty members.

11. Write an interim report and a set of recommendations for continuing assessment based on preliminary findings from the Pilot Project, including a methodology to select academic units for assessment implementation that will help ensure an efficient and effective collection of data, and an evaluation of the Communication Plan. Distribute report for review and comment to the Liberal Studies Committee, the Faculty Senate, participating faculty and academic units, and other individuals and groups as identified in Communication Plan.
12. Write a final Pilot Project Assessment report.

Anticipated Findings and Implications.

The Pilot Project findings will identify issues arising from the defined skills of effective writing, critical reading, and effective oral communication in the Liberal Studies Program. The findings will assist in aligning defined outcomes and actual achieved course learning objectives.

We believe that the Faculty Senate Liberal Studies Review Committee will find the results of this research valuable when it considers revisions to the Liberal Studies Program with the goal of creating a more cohesive Liberal Studies curriculum.

The results of this research will also assist in the creation of feedback loops necessary for reviewing assessment data and implementing data-informed curriculum change. In sum, the results of this research will generate information to inform decision making regarding:

- a) non-alignment between the existing definitions of course-based skill outcomes and Liberal Studies skills outcomes;
- b) skill assessment rubrics;
- c) data collection and analysis procedures;
- d) effectiveness of the Communication Plan;
- e) procedures to involve faculty as a prelude to a wider Liberal Studies Program assessment.

Liberal Studies Committee and Faculty Involvement in the Assessment Plan Development Process

The Liberal Studies Committee as a whole has participated in the development of this initial assessment plan. The Committee includes two faculty representatives from each of NAU's six colleges, a student representative from ASNAU, and ex-officio members representing the Honors Program, the Office of Academic Assessment, University Advising, and the Vice Provost for Undergraduate Studies and staff.

The members have actively participated on a variety of subcommittees focused on defining the student learning outcomes for effective writing, effective oral communication, and critical reading. In addition to member input, faculty members not serving on the Liberal Studies Committee from English, Mathematics, Communication, and Fine Arts provided input and feedback to help define the core skills assessed in this plan.

Development of this assessment plan occurred in consultation with or reference to a variety of outside sources including:

- The Association of American Colleges and Universities, *Greater Expectations: A New Vision for Learning as a Nation Goes to College* (AAC&U, 2002)
- Barbara E. Walvoord, *Assessment Clear and Simple: A Practical Guide for Institutions, Departments, and General Education* (Jossey-Bass, 2004)
- Indiana University-Purdue University Indianapolis's web site on assessment of general education requirements

Numerous rubrics related to the three skills being assessed through this plan were reviewed. Additionally, several Liberal Studies Committee Assessment Subcommittee members attended the Association of American Colleges and Universities 2004 General Education and Assessment: Generating Commitment, Value, and Evidence Network for Academic Renewal Conference and the American Association of Higher Education 2004 Assessment Conference: Connecting Public Audiences to Our Work.

Appendix A: Liberal Studies Thematic Foci

To be well prepared to meet the demands of living in an increasingly complex society, students should understand how their learning is connected to major issues and problems facing our society. Through the Liberal Studies Program, students are asked to consider the following global themes:

Environmental Consciousness – The environmental challenges that we and our students face are myriad and complex. And we know that environmental problems and issues cannot be addressed easily, simply, or from only one perspective. It is essential, then, that students think about environmental issues in ways that are themselves sophisticated and integrated. Students need to be aware that environmental issues and problems are complicated and that these problems are dependent on all of our actions, not just on the actions of those who are trained as environmental specialists. Thus, students in this program have opportunities to develop their own comprehensive understanding of how these issues may be broached in range of disciplines.

Technology and Its Impact – Technological innovation and development shape the fabric of our lives and substantively alter the quality of the lives we lead. Students today use computers daily, have access to more information more quickly than any group in history, and we all benefit from technological sophistication in medicine and other fields. At the same time, because technological innovation changes our lives and the lives of our students so rapidly, it is essential for all of us to consider the effects of technology, and to understand that we must make informed decisions about the questions posed by technological possibility. Students graduating today and in the future need to reflect on the impact of technology in our lives and to realize that these are questions that face us all regardless of our jobs or our careers.

Valuing the Diversity of Human Experience – Environmental problems, globalization, and technological changes will present challenges to all societies in the global community. Students need an understanding of the major structural, cultural, and dynamic features of human societies in order to participate effectively in efforts to address the social

changes of the next century. Students need to value and understand the origins of diversity, to appreciate that people from various cultures and backgrounds approach problems differently, raise different questions, and find different solutions. It is important that student graduating from NAU have the opportunity to work with others from backgrounds dissimilar from their own. They must also develop the ability to work effectively with a range of people in different settings as well as to learn to value and understand ideas from various cultures and how these ideas shape our lives.

Courses approved for liberal studies credit will have to demonstrate how they address questions and ideas related to at least one of the three themes.

(Source: http://www2.nau.edu/~d-ugstdy/libstu/faculty/overview_dr.html)

Appendix B: Liberal Studies Distribution Blocks

Laboratory Science – Courses in this block will increase student’s knowledge about the natural world. Understanding a variety of physical and biological phenomena is developed through the application of the scientific method. Students will learn to employ the logic and techniques of scientific inquiry and thereby develop an understanding of the basis and limits of contemporary scientific knowledge. These courses will also familiarize students with important theories, concepts, and taxonomies that are central to the various science disciplines.

Science/Applied Science – Courses in which students apply knowledge derived from scientific inquiry to address human needs through technological advancements. Students learn practical skills in the creation and application of various technologies. Courses in this block also address the impact of technology on the human condition and the natural world.

Social and Political Worlds – Courses that engage students in the study of the patterns that characterize the history of human communities, the relationships between the psychological, social, cultural and political components of human communities, and dynamics of human behavior in varied contexts. Students will learn how different empirical and theoretical strategies are employed to study human behavior and social, political, and cultural systems. These courses enhance student understanding of the dynamic relationships between human communities and their ecological context, the systemic components and dynamics of contemporary human societies, relationships between human societies in the global community, and the major dimensions of variation in contemporary human experience.

Aesthetic and Humanistic Inquiry – Courses in this block involve students in the study of the human condition through philosophical inquiry and analysis of the various forms of creative expression. These courses help students develop an understanding of the relationship between context and human creative expression, major conceptual frameworks utilized to make sense of the creative arts, and how human experience and values are expressed through creative endeavors. Students will also develop their capacities for analysis and ethical reasoning along with an understanding of the multiple facets of the human condition.

Cultural Understanding – Courses in this block enhance students' understanding of different cultures of the world through the study of language, literature, religion, and artistic creations or other disciplines. These courses provide students with an experience of diverse cultures (different from their own), and an analytic framework that facilitates awareness of how cultures vary and shape human experience. Students will become more familiar with cultures of the world and develop an appreciation for the unique features and perspectives of varied cultural traditions.

(Source: http://www2.nau.edu/~d-ugstdy/libstu/faculty/overview_dr.html)

Appendix C: Liberal Study Skills and Definitions

Skill: Effective writing

Student Learning Outcomes:

Students will be able to:

- Demonstrate steps in the writing process;
- Tailor writing to a specific audience;
- Focus writing on a specific purpose;
- Provide logically coherent pieces of written work;
- Apply general writing standards.

Skill: Effective oral communication

Student Learning Outcomes:

Students will be able to:

- Organize and deliver content based on audience, location, allotted time, and purpose;
- Speak with appropriate oral communication techniques;
- Listen carefully and respond thoroughly and thoughtfully to questions;
- Create appropriate professional supplemental materials that reinforce the presentation.

Skill: Critical reading

Student Learning Outcomes:

Students will be able to:

- Summarize accurately and comprehensively;
- Recognize the most significant textual and visual elements;
- Incorporate/use specific examples and/or quotations;
- Recognize patterns and valid comparatives;
- Demonstrate an understanding/comprehension of the material;
- Demonstrate evidence of an ability to analyze and evaluate texts;
- Demonstrate the ability to explicitly identify criteria and use these criteria accurately to evaluate a piece of written work.