

Chapter XV: PORTFOLIO ASSESSMENT

Who takes it?

Right now, only seniors in classes that require creation of a Liberal Arts and Sciences Portfolio (most often capstone courses or senior seminars) submit portfolios. In May of 2002, nine hundred and eight seniors, or 68.2% of the graduating class turned in portfolios. All students matriculating in or after the fall of 1999 will be required to develop and submit portfolios as a requirement for graduation.

When is it administered?

The instructor of the course requiring participation in the portfolio assessment distributes the guidelines and collects portfolios during the course. This could occur in any semester during the student's senior year.

How long does it take for the student to compile the portfolio?

The average is about four to five hours.

What office administers it?

The class that requires it.

Who originates the submission requirements for portfolios?

Faculty readers and evaluators, the Assessment Committee and the director of the portfolio assessment design, evaluate and publish the requests for specific portfolio items.

When are results typically available?

The portfolios are read and evaluated in May and generally the results are available in late summer or early fall.

What type of information is sought?

Faculty evaluators and the Assessment Committee designate the types of works requested from students. In the past, many of the requested items have remained constant. In the 2001-2002 academic year, a portfolio included a work demonstrating *critical thinking*, a work demonstrating *interdisciplinary thinking*, a work reflecting *historical analysis*, a work showing *scientific reasoning*, an item demonstrating *aesthetic analysis*, a work or experience the student considered *most personally satisfying*, and a *cover letter* in which the student reflects on ways they have changed while at Truman and offers any other thoughts they care to express about their experiences here. Other items may be included, and some disciplines may require additional items relating specifically to their major.

From whom are the results available?

The director of portfolio assessment.

Are the results available by division or discipline?

Traditionally, results by discipline are not made available to the general public. However, each Division Head receives the results from students majoring in disciplines within his or her division, and each discipline is provided with results from students in its major. Furthermore, information about the classes serving as sources for portfolio submissions including the scores of those submissions are provided to individual disciplines. In this way portfolio data can be used by disciplines in making informed decisions regarding their curricula and methods.

To whom are results regularly distributed?

The results of portfolio assessment are made available to all members of the Truman community through this Assessment Almanac. Division Heads receive results for students majoring in disciplines within their divisions, and individual disciplines receive results for their major students. Information about classes serving as sources for portfolio submissions are provided to disciplines through their conveners. More detailed data are accessible in consultation with the Portfolio Director. Specific findings are shared with faculty and administrators through planning workshops, faculty development luncheons, and other forums. In the past, data and specific findings have been useful to the university in preparing a self-study report for reaccreditation by the North Central Association and in guiding the core reform that led to the development of the Liberal Studies Program. The Faculty and Student Senates have used the reports in developing planning documents. In discipline committees, some faculty use the information to reform their curriculum, improve their major, and engage in self-study for reaccreditation of their

programs. Portfolio findings have also affected the assignments and syllabi of faculty that have participated as portfolio readers.

Are the results comparable to data of other universities?

No. Few universities are using portfolios for assessment of general education or liberal studies; however, many institutions have inquired about the development and results of the portfolio assessment at Truman.

2002 Liberal Arts and Sciences Portfolio

In 1988, President Charles McClain charged a faculty committee to design a local assessment of the liberal arts and sciences curriculum at then Northeast Missouri State University. The Liberal Arts and Sciences Assessment Committee recommended the use of senior portfolios for sampling and assessing materials that demonstrated student achievement and learning. This volume reports and analyzes the 2001-2002 academic year portfolio assessment findings, concluding with a series of recommendations about the portfolio assessment processes and about the use of the data for improving teaching and learning.

In May 2002, portfolios from eight hundred ninety-six, or 67% of the 1330 students who graduated in fiscal year 2002, were read and evaluated by faculty readers. This percentage is significantly lower than the 84% participation reported for 2001. Twenty-one disciplines participated in the portfolio project, administering the portfolio to its majors. This number is higher than the eighteen disciplines participating last year. The increase is assumed to be attributable to the pending implementation of the portfolio as a graduation requirement, which comes into effect when the students who matriculated in 1999 complete their studies in the spring of 2003. The accompanying table lists several more disciplines, because some students are double majors. The number of majors represented in the portfolio is twenty-eight, five more than in 2000.

Fifty-eight faculty members read and evaluated the portfolios, representing all ranks and twenty-four academic disciplines from every division except Education. Twenty of the faculty participants (five more than last year) were new readers. The portfolio director, who is a faculty member, organized the readings sessions, trained readers in holistic evaluation, facilitated discussions, and served as a second or third reader of materials that were difficult to assess. Two student employees helped considerably with data entry and sorting. Newer readers were encouraged to seek advice of those with more experience when confronted with difficulties.

Reading sessions were scheduled over the three weeks from May 20 to June 7, 2002. Approximately one-third, or about twenty, of the readers participated during each week, gathering daily at 8:00 AM and ending at 4:30 PM (8:00 AM to 6:15 PM during the second week, shortened due to the Memorial Day holiday) with a long hour for lunch and a morning and afternoon break of about fifteen minutes each. Having tried other arrangements, it seems that twenty readers per week form an optimum cohort, allowing reasonable time for satisfactory discussions without compromising efficiency.

The types of student works sought with the 2002 portfolio were the same as in 2001, though two categories were modified. Portfolio submissions were elicited by prompts for demonstrating “critical thinking,” “interdisciplinary thinking,” “scientific reasoning,” “historical analysis” and “aesthetic analysis and evaluation,” focusing on students’ critical thinking across the liberal arts and sciences curriculum. A sixth prompt asks students to demonstrate or describe their “most personally satisfying work or experiences” during their Truman tenure. Finally, seniors were asked to draft reflective cover letters for their portfolios.

The “critical thinking” category is a revision of the “growth as a thinker” category used previously. Rather than submitting two works that demonstrate growth in thinking, students are now asked to submit their best example of critical thinking. Over

PORTFOLIOS BY MAJOR	
Accounting	56
Agriculture	2
Art	30
Biology	117
Business Administration	215
Chemistry	18
Classics	1
Communication	70
Communication Disorders	1
Computer Science	24
Economics	6
English	91
Exercise Science	65
Health Science	32
History	50
Justice Systems	1
Mathematics	24
Music	18
Philosophy and Religion	5
Physics	4
Political Science	12
Psychology	48
Sociology/Anthropology	1
Spanish	3

Participating Disciplines
Accounting
Art
Biology
Business
Chemistry
Classics
Communication
Computer Science
Economics
English
Exercise Science
Health Science
History
Mathematics
Music
Nursing
Philosophy and Religion
Physics
Political Science
Psychology
Spanish

the years, students have often misunderstood the request for two papers, preventing valid comparisons of the student’s growth. The change clarifies the focus for students and enables them to provide an appropriate sample of their work.

Secondly, the “aesthetic analysis and evaluation” prompt was modified for students submitting packets during the spring semester. The revised prompt, crafted with the assistance of faculty from Fine Arts and Language and Literature, seeks to more appropriately assess the outcomes identified in the LSP for the aesthetic mode of inquiry. The category was renamed “aesthetic analysis.” Approximately 47% of the submissions used this revised version of the prompt.

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|---|
| <p><u>The 2002 Portfolio</u></p> <ul style="list-style-type: none"> • Critical Thinking • Interdisciplinary Thinking • Scientific Reasoning • Historical Analysis • Aesthetic Analysis and Evaluation • Most Personally Satisfying Experience • Reflective Cover Letter |
|---|

2002 Portfolio Findings

The findings of the 2002 Portfolio Task Force are presented for the entire group of participating seniors. The findings are also sorted and reported according to three large groupings based on students’ majors: “Arts/Humanities,” “Science/Math,” and “Professional” studies. The accompanying table shows how the various disciplines are characterized in this scheme.

Because this assessment relies on students to first keep and then select materials for inclusion in their portfolios, the resulting data are inherently “fuzzier” than data from a standardized, systematically controlled instrument. Students occasionally indicate that they are submitting work that is not their strongest demonstration because they did not keep or did not receive back the artifacts which best demonstrate their competence in the specified area. Other students report that they were never challenged to use the thinking skills or the mode of inquiry requested by individual prompts and, therefore, cannot submit material. Lack of motivation may inhibit the thoughtfulness of the selection process or engagement in self-assessment encouraged by the cover sheets for each portfolio category. In their reflective cover letters, students report a wide range of motivation levels and frequently are frank in stating that they compiled their portfolio quickly and with little thought because other concerns and responsibilities were considered higher priorities. The administration of the portfolio and the degree of self-reflection it fosters in students are uneven across the campus.

<u>Major Groups</u>		
Arts/Humanities	Science/Math	Professional
Art	Agriculture	Accounting
Classics	Biology	Business Administration
Communication	Chemistry	Communication Disorders
English	Computer Science	Justice Systems
History	Economics	
Music	Exercise Science	
Philosophy and Religion	Health Science	
Sociology/Anthropology	Mathematics	
Spanish	Physics	
	Political Science	
	Psychology	
265 Portfolios	353 Portfolios	277 Portfolios

Because some students elect not to submit materials in certain categories and others offer multiple submissions, the number of submissions varies from category to category in the report. Additionally, we have kept track of the sources of items selected by seniors for their portfolios. We characterize that data by indicating several of the most common sources (disciplines and courses) for each category. Finally, we report findings regarding the occurrences of submissions dealing with issues of race, class, gender or international perspectives.

Critical Thinking

Seniors submit works to demonstrate their abilities as critical thinkers. In 2002, items were elicited with the following prompt:

Please include a work reflecting your best critical thinking from your academic career. Strong critical thinking involves such intellectual processes as analyzing,

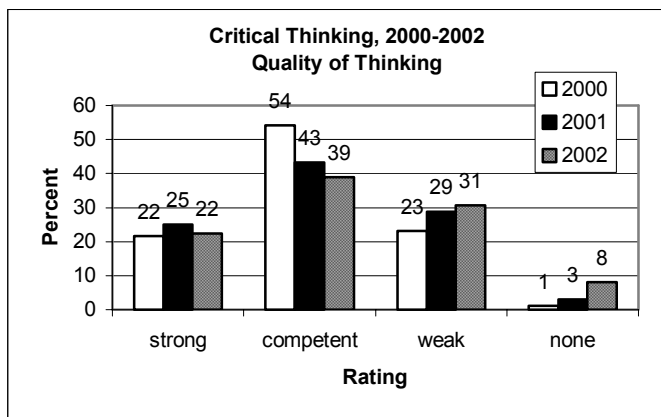
evaluating and synthesizing ideas and concepts (see “Bloom’s Taxonomy” on the following sheet). Please note that in the past, some students confused good writing with good critical thinking. Although writing and thinking are correlated, we are most interested in your critical thinking skills.

Students are further provided with a description of Bloom’s¹ taxonomy of critical thinking, and are encouraged to use it when reflecting on their growth. The cover sheet encourages metacognition when it specifies that seniors describe how and why their choices demonstrate their best critical thinking.

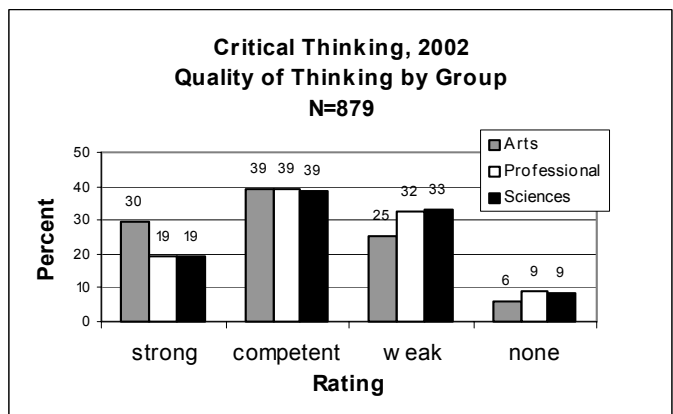
Faculty read the submissions and make two judgments: 1) whether the quality of the thinking is strong, competent, weak or not evident; and 2) whether the quality of insight evident in the senior’s description and self-assessment of growth as a thinker is strong, competent, weak or nonexistent. Each item was read and evaluated by one faculty reader.

Critical Thinking at a Glance	
• Number of submissions:	879
• Percent of “no submissions”:	<1
• Mean critical thinking score (on a 0 – 3 scale):	1.76
• Highest scoring “group”:	Arts/Humanities
• Lowest scoring “group”:	Professional
• Most frequent source (course):	ENG 314
• Most frequent source (discipline):	ENG
Trend:	Weaker critical thinking scores

Out of the 895 portfolios collected, 879 (98%) submitted examples of critical thinking. The others did not include a submission for this category (n=7), provided a “self-report” (described but did not include an assignment, n=1), or failed to attach prompts to their submissions for any categories (n=3). Of the 879 seniors who submitted anything in this category, 17.8% offered no meaningful self-assessment.



Faculty readers evaluated 879 works for the quality of critical thinking evidenced, and rated the thinking as “strong,” “competent,” “weak,” or “none.” In 2002, 22% of seniors submitted material judged as demonstrating “strong” thinking; 39% submitted material with thinking judged as “competent”; 31% submitted material judged as showing “weak” thinking; and 8% submitted material judged as demonstrating no critical thinking. Typically, entries evaluated as “none” were reflective papers, creative writing, or researched reports displaying neither analysis nor evaluation. The percentage of seniors with submissions judged as “competent” is 4% lower in the current portfolios than was found in 2001 and 14% less than was found in 2000.



Additionally, “strong” thinking decreased by 3% as compared with the 2001 findings, “weak” and “no” critical thinking increased by 5%. These factors combine to account for a decrease in the mean score from 1.90 in 2001 to 1.76 in 2002, (where a score of 0 = “none” and 3 = “strong”).

When the data is sorted according to major groups, it becomes evident that seniors with Arts/Humanities majors are judged as significantly stronger critical thinkers than those with Professional or Science/Math majors. Thirty percent of Arts/Humanities students were found to be “strong” critical thinkers, while only 19% of Science

¹ Bloom, B.S. (Ed). Taxonomy of Educational Objectives Handbook 1: Cognitive Domain. New York: Longman, Green & Co. (1956).

students and Professional Studies students were considered “strong” in their thinking. Similar patterns are observed when compared with the 2001 data.

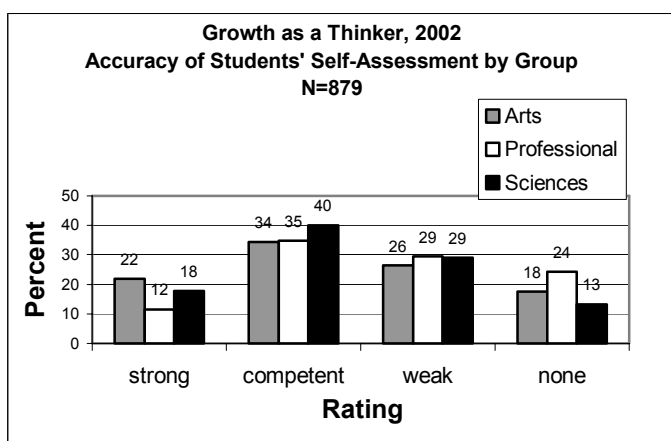
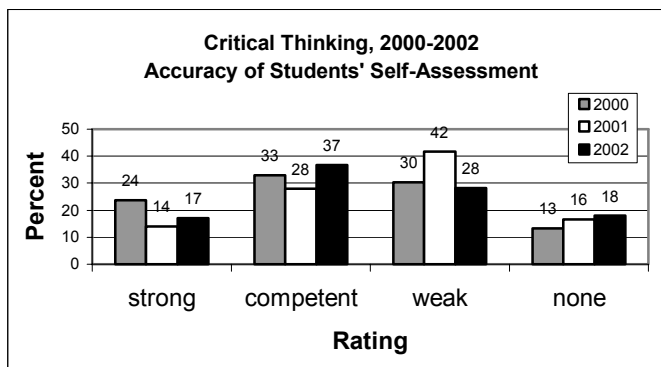
In 2002, students’ self-assessments of their critical thinking showed modest improvement from 2001, but still slightly lower scores than 2000. “Strong” and “competent” self-assessments were up a combined total of 12% from 2001, but down 3% from 2000. The percentage of students who provide no self-assessment is a concern, since it has continued to increase throughout the three-year period.

When sorted according to major groups, seniors with Arts and Humanities majors were most insightful in their self-assessments of their critical thinking skills. Science/Math majors were rated similarly, though slightly lower. Students with Professional majors were least insightful.

As expected, the vast majority of works chosen by seniors for this category were generated in the last two years of study. Forty-two percent of the submissions were examples of work done as a senior, 36% were from the junior year, 12% came from the sophomore year and 9% were produced during the freshman year. It is curious that over 20% of the submissions came from the first two years. This may be due, in part, to the use of “critical thinking” as the category title. Since fifty-three students submitted works from ENG 190 (Writing as Critical Thinking), it may be that they found this class to be closely related to the prompt. This may also indicate a need for increased discussion of critical thinking throughout the curriculum. Fifty-four percent of the submissions fulfilled assignments for classes in the major, 33% were generated in Liberal Studies Program classes, and the rest were products of elective courses, minor requirements or other sources.

English classes were the most common sources of student submissions. Two hundred one submissions were from English classes. Business courses were the sources of 98 submissions, followed by Philosophy and Religion with 70 submissions.

Of the items submitted, 3.8% dealt with issues of class (down very slightly from 2001), 5.7% dealt with issues of race (up 1.7% from 2001), and another 6.5% had international perspectives (up 2.5% from 2001). Six percent of the submissions dealt with issues of gender (up 4% from last year). The percentage of collaborative submissions rose to 9.2%, up 2.2% from 2001.



Critical Thinking			
Top Ten Courses		Top Ten Disciplines	
ENG 314	61	ENG	201
ENG 190	53	BSAD	98
BSAD 460	30	PHRE	70
BSAD 325	18	BIOL	49
ENG 209	15	JINS	49
PHRE 186	15	COMM	46
POL 161	14	HIST	46
ES 505	13	ES	33
CHEM 421	12	POL	33
PHRE 185	12	ECON	32

Interdisciplinary Thinking

Examples of student work demonstrating an ability to engage in interdisciplinary thinking were elicited with the following prompt:

Please include a work demonstrating that you have engaged in interdisciplinary thinking. "Interdisciplinary Thinking" means using the perspectives, methodologies or modes of inquiry of two or more disciplines in exploring problems, issues, and ideas as you make meaning or gain understanding. You work in an interdisciplinary way when you integrate or synthesize ideas, materials, or processes across traditional disciplinary boundaries. You should not assume that you are generating interdisciplinary work if you merely use essential skills like writing, speaking, a second language, computation, percentages, or averages to explore content, perspectives and ideas in only one discipline.

*For example, a Chemistry major was assigned as part of her internship to study a pollution problem caused by the company's product. She used ethical inquiry and applied economic theory to balance the criteria of cost to the quality of life and cost to the economy in her recommendations about reducing the pollutant. Another student found significant meaning in the changing architecture of school buildings in America by exploring a parallel evolution in pedagogical methods and philosophies. You might have analyzed a film like *Them* or *The Beast from 20,000 Leagues* to illustrate Cold War mentality in a class presentation of your research into and application of a paradigm from Political Science as part of your studies of 20th century history.*

In 2002, 2.8% of participating seniors did not submit an entry demonstrating "interdisciplinary thinking," which is much lower than 2001 (7%). Only 1.8% provided "self-reports" of interdisciplinary work they remembered but no longer possessed (roughly comparable to previous years). Because faculty readers did not have direct evidence of interdisciplinary thinking, self-reports were not evaluated. Several portfolios contained multiple submissions that were evaluated and scored independently. Altogether 850 submissions were each evaluated by two faculty readers who read the works "holistically" while keeping in mind the following descriptors:

Interdisciplinary Thinking at a Glance

- Number of submissions: **850**
- Percent of "no submissions": **2.8**
- Mean score (on a 0-4 scale): **1.46**
- Reader "split" rate percent: **24**
- Highest scoring "group": **Arts/Humanities**
- Lowest scoring "group": **Professional**
- Most frequent source (course): **JINS 306**
- Most frequent source (discipline): **JINS**
- Trends: **Higher scores**
Large number of JINS submissions, with higher scores
Fewer no submissions

Some Descriptors of Competence as an Interdisciplinary Thinker

The items submitted may have some, many, or all of these features which influence your holistic response to the material you review.

4 Strong Competence

- ❖ A number of disciplines
- ❖ Significant disparity of disciplines
- ❖ Uses methodology from other disciplines for inquiry
- ❖ Analyzes using multiple disciplines
- ❖ Integrates or synthesizes content, perspectives, discourse, or methodologies from a number of disciplines

3 Competence

- ❖ A number of disciplines
- ❖ Less disparity of disciplines
- ❖ Moderate analysis using multiple disciplines
- ❖ Moderate integration or synthesis

2 Some Competence

- ❖ A number of disciplines
- ❖ Minimal disparity of disciplines
- ❖ Minimal analysis using multiple disciplines
- ❖ Minimal evidence of comprehension of interdisciplinarity

1 Weak Competence

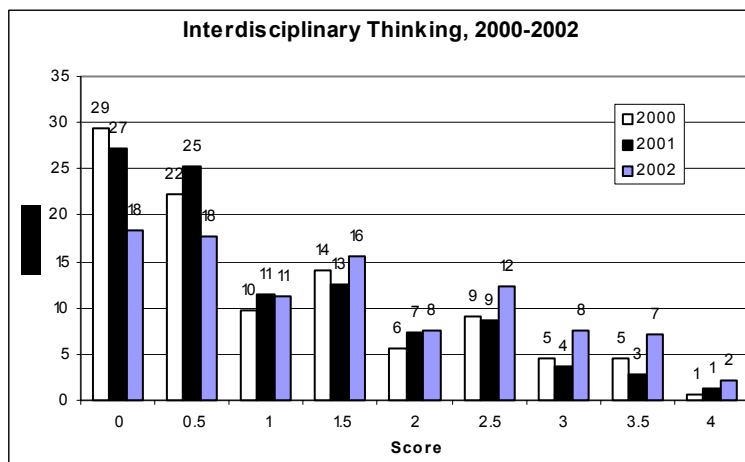
- ❖ A number of disciplines
- ❖ Mentions disciplines without making meaningful connections among them
- ❖ No analysis using multiple disciplines
- ❖ No evidence of comprehension of interdisciplinarity

0 No demonstration of competence as an interdisciplinary thinker

- ❖ Only one discipline represented
- ❖ No evidence of multiple disciplines, of making connections among disciplines, or of some comprehension of interdisciplinarity

With each item read by two different evaluators, the overall score on a 0 to 4-point scale is the average of the two individual scores as long as these differ by no more than one point. Differences of two or more points are “splits,” and items receiving split scores are evaluated a third time by an experienced reader (usually the portfolio director) to determine the final score. The percentage of splits is a measure of the reliability of the evaluation process. In 2002, 24% of the submissions received split scores. This percentage is higher than the 19% split rate achieved in 2001 and the 20% split rate in 2000. (For comparison, random scoring with the five level scale used here would result in a 48% split rate.)

The histogram shows the results for “interdisciplinary thinking” in 2002 with the results for 2000 and 2001. As is evident, the scores for 2002 are better than either 2000 or 2001. The percentage of submissions scored zeroes and 0.5 decreased dramatically, while those scored as 2.5 or better increased. As in 2001, there was a noticeable increase in the number of students receiving scores of 4 (“strong competence”). Eleven submissions received the highest score in 2001 and 18 scored a “four” in 2002. The mean score for interdisciplinary thinking rose in 2002 to 1.46, which compares favorably with the mean from 2001 (1.06) and 2000 (1.13).

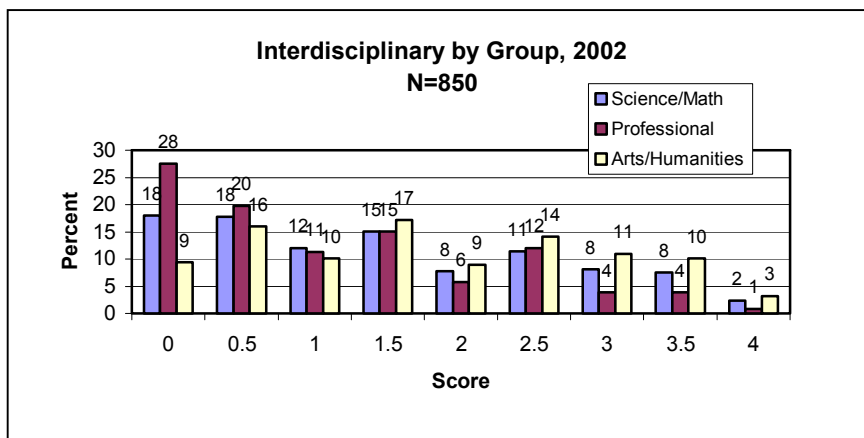


Further examination of the data indicates that submissions from JINS courses are in large part responsible for the overall improvement in scores. JINS courses accounted for 36.2% (329) of the submissions, with a mean score of 2.06. All other submissions had a mean score of 1.08. It is also notable that the number of no submissions has dropped from 7% to 2.8%. This is likely due to the addition of JINS courses to the curriculum.

The data sorted by major group is summarized in the accompanying chart. Students from “Arts/Humanities” and “Science/Math” disciplines submitted significantly fewer items with little or no

interdisciplinary thinking than did students with “Professional” majors. Roughly 47% of “Professional” students’ submissions were scored a zero by at least one reader. Only 25.4% of “Arts/Humanities” students’ submissions were scored 0 or 0.5, while 25.7% of “Science/Math” submissions scored 0 or 0.5. It is important to note that these percentages are significantly lower than last year, when 62% of “Professional” students’ submissions were scored 0 or 0.5. Likewise, in 2001 49% of “Science/Math” submissions and 44% of “Arts/Humanities” submissions received those scores.

The interdisciplinary items were selected by seniors from 34 academic disciplines. The influx of JINS submissions produced a dramatic shift in sources. Almost 60% of submissions came from LSP courses, while 29% were drawn from the major. The rest were drawn from electives (6%), academic minor requirements (5%), and other miscellaneous sources (less than 1%). In addition to the 329 JINS



entries, 110 came from English classes, including 29 (3.2%) from English Composition II (ENG 314). This is a dramatic shift from previous years and also demonstrates the effects of JINS courses on the curriculum. BSAD courses were the next most frequent source of interdisciplinary submissions with 76 items followed by PHRE courses accounting for 40 items.

Most of the work reflected in the interdisciplinary submissions was accomplished by students in their junior and senior years (46% and 30%, respectively). Ten percent came from the sophomore year and 7% from the freshman year. Nine percent of the items were the result of collaborative work.

Interdisciplinary Thinking			
Top Ten Courses		Top Ten Disciplines	
JINS 306	32	JINS	329
ENG 314	29	ENG	110
JINS 325	24	BSAD	76
BSAD 349	21	PHRE	40
JINS 301	19	JINS	32
JINS 322	18	COMM	27
JINS 303	16	ECON	22
JINS 318	15	PSYC	20
PHRE 185	14	CHEM	19
JINS 315	13	BIOL	18

Portfolio readers keep a tally in each category of items dealing with race, class, gender, and international issues. In the interdisciplinary category 18% of submissions dealt in some way with international issues, 14% with gender, 12% with race, and 10% dealt with issues of class.

Interdisciplinary Thinking Five Years Ago

The interdisciplinary thinking category has been a fixture in the portfolio from the beginning. Over the years, questions have been raised regarding the reliability of the scoring in this category. Indeed, one of the primary reasons for scoring each submission twice is to provide a check on interrater reliability. Furthermore, some readers have been concerned that more recent submissions may be scored more harshly or more liberally than in previous years (“scoring deflation/inflation”). This past year, the director decided to have readers score a random sample of five-year-old interdisciplinary submissions to assist in addressing these concerns.

Portfolios from 1997 were selected for two reasons. First, the interdisciplinary thinking prompt used that year is quite similar to the current prompt. Thus, differences in how the submissions were scored five years ago versus this year would not be due to substantive differences in what students were asked to submit. Second, five-

year-old portfolios provide a relatively large time gap, increasing the ability to discern any real differences in scoring that may have occurred.

A 25% random sample of the 1997 portfolios (n=665) was drawn, producing 166 entries. Eliminating packets without submissions from the list reduced the usable sample to 143, or 21.5% of the dataset. This sample was of sufficient size to permit significance testing of the results. During each week of reading, approximately one-third of the 1997 packets were distributed along with the current packets. Readers were instructed to score them without regard to date of origin. Each 1997 submission was read by one reader. The mean score in 1997 was 1.22, while the mean score given this year was 1.13. A paired samples t-test revealed no significant difference in scores. The “split rate” for the sample was 21%, which is slightly lower than the split rate for the current year. This rate was determined by comparing the average score from 1997 with the score of the 2002 reader, counting those entries where the score differed by more than one point. It is also interesting to note that 29% of the sample was scored the same as the average score from 1997. While this data is not conclusive, it suggests that scoring has remained consistent over the past few years in this category. Additional longitudinal studies will further our understanding and assist us in refining the assessment process.

Furthermore, comparing the scores from this sample with those of the current group is revealing. The average for the 1997 sample (1.13) was statistically significantly lower than this year’s group (1.46), indicating that current students are demonstrating higher levels of competence in interdisciplinary thinking. It is also clear that this can be (at least) partially attributed to the influence of submissions from JINS courses, since those courses did not exist in 1997.

Historical Analysis

“Historical Analysis” was developed in the fall of 2000, and implemented in the spring of 2001. Because the category was introduced mid-year, only 42% of the students submitted an entry. This year is the first year in which all students submitting portfolios were expected to submit an entry for this category.

The prompt for this category is provided below. It is identical to the prompt used in spring 2001.

<u>Historical Analysis at a Glance</u>	
• Number of submissions:	850
• Percent of “no submissions”:	3.7
• Mean score (on a 0-3 scale):	1.28
• Highest scoring “group”:	Arts/Humanities
• Lowest scoring “group”:	Professional
• Most frequent source (course):	HIST 105
• Most frequent source (discipline):	History

Please include a work that shows your ability to think historically. This involves analyzing connections between events or developments, demonstrating change over time, and showing the relevance of historical context to the topic you are discussing, whether the focus be individuals, social groups, cultural developments, or particular events. Historical thinking critically evaluates historical sources, which could be written, visual, aural, archaeological, scientific, etc., and it pays attention to the reliability and objectivity of the historical record.

This year, 3.7% of participating seniors did not submit a work for this category, which is slightly higher than last year. Less than one percent provided “self-reports” (n=6), which were not evaluated by faculty readers. A total of 850 submissions were evaluated and scored, using the following descriptors:

Some Descriptors of Competence in Historical Analysis

3 Strong Competence

Strong demonstration of historical analysis includes some, but not necessarily all of these features. The submission may:

- ❖ Deal deliberately with historical context and chronology.
- ❖ Critically evaluate historical resources.
- ❖ Use good analytical thinking in making an argument.

- ❖ Show clear and insightful understanding of causation.

2 Competence

Competent demonstration of historical analysis submissions may:

- ❖ Make vague or incidental reference to historical context and chronology.
- ❖ Show awareness of causation in looking at change over time.
- ❖ Be diligent in reporting resources, but does not evaluate them.
- ❖ Be uneven in its analysis.

1 Minimal Competence

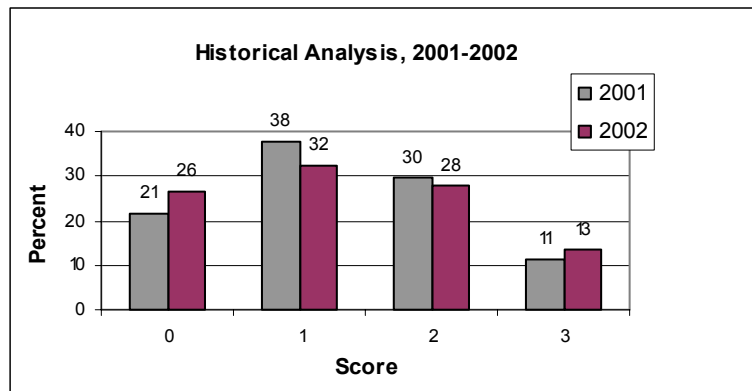
Minimally competent demonstration of historical analysis submissions may:

- ❖ Analyze weakly.
- ❖ Deal with a historical event or artifact with little attention to historical context or chronology.
- ❖ Recognize change over time (i.e., see differences), while neglecting to recognize causation and evolution (i.e., no illuminating connection discussed).

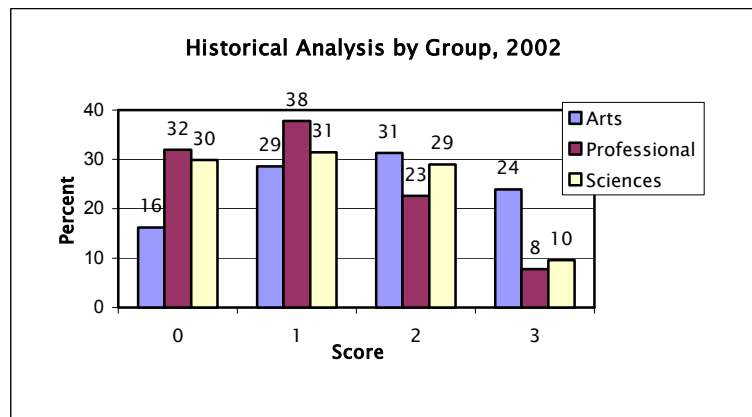
0 No Competence

- ❖ Report historical “facts.”
- ❖ Ignore historical context.
- ❖ Neglect to deal with change over time.
- ❖ Contain no analysis.

The table at right compares the data for both years. Results are consistent, with slight increases in both the lowest and highest scores and similar decreases for the middle scores. The mean score of 1.28 for 2002 is just slightly below the baseline established in 2001 of 1.31.



When the data are sorted according to the major groupings, students majoring in the Arts/Humanities disciplines scored significantly higher than students with Science/Math and Professional majors. Twenty-four percent of students in the Arts/Humanities group submitted strongly competent items as compared with only 10% of the items from the Science/Math group and 8% of the items submitted from the Professional major group. While 55% of Arts/Humanities students scored at least “competent” (i.e., scores of 2 or 3), only 39% of Science/Math students, and 31% of Professional students were judged competent or better in historical analysis.



Not surprisingly, the discipline from which students chose work for this category most frequently was History. Roughly 36% of the items came from history courses (n=331). English courses accounted for 13% of the submissions (n=117) and JINS courses accounted for 11% of the submissions (n=103). The U.S. History sequence, HIST 104 and 105 were the two most common courses used as sources for items in this category, together accounting for about 12% of the total number. American Institutional History (HIST 298) was the next most common item (n=42), followed by Composition II (ENG 314) with 30 items.

Over 31% of the submissions were produced in the senior year, 34% in the junior year, 19% in the sophomore year and 16% in the freshman year.

Fifty-eight percent of the items submitted were the result of work in LSP classes, 27% were assignments in major courses, 8% were from elective courses and 7% were produced in classes taken to fulfill minor requirements.

Of the 850 submissions read for historical analysis, 14% dealt with issues of race, 19% with international perspectives, 9% with issues of gender, and 9% with class issues. Only 3.9% of the items submitted were collaborative works.

HISTORICAL SOURCES			
Top Ten Courses		Top Ten Disciplines	
Hist 105	65	HIST	331
Hist 104	49	ENG	117
Hist 133	42	JINS	103
Hist 298	33	ART	34
Eng 314	30	MUSI	30
Hist 131	16	POL	27
Hist 328	15	ECON	26
Eng 190	14	BSAD	24
Musi 205	14	COMM	22
Hist 132	13	PHRE	22

Scientific Reasoning

Examples of student work demonstrating an ability to reason scientifically were elicited with the following prompt:

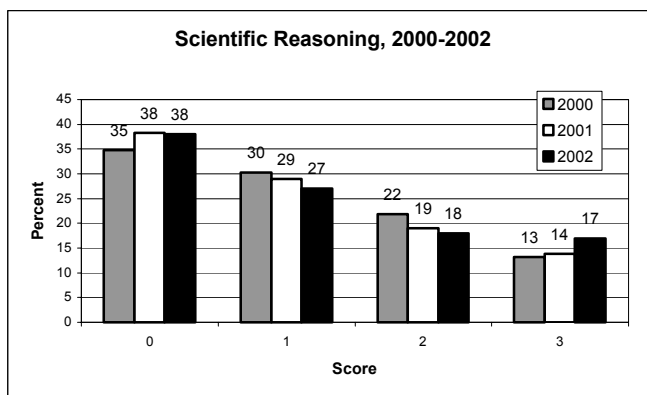
Please include a work that shows your ability to reason scientifically. You might include a laboratory or research report in which you justified or validated a scientific theory or reached new conclusions about the behavior of humans or other aspects of the natural world. Alternatively, you might have derived testable predictions about the behavior of Nature or of persons developing some theory to a logical and relevant consequence.

In 2001, 6.7% of seniors did not submit materials to demonstrate “an ability to reason scientifically.” This percentage is less than the non-submission rate of 8% found in 2001 and the 10% rate in 2000. Only 2% of seniors submitted self-reports (1% in 2001) of work they recalled doing. Self-reported work was not evaluated by faculty readers.

Readers evaluated 811 submissions one time, assessing the competence of scientific reasoning as evidenced in the submission. Each item was assigned a score from zero to three with zero representing “no evidence,” one representing “minimal competence,” two representing “competence” and three representing “strong competence.” When readers had questions about the quality of the submission, they consulted with colleagues from the sciences and social sciences.

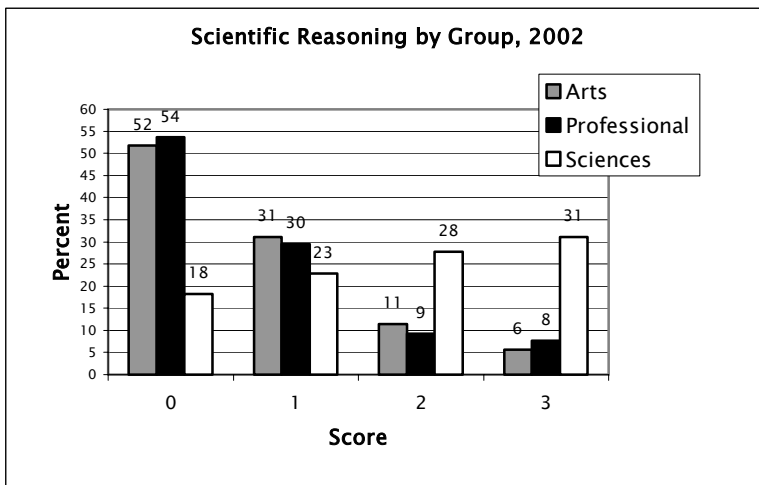
In 2002 the most common finding was “no evidence,” while “strong competence” was found least often. This is the third consecutive year that submissions scored a zero outnumbered submissions judged “minimally competent.” When examined over a three-year interval, the trend toward slightly lower scores remains. Scores of zero have increased over the last three years, along with scores of three. Mean scores have remained fairly constant, moving from 1.13 in 2000 to 1.08 in 2001, then to 1.14 this year.

Scientific Reasoning at a Glance	
• Number of submissions:	811
• Percent of “no submissions”:	6.7
• Mean score (on a 0-3 scale):	1.14
• Highest scoring “group”:	Math/Science
• Lowest scoring “group”:	Arts/Humanities
• Most frequent source (course):	BIOL 100
• Most frequent source (discipline):	Biology
• Three year trend:	Stable scores



The major group data in 2002 are similar to the 2001 findings in that they show that seniors in math and science majors account for most of the higher scores. Items judged “no evidence” came from seniors majoring in professional disciplines, with similar results for the arts/humanities disciplines.

Again this year, the four disciplines in the Division of Science were the sources of many of the submissions. Courses in the Biology discipline accounted for 230 (265 in 2001) of the submissions, followed by Chemistry with 108 (114 in 2001), Psychology with 62 (105 in 2001), Physics with 50 (65 in 2001), and Agricultural Science with 48 (65 in 2001). The top individual classes were BIOL 100, CHEM 100, AGSC 100, BIOL 107, and BIOL 301.



Thirty-one percent of the submissions were produced by students in their senior year, 33% in the junior year, 21% in the sophomore year, and 15% were generated by freshman students. Forty-five percent of the submissions were generated by students satisfying requirements of their majors, 41% were from LSP courses, while minor and elective courses accounted for 6% and 8%, respectively.

Four percent of the submissions for scientific reasoning dealt with issues of gender. Just over one percent of science submissions had an international perspective or dealt with issues of race or class.

As occurred in 2001, 31% of submissions were the results of collaborative work. This is largely because group work in the science lab is a common practice.

Scientific Reasoning Sources			
Top Ten Courses		Top Ten Disciplines	
Biol 100	85	BIOL	230
Chem 100	53	CHEM	108
Agsc 100	45	PSYC	62
Biol 107	31	PHYS	50
Biol 301	21	AGSC	48
Phys 100	17	ES	44
Chem 421	15	ENG	43
Psyc 166	15	BSAD	31
Biol 315	14	JINS	24
Bsad 349	14	ECON	23

Aesthetic Analysis and Evaluation (Old Prompt)

Following the requests of faculty members in Fine Arts and Language and Literature, this category was significantly revised, so that it would more appropriately address the outcome statements for the Aesthetic Mode of Inquiry (both Fine Arts and Literature). In the fall of 2001, a group of faculty from both divisions was recruited to assist in crafting a new prompt to be used in the spring 2002 packets. Because the new prompt was not available for students completing their portfolio in the fall, the previous prompt was used for those individuals. This report will discuss the submissions for each prompt separately.

<u>Aesthetic Analysis and Evaluation at a Glance (old prompt)</u>	
• Number of submissions:	434
• Percent of “no submissions”:	9%
• Mean score for “analysis” (on a 0-3 scale):	1.64
• Mean score for “evaluation” (on a 0-3 scale):	1.40
• Highest scoring “group” - analysis:	Arts/Humanities
• Lowest scoring “group” – analysis:	Professional
• Highest scoring “group” - evaluation:	Arts/Humanities
• Lowest scoring “group” – evaluation:	Math/Science
• Most frequent source (course):	MUSI 204
• Most frequent source (discipline):	ENG
• Trends:	Stable scores for analysis slightly better for evaluation Better analysis than evaluation

The discussion begins with the older prompt, which provided the following directions:

Please include something that demonstrates you making an aesthetic analysis and/or evaluation of some artwork or creative work. (Examples might be critiques, research or reviews of painting, poetry, sculpture, literature, film, theatre, music and other performances.) If you choose to include artwork you have created or a description of a personal aesthetic experience, please take the time to write a formal analysis and evaluation of your work as you reflect on your submission below.

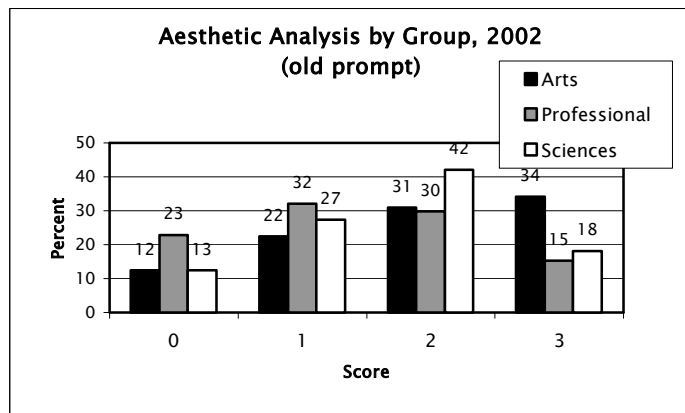
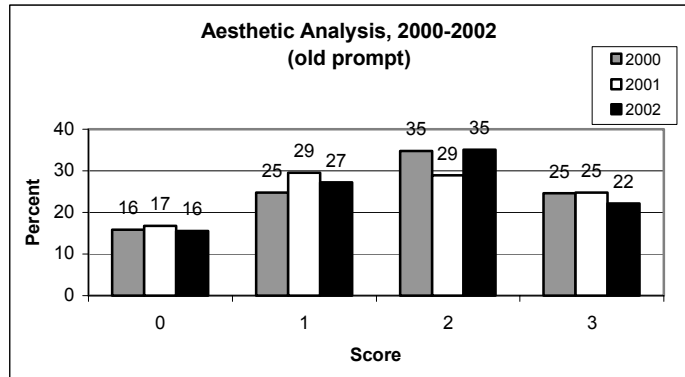
A total of 468 portfolios used this prompt, with 434 submissions for this category. As one might expect, many of the submissions evaluated were written papers, but some seniors submitted original artwork they created, cassette and video tapes of performances, and various other items. When students submit their own creative work, the prompt directs them to analyze and evaluate that work and include it with the submission. In this instance faculty readers consider student commentary written expressly for the Portfolio in their evaluative capacities.

Readers made two judgements for each submission, assessing it for the quality of the aesthetic analysis, and separately assessing the quality of aesthetic evaluation. Readers use the scoring categories of “no evidence,” “weak competence,” “competence” and “strong competence” for each assessment.

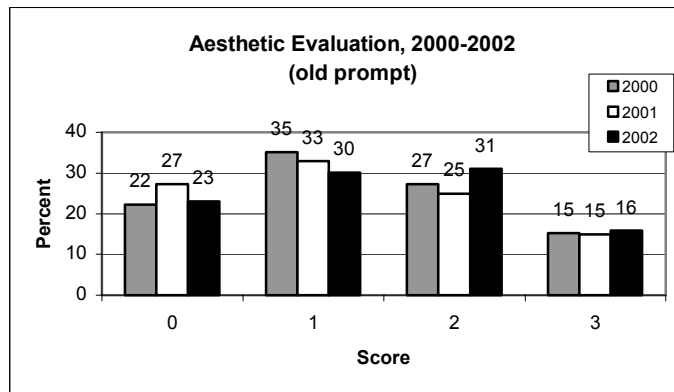
When assessing aesthetic analysis, faculty readers were looking for students dealing with the constituent parts of a work of art; distinguishing and describing the parts and discussing how they interrelate and work together in forming the whole. The results show a slight shift from “weak competence” to “competence,” though overall scores are comparable with 2001. The percentage of “strong competence” declined slightly, moving from 25% to 22%. Judgments of “no evidence of aesthetic evaluation” have remained stable throughout the three-year period. Concomitantly, the mean aesthetic analysis score has increased from 1.62 in 2001 to 1.64 (where “no evidence” = 0 and “strong” = 3).

When the data are sorted by major group, we see that students majoring in Arts and Humanities received more ratings of “strong competence” and fewer of “no evidence” as compared to the other groups. Math/Science majors received the most ratings of “competent,” and students with Professional majors received the most judgements of “weak competence” and “no evidence.”

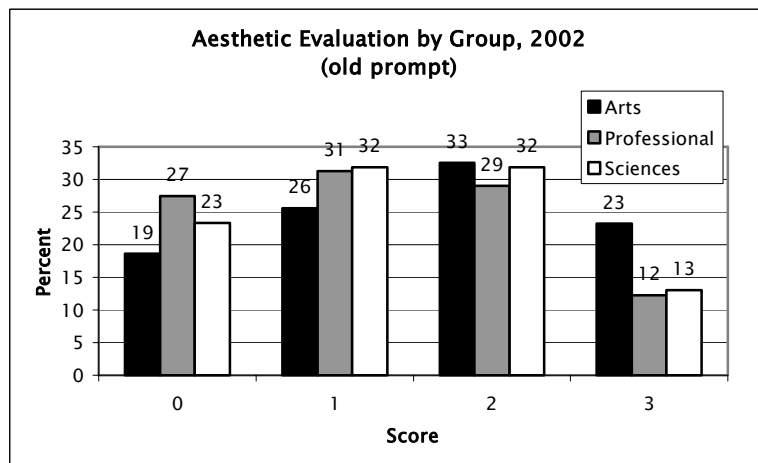
When assessing aesthetic evaluation, faculty readers were looking for students making supported judgments about a work of art; criticizing, explaining and interpreting the work while displaying understanding of genre and historical context. The aesthetic evaluation scores in 2002 show some improvement over 2001. Ratings of “strong competence” increased to 16%, and ratings of “competence” increased from 25% (2001) to 31%. Scores of “weak competence” and “no evidence” declined from the 2001 findings. Furthermore, “weak competence” dropped even more from 2000, decreasing 5%. These findings caused the mean aesthetic evaluation score to increase to 1.40 from 1.27 in 2001 (where “no evidence” = 0 and “strong” = 3).



The group ratings show that students with Professional majors received the highest percentage of low ratings, and, as one might expect, students with Arts and Humanities majors were judged as relatively stronger at aesthetic evaluation than were students in the other two groups.



Historically, the portfolio entries demonstrate more aesthetic analysis than aesthetic evaluation. Each year, the assignment sheets that seniors append to entries and the students' descriptions of their assignments focus more on analytical thinking and less on evaluative thinking. The same difference is noted this year. The mean score for aesthetic analysis is 1.64, while the mean score for aesthetic evaluation is 1.40. Fifty-seven percent of submissions (up from 54% a year ago) were judged as "competent" or "strong" examples of aesthetic analysis while only 47% (40% in 2001) were judged as "competent" or "strong" examples of aesthetic evaluation. Conversely 23% (down from 27% in 2001) had no evidence of aesthetic evaluation while only 16% (17% in 2001) were found lacking analysis.



As in 2001, ENG courses surpassed ART courses as the most common source of submissions in this category. MUSI courses were the next most common source accounting for 80 submissions. The most common courses from which submissions for aesthetic reasoning were drawn were the old Music Appreciation (MUSI 204), accounting for 51 submissions and Intro to Visual Arts (ART 203) accounting for 49 items. These were also the two most popular source courses in 2001. Composition II (ENG 314) was third with 24 submissions.

Aesthetic Analysis Sources (old prompt)			
Top Ten Courses		Top Ten Disciplines	
Musi 204	51	ENG	120
Art 203	49	ART	95
Eng 314	24	MUSI	80
Musi 205	20	JINS	30
Art 223	15	THEA	16
Eng 190	12	COMM	14
Thea 275	11	HIST	12
Eng 225	10	PHRE	6
Eng 100	8	BSAD	5
Art 326	7	PSYC	5

Items created during the junior year accounted for the largest proportion of submissions in this category (26%). Work from the senior year accounted for 25% of the submissions, as did items from the sophomore year. The remaining 24% of the submissions were produced in the freshman year.

Sixty-one percent of the submissions were created by students for classes used to fulfill core requirements (also 61% in 2001), 20% were from major courses (17% in 2001, 14% in 2000), and 19% were from courses used to fulfill minor requirements or were elective courses.

Five percent of submissions dealt with international perspectives (down from 7% in 2001 and 11% in 2000), 4% with race issues (down 1% from last year), 6% with gender issues (up 2% from a year ago), and 2% with class issues (the same percentage as last year).

Two percent of submissions were the result of collaborative work.

Aesthetic Analysis (Revised Prompt)

Students submitting portfolios in the spring semester used the following prompt:

Please submit an analysis of a creative work or works, using aesthetic criteria. The subject of your analysis may be from a wide variety of genres: visual arts (such as painting, sculpture, collage, film, or costume), performing arts (such as music, theatre, dance, or dressage), or written arts (such as poetry, fiction, or nonfiction). Your submission should demonstrate your ability to analyze the work's form, structure, and contexts; ultimately, it should interpret the work in some way. Please do not submit an original creative piece of your own.

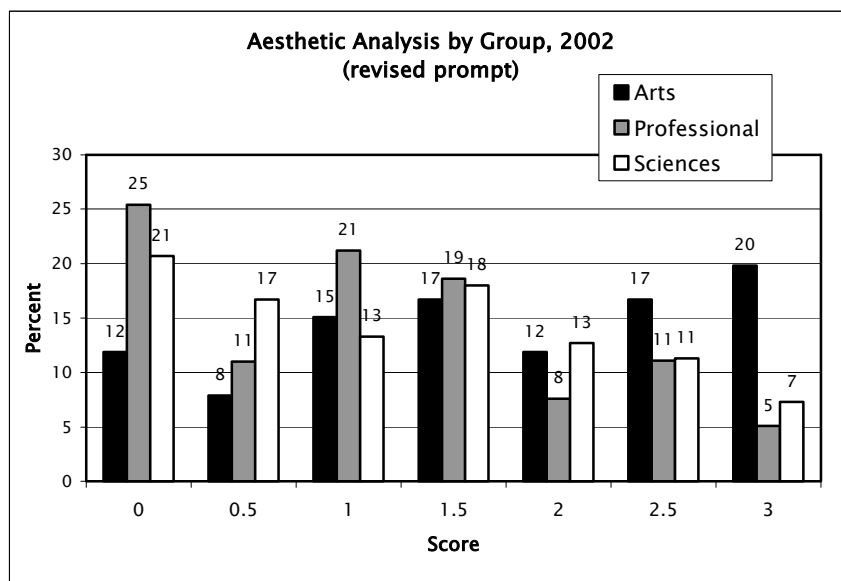
In crafting this prompt, faculty members in Fine Arts and Language and Literature sought to address the outcome statements for the Aesthetic Mode of Inquiry. Furthermore, many faculty readers had expressed concern with the distinction drawn between analysis and evaluation. Thus, the new prompt eliminated the explicit request to separate these activities and merely asked students to demonstrate analysis, conceived more broadly. Additionally, the new prompt instructs students to not submit their own creative work. While some faculty readers expressed concern that this forces students to conform to a more rigid structure, many readers felt that this was more helpful in assessing the ability of students to conduct analysis of works. In the past, students who submitted their own creative work were still expected to conduct analysis. Faculty readers found that many students failed to engage in the analytical task when considering their own efforts, or did so in a very limited, facile manner.

Of the 435 portfolios submitted that used this prompt, 398 included a work for the category, resulting in an 8% “no submission” rate. Since this prompt was a significant revision, two different faculty members read each submission. As with the interdisciplinary thinking category, “splits” (differences in scores greater than one) were read by a third reader. Only 40 submissions produced splits, or roughly 10% of the works.

The mean score for submissions using the revised prompt was 1.35, which is significantly below the 1.64 average for analysis with the older prompt. It is difficult to identify the reason for this variation, and will require close examination in the future.

Comparing the groups produced results similar to the results for the older prompt. Arts and Humanities majors scored significantly better than either Sciences or Professional majors, averaging 1.69, versus 1.24 (for Sciences) and 1.13 (for Professional).

<u>Aesthetic Analysis at a Glance (revised prompt)</u>	
• Number of submissions:	398
• Percent of “no submissions”:	8%
• Mean score for analysis (on a 0-3 scale):	1.35
• Reader “split rate” percentage:	10%
• Highest scoring “group”:	Arts/Humanities
• Lowest scoring “group”:	Professional
• Most frequent source (course):	MUSI 204
• Most frequent source (discipline):	ENG



Of the 395 submissions, approximately 27% were created during the junior year. Almost 26% were produced during the freshman year, while just under 25% were from the senior year and 23% from the sophomore year.

Almost 70% of the submissions came from LSP courses, while 16.5% were from major courses. Just over 9% were from electives, and 5% from courses in the minor. Three percent of these works were collaborative efforts.

In this group, 14% dealt with international perspectives, 5% considered issues of class, 8% involved gender issues, and 7% examined issues of race.

Most Satisfying Work or Experience

Students are asked to submit an item or a description of a most personally satisfying experience with the following prompt:

Please include something (a work from a class, a work from an extracurricular activity, an account of an experience, objects which are symbolic to you, etc.) that you consider representative of the most personally satisfying results of your experiences at Truman. If you don't have an "artifact", which would represent or demonstrate the experience, write about it on this sheet. This is space for something you feel represents an important aspect, experience or event of your college experience.

This portfolio category was recommended to the University Portfolio Committee in 1992 by students in capstone classes seeking a site where they could share experiences or work at Truman that made them proud or most satisfied them.

Faculty readers do not evaluate the quality of the materials submitted in any way. Rather they review and describe what it is that a student found to be "most personally satisfying." Over time repeated motifs have been identified. Readers use a checklist to record the context of the experience and the reason it was especially satisfying to the student.

Three percent (compared with 4% in 2001 and 5% in 2000) of the portfolios did not contain an item or a description representing a "most satisfying experience," and some students submitted multiple items writing that they had so many satisfying experiences they could not identify a single one to submit. In all, the faculty readers reviewed 868 (975 in 2001) submissions.

Thirty-seven percent explained that their satisfaction was the result of having achieved "significant personal growth," 23% achieved a "personal best," 21% described something that was "especially challenging," and 16%

mentioned achieving "personal goals" or "working as a professional." Another 10% pointed to "collaborative efforts," while 5% found something to be personally stimulating. Educational experiences in general (4%), fun/friendship experiences (3%) and spiritual growth (1%) were also discussed. Finally, 5% gave no indication and 7% identified a variety of things that did not fit other categories. [Note that the percentages exceed 100% because some students described most personally satisfying experiences that clearly fit into several categories.]

Why Was It Satisfying?	#	%
achieved significant personal growth	324	37%
personal best	203	23%
especially challenging	180	21%
achieved personal goals	137	16%
working as a professional	135	16%
collaborative effort	88	10%
Miscellaneous	65	7%
personally stimulating	45	5%
no indication	41	5%
enjoyable educational experience	37	4%
fun/friendship	24	3%
spiritual growth	8	1%

It is difficult to group the kinds of experiences students cite as especially satisfying. Many students submit academic work of which they are especially proud. Others talk about friends, family, religion, the whole college experience, campus organizations, particular campus events in which the student played a role, and a wide variety of other things. The accompanying table attempts to organize the contexts of students' most personally satisfying experiences into groups.

As in past years, the great majority of submitted artifacts were papers, essays, projects, and lab reports generated in classes. It is interesting, even with the great diversity of citations in this category, that so many students are most proud of some artifact of their academic experience.

Practically every aspect of campus culture was cited as a satisfying experience by at least one student. Participation in sports (both varsity and club), involvement with fraternities and sororities, working on SAB projects, participation in theater performances and musical groups, and volunteer work, are but a few examples.

Context	#	%
Major Class	280	32%
LSP	164	19%
Other	85	10%
Other Organization	61	7%
Elective	55	6%
Social Fraternity/Sorority	43	5%
Varsity Athletics	41	5%
Research	31	4%
Study Abroad	29	3%
Minor Class	28	3%
Religious Activities/Organizations	17	2%
Capstone	16	2%
Internship	14	2%
Volunteer Work	10	1%
Campus Employment	9	1%
Service Organization	8	1%
Other Athletics	8	1%
Professional Organizations	7	1%
Other Travel	7	1%
Cultural Events	7	1%
Residence Life	6	1%
Friendships	5	1%

Thirty-eight percent (43% in 2001) of the “most satisfying experiences” occurred in the senior year, 28% (same in 2001) in the junior year, 13% (up 3% from last year) in the sophomore year, and 9% (same as 2001) in the freshman year. The remaining 13% (10% last year) occurred over times spanning more than a year.

Four percent of most personally satisfying experiences dealt with international perspectives (down 2% from 2001). Many of these were study abroad experiences. Three percent dealt with issues of gender (down 1% from 2001), 3% with race issues (2% in 2001), and less than 1% dealt with issues of class (same as 2001).

Reflective Cover Letters

Finally, the portfolio asks students to compose a cover letter addressed to the Liberal Arts and Science Portfolio Task Force. During the weeks of portfolio assessment and evaluation, the student letters are generally reserved for the last day. They provide faculty readers with a more intimate and direct engagement with student ideas and attitudes as compared with what can be inferred from reading students' academic works. Through the students' letters, readers capture a fuller sense of individual students, their achievements and aspirations, even as they are collecting information that leads to a larger picture of student attitudes. While reading student letters, faculty readers are instructed to reserve several student letters to share with the group, and thus the week of portfolio evaluations ends with an airing of student concerns, criticisms, recommendations, and/or kudos that seniors feel compelled to express. Giving voice to the students provides a sense of perspective and “closure” for the faculty readers that parallels the kind of closure that the entire portfolio is envisioned to give students with respect to their undergraduate academic careers.

Students are asked in their cover letters to reflect on and write about several specific items:

- The process used and time spent in compiling their portfolio.
- What they learned about themselves through the process.
- Their attitudes toward portfolio assessment (and assessment at Truman in general).
- Their attitudes about their education at Truman.
- Their ideas, reactions, and suggestions regarding the undergraduate experience at Truman.
- Their immediate plans upon leaving Truman.

Faculty readers look for self-reflection in the letters. They characterize students' attitudes about the portfolio and about their education in ways described below. Finally, they mark parts of letters containing relevant insights, or specific suggestions, which the faculty readers feel should be given a broader airing. Some of these insights and suggestions are shared openly with the other readers as described above. The portfolio director reads all of them, and many are used as the examples reprinted below.

Because of an expressed concern that portfolio assessment could be too intrusive in student and faculty lives, the prompt for the cover letters asks seniors to report the time involved in compiling and submitting their portfolio. The average time reported to assemble a portfolio in 2002 was 3.6 hours. (This average includes all *reasonable* responses – some students did not address the time they spent on this task, and others gave responses like “It took me four hard years of work to generate the material for this portfolio.”)

Continuing the trend of recent years, fewer students express surprise upon being assigned the portfolio project in their senior capstone course. More students say they have been expecting and preparing for the assignment throughout their undergraduate careers. Additionally, many students are maintaining documents for their portfolio electronically. This includes a number of submissions that direct the reader to a student-authored web page. As in past years, this has also created problems in retrieving documents due to various computer failures. However, that problem appears to be decreasing, as only a few students noted this in their letter. The following letter from a Communication major describes in typical fashion the process used to assemble the portfolio:

While I did not look forward to spending a Saturday piecing together yet another portfolio for Truman, I came away from the experience with a change of heart. It took between four and five hours to dig through past computer diskettes and locate examples of my work that met the criteria specified for each portfolio category, then print them off and write responses to the questions under each subheading, but I learned a few things from the process.

Along with concerns about electronic storage, several students discussed the difficulty in recalling the original instructions for the assignment. For example, this Art major commented:

The time frame that this portfolio took to complete was roughly four to five hours all together. I collected all of my floppy disks and figured out which papers went under which categories. I had some papers saved on the Truman hard drive and some to my own personal disks. I believe the biggest thing I have learned while creating this portfolio is that I should make a concerted effort to save all of my work to a hard drive and to floppy or zip disks. The biggest time frame was collecting the data. I have been giving some advice to other students that will complete the portfolio in the future and I have advised them to collect all of their papers and best work on a couple zip disks. I also advised some students to keep the assignment instructions given by the teacher for each paper or assignment that they completed. Trying to recollect assignments or remember exactly what the teacher specified was frustrating for me.

REFLECTION IN COVER LETTERS

It is clear that self-assessment and reflection is valued across the University community as an integral component to student learning. The portfolio process has always been considered a means to encourage students to engage in this task as they near graduation. This year's letters indicate a continued increase in the number of students using the portfolio to do just that.

Cover letters often provide personal and thick description as seniors “sum up” their experiences at Truman. Some writers are specific and laconic. Others expand on their attitudes toward their education at Truman, their personal growth and academic achievement, and their opinions and recommendations about the curriculum, the Liberal Arts culture, and the assessment culture. Many refer to experiences and learning outcomes that best represent them but were not elicited by the other portfolio prompts.

Faculty readers report whether cover letters contain reflection. They check “yes” for reflection presented only as generalizations and “yes, with findings” when the writer presents specific and well-developed insight. The 2001 data are similar to those reported in 1999, while showing increased levels of reflection from 2000. Seventy-two percent of the letters contained some reflection, up from 67% in 2000, and 33% of them “with findings.” The 27% without reflection were mostly letters explaining the contents of their portfolio and the process they used in assembling it.

The data by group show Arts and Science students to be more likely to include findings in their self-assessment than are the students in Professional majors. Again this year, a higher percentage of students in all three groups demonstrated self-reflection with findings.

Seniors engage in a broad range of reflections in the portfolio cover letters. Some focus on the challenges they faced and the achievements they accomplished in the major. Others wrote about the value of the liberal arts to them. Still others attempt a holistic assessment of personal development over their Truman tenure. Each cover letter excerpted in this almanac was recommended by faculty readers for sharing with the university community.

This English major focuses on growth outside the classroom:

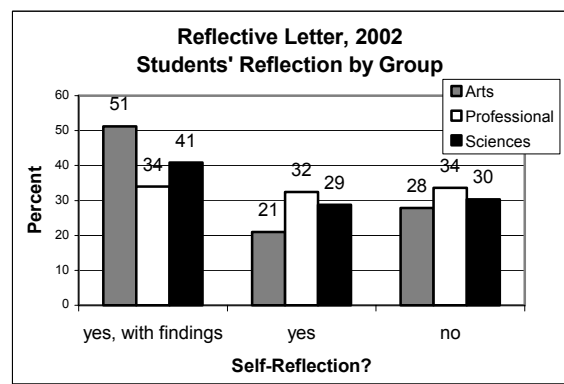
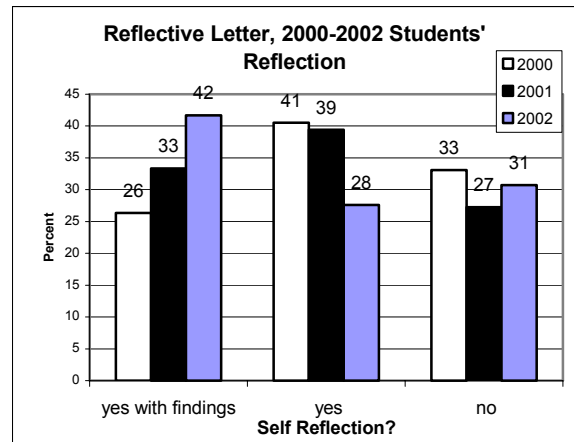
Although my literary interests have been piqued, and I have definitely gained a more thorough critical approach, most of my learning has taken place outside of the classroom. Extra-curricular experiences, then, are what give me the competence now to stand truly independent. As a member of the Women's track and field squad, I have had the benefit of balancing a rigorous exercise program with my academic schedule. Offering an arena in which to explore my bodily limits and test the strength of my will, collegiate competition yields immediate feedback that transfers readily to academic course work. In other words, the intensity of the sport and the dedication that it demands directly ameliorates my evaluative skills (there is no cheating in track-you are either fast, or you are not). With such standards in place, I can better understand myself in terms of my talents and limitations. This insight, in turn, allows me to play on my strengths and tend to my weaknesses so that my confidence in all areas increases. The stake that I have in my intellectual contributions definitely reaps the benefit of the personal struggles that I take out on the track.

In this excerpt, a Communication major comments on making intellectual connections and lifelong learning:

The biggest thing I recognize is I try to connect classes together. This makes things much easier because it allows for overlap of material from class to class. More importantly, I have begun to look for how I can use my studies here at Truman to the rest of my life.

A Music major discussed learning about himself while here:

At Truman, I have had many eye-opening experiences. Many of them were wonderful and others were not as pleasant. I learned that I love music, but it was not my passion, nor should I have majored in it. I learned that life is not always, and even rarely, as you have planned. Recently I have learned the



importance of politics and the notion of "if you scratch my back, I'll scratch yours." I have also fallen in love with a woman and have created some everlasting friendships. To me school has never been about the grades that were made; yet somehow I still devoted a majority of my time to them. It has been however about the experiences that I have had. These are the experiences in which I have grown from and will continue to change my life until the end of my days.

ATTITUDE TOWARD EDUCATION AT TRUMAN

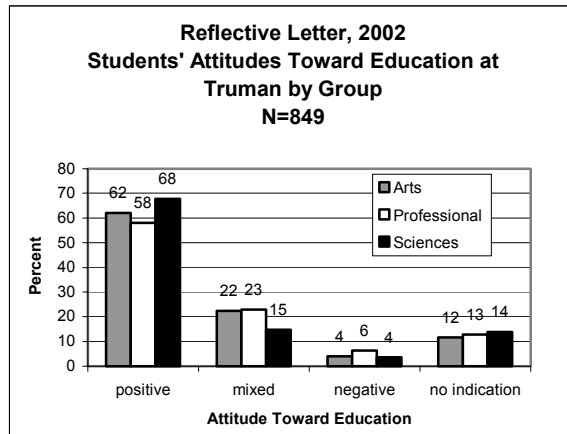
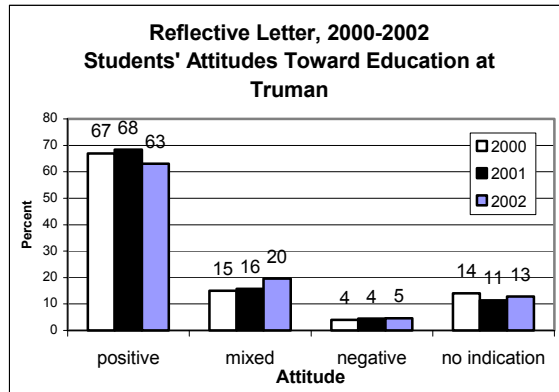
Student attitudes regarding their education at Truman continue to be positive, though the percentage this year is slightly lower than previous years. ‘Positive’ attitudes decreased 5% from last year and 4% from 2000. Additionally, more students expressed mixed attitudes (20% versus 16%), and more students did not discuss their attitudes in this area (13% versus 11%). Sixty-three percent of the letters expressed a positive attitude about their education, 20% expressed mixed feelings, and 5% were negative. Overall, the general pattern of a large positive attitude and a small negative attitude towards a Truman education has been demonstrated each year and appears generally constant across disciplines.

As a group, science and mathematics majors expressed more positive attitudes than did arts/humanities or professional majors. However, the percentages are similar when examining negative attitudes. For the most part, arts/humanities majors and professional majors were more likely to express mixed feelings about their educational experience at Truman than were science/math majors.

As in past years, students expressing negative or mixed feelings about their Truman experience frequently complain about the university’s preoccupation with its “image,” and the failure to address the needs of current students. They say that this attitude is engendered by university policy, by the allocation of resources, and by the obsession with university assessment. This year, students also discussed the Liberal Studies Program, describing it as too complex, cumbersome, or inflexible. The following excerpt from an Art major discusses this last issue in some detail:

As I write this, I'm still a bit unclear how this is going to tell anyone about my learning experience at Truman. The only things that I think that will describe that at all are the work I produce through my art classes and through what I have done through my theater classes. And I say that not because I haven't

learned anything in my other classes, but because those were the classes that I decided to take. They were not classes I was told to take under the guise of a liberal arts education. Yes, I learned things in my LSP classes, but for the most part I felt they were a waste of my time. The few classes that I thought would be interesting ended up being boring and didn't teach me anything because I could barely stand the teachers. The couple classes that I am truly interested in taking, I have to pass up because they never fit my schedule because of all of the LSP requirements. I have read several articles in the Index and the Monitor from professors here criticizing the structure of class requirements here. I have to admit that I agree with them. If we are trying to emphasize our liberal education, one that demonstrates experience and knowledge in a wide variety of disciplines, why are we not allowed more freedom in the selection of our classes? Granted, we are allotted several options in most of the areas of the LSP. But why are students required to take a minimum of 3 math related classes? Why are we required to take two sciences courses? I can understand that perhaps a student attempting a Bachelor of Science degree would have more use for these classes, but why are all students required to take them? Why are all students going for a Bachelor of Arts degree



required to have an intermediate Proficiency in a foreign language? It seems this should go the other way, since many scientific terms, primarily in the field of medicine, are derived from languages such as Latin. I am an Art major and am involved in theater ...I have found no special need for a foreign language. I will not even begin with the chaos caused by the Sophomore Writing Experience and JINS classes. Perhaps if rules were enforced or if the requirements were constant rather than changing every semester, we wouldn't have such problems with those requirements. And we wouldn't have so many confused students.

Another Art major expressed concern with the lack of a personal touch for students:

I feel that Truman has so much it can offer students. I believe that this is a fine institution with wonderful faculty. However, I also feel that the school is run too much like a business and less like a nurturing environment. Many times I was treated with coldness or indifference when it would have been more appropriate to express concern and support. So much of what goes on at this school is driven by money and recognition. I believe that I have obtained a solid, well-rounded education here at Truman State University and I also believe that part of this "well-roundedness" has come from observing errors and faults of choices made by faculty here. Truman has a great deal to reveal to students - both in academic and non-academic situations.

A Health Science major focused on issues related to administration:

I do believe that I have had mixed experiences while at Truman. I feel that I have received a good education at a school with a good reputation. I also enjoyed the small size of the school, the beauty of the campus, and the availability of the faculty. However, I do feel that Truman is severely lacking in school spirit and alumni loyalty (perhaps because of the lack of school spirit). Most of my other frustrations center around administrative issues such as scholarship hours (scholarships are given to you not worked for, that is called work study), implementing new ideas before the logistics are in place (writing enhanced courses), etc. I do think I would still have come here knowing now what I do about this school but I would be extremely hesitant to recommend this school to people I know. Overall, most of my good academic experiences here at Truman were within my major (Health Science) in which I loved the classes, the faculty, and the students!

This Business Administration major was concerned with faculty behavior and a failure to consider student evaluations of faculty performance:

To be perfectly honest, I have not been very satisfied with my experiences here at Truman. I feel that many of the professors are hired just because they have a degree, not because they have the ability to teach. I have had many professors that I believe are nice, intelligent people, but they have no teaching skills whatsoever. Many of the professors don't seem to care about the students at all, with the exception of a few. I also feel that the students' opinions, of the professors aren't even taken, into consideration. One professor that I had, I won't mention names since it won't make a difference anyway, was very sexist, and treated the females in the class poorly. He would continuously make rude comments to or about the female students. When we went to the division head, nothing was done about it. Every female in the class gave him a bad evaluation, but once again, our complaints were not heard.

Unfortunately, this History major found Truman lacking in several ways:

I don't have any positive things to say about my experiences here at Truman. To be perfectly honest, I hated it and if I had the opportunity to choose colleges again, I would not choose Truman. The academic standards are unreasonably high and the physical location of the institution is unpleasant to a young, urban, minority population. I understand that Truman has no control of the city of Kirksville and the personal and social opportunities that it has to offer. However, Truman falls short of compensating for the lack of social stimulus that is necessary to help social development and creates a pleasant living environment. The only positive thing that I can say about Truman is that it has made me a stronger, more determined and aggressive person in that I have been able to finish my time here. I cannot fully credit Truman for this either, because I feel that this was a result of my tenacious personality, and not Truman's effort.

The following excerpts came from students who are leaving Truman with more positive attitudes about their education here.

First, this excerpt comes from an Art History major who found the Liberal Studies Program beneficial:

Clearly, I can now see how beneficial it has been for me to be in Kirksville and to study Art History. In our freshman week class, we talked about what it meant to be a liberal arts and sciences institution. I was not then aware of the exceptionality of such a university. The LSP requirements have definitely enhanced my overall education. In fact, it was my interest in the Introduction to the Visual Arts (an LSP course) that led me to declare a major in Art History. The LSP foreign language requirement spurred my interest in the German language, which led to a study abroad experience during the summer of 2001 and I will be graduating in May 2002 with a German minor. I may not have taken classes such as Calculus I, Chemistry for Contemporary Living, Biology, or Geography if they had not been required, but retrospectively I can see how important those classes were to my overall education and they each have tied into the study of art in a variety of ways. Examples of the interdisciplinary connections include the relationship between the nationality of an artist and how the geographical features of a region impact the medium and content of pieces of art, how scientific discoveries have impacted art, and how a knowledge of chemistry aids in conservation of art. In the JINS course that I enrolled in, The Chemistry of Art, the interdisciplinary connection between art and science became very apparent. I think that the best way to change the core to make it better suited for my major would be to have more of the classes designed to be more interdisciplinary, like the JINS classes. Also, a course that I particularly would be interested in taking would consist of a mixture of German and art, with discussions in German about art and a study specifically of art movements and artists in Germany. Although I can conjure up ideas for other courses, I am overall quite satisfied with the class offerings. It is difficult for me to relate to the complaints of students, who bemoan the LSP requirements; I have found these classes to indeed create a well-rounded base of education.

Next, this Accounting major reflects on the changes that occurred due to the educational environment:

Being at Truman, compared to other schools, I have learned more about myself. As part of the liberal arts and sciences I have examined many topics that I would have never seen at a purely business school. These opportunities have had many long-term affects on me. For example, I have rediscovered my love of theatre thanks to classes and friends. I have earned membership in the national honorary theatrics society, Alpha Psi Omega, an honor I'm sure not many accounting majors have. I now plan to one day work in theatre business management, a direction I would have never considered had it not been for my experiences here.

This Exercise Science major found Truman to be an excellent value and the faculty caring:

I believe the education I have received here at Truman is the best that I could have received for the money. I have friends that attend other state schools and private ones within Missouri and none of them compare to the education we receive here. I have also had very good experiences interacting with professors within my major and emphasis area. Many go out of their way to make your time here at Truman the best it can be. My experiences with extra-curricular activities have also helped to shape me into what I am today. My experiences and education have provided me with the tools I will need to aid me throughout life.

Finally, this Psychology major's letter suggests that Truman has made her feel welcome and enabled her to experience life in a new dimension:

My education at Truman has been very complete. I know that it has been a means to an end and not the "end" itself. More importantly, however, has been the environment that exists at Truman that I have lived my life in for the past three and-a-half years. It is an environment of learning and teaching that welcomes all types of people. This is what I have loved about Truman: just being here. I was comfortable being at Truman when many of the aspects of college life made me uncomfortable. I know these aspects exist on all college campuses (i.e. excessive drinking, rudeness, irresponsibility) but I didn't feel the need to escape them here. The Truman environment made people as reserved as me and those much less inhibited feel at home. On the whole, I see my experience at Truman as a microcosm of my experiences to come. I will be out of school for the first time in seventeen years, working, I hope, at a job I can be content with but which remains to be found. (I don't know where I'll end up!) My experience has given me a glimpse of the "real world" where people come from all walks of life and enter your own. Truman's academics and environment has prepared me for my life to come, and that's the most vital thing I could've gotten out of my college experience.

ATTITUDE TOWARD THE PORTFOLIO PROCESS

Overall, seniors continue to express more positive than negative attitudes about the portfolio process. This year, faculty readers found more mixed and fewer positive expressions than they did in 2001. In 2002, 7% of seniors provided no feedback, which compares favorably to the 10% in 2001. Forty-two percent of seniors were positive about their experience with the portfolio, down 1% from last year's findings. Expressions of negative attitudes regarding the portfolio rose from 20% in 2001 to 21% in 2002. Thirty percent offered mixed opinions, which is higher than 2001. When sorted by group, seniors in the professional majors are slightly more negative about portfolio assessment than are students in the other two groups.

Again this year, a great many students admitted that they spent little time on their portfolios. Some expressed anger that they were required to complete this project, which is ungraded, at a time when they are busy completing projects for courses, preparing for crucial exams, and working out their future lives. Many are dubious about the usefulness of assessment in general and the portfolio in particular, especially when, as some students claim, few of their colleagues take the assignment seriously. Other students acknowledge the potential benefits of portfolio assessment (to the university and to themselves), and are apologetic about having procrastinated resulting in a less than satisfying portfolio.

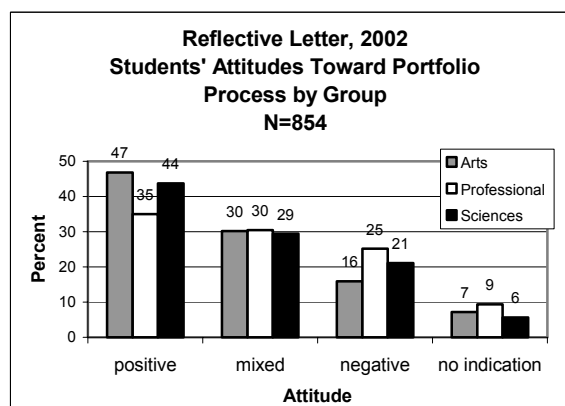
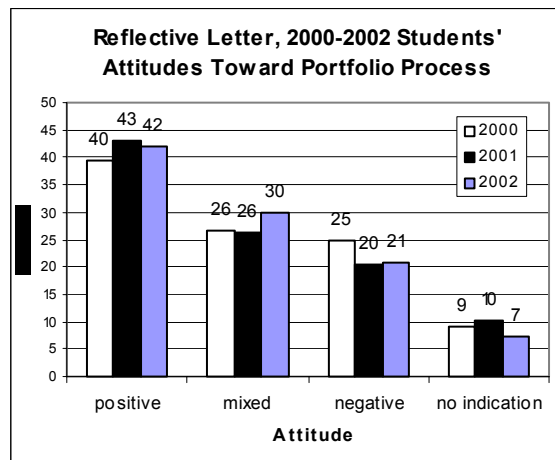
The following excerpts serve as examples of some of the negative attitudes students expressed toward the portfolio process and in several cases toward assessment in general:

This passage is from a Business Administration major:

I do not find the concept of portfolios to be beneficial. I don't believe many of the papers turned in represent the true work of the student. No one will read these until after graduation and therefore, students are not really concerned with what is in them. I don't believe anyone puts a great deal of time and effort into forming their portfolio. Furthermore, many papers have disappeared over the years due to lost or erased disks or group papers that only one person bothered to save. This adds to the lack of quality work being put into the portfolio. In the letter given to us, it says portfolios are used to assess courses, etc. However, professors who assign the projects could draw conclusions from the work they receive and from responses from their classes. I don't really see the point having students spend time to answer questions about work they did over a year ago. For example, I have not done any scientific papers since my sophomore year. Yet my comprehension and writing skills may have drastically improved since that time.

This excerpt is from a Biology major:

I am disappointed to say that through this process I learned nothing about myself that I didn't already know. In order to grow, it is my belief that we need to constantly evaluate ourselves. Therefore I felt as if this process was, at least for myself, an unnecessary attempt to gain something tangible (papers) from an intangible process in which I constantly engage. The portfolio experience cannot make one a better student at the end of his/her college career if self-assessment does not occur at every step along the way.



It is my belief that the entire process of portfolio evaluation is fundamentally flawed. Qualitative "data" are very difficult to use in a standardized evaluation process. Within the letter addressed to prospective graduates regarding the portfolio it was stated, "Portfolio assessment provides a 'thicker' description of the learning experiences of students and rounds out the data we acquire through standardized exams. When they review portfolios, faculty can assess the nature and quality of the liberal arts and sciences experiences of graduating seniors." These words imply nothing concrete but only give the readers impressions of the quality of work of the students. How can the information gathered from portfolios be effectively and practically applied to increase the quality of education at Truman? If it cannot do this, then we must reevaluate its necessity.

A Business Administration major wrote the following:

The portfolio process doesn't seem like it is that important to anyone, myself included, so I do not have a very favorable view towards portfolio assessment. Almost everyone I know put their stuff together the night before it was due, and that is more or less what I have done here. For the most part, graduating seniors are the ones putting together these portfolios and this is about the last thing we want to be doing at the end of the semester. At the end of this semester I have had a 25 page and a 40 page paper due, with another 10-15 page paper on the way next week. Then I have to take time out of my week to put this together when I could spend this time on finishing something that is actually important to my GPA. I don't know how to fix this problem, but overall I would have to say the process of putting together a portfolio is more of an annoyance than anything else.

Finally, an Exercise Science student pointed to an over-emphasis on assessment:

Overall, I feel that Truman is too intent on assessing its students as opposed to helping them learn. This portfolio is yet another example of our constant assessment. I understand the concepts behind the testing, but you must understand it gets very tedious to continuously remember one more test, and one more after that, and one more after that.

On the other hand, many students find the portfolio process to be rewarding or see it as an opportunity to give something back to the University. Some students view the portfolio as a superior assessment instrument because it permits them to demonstrate what they have learned and/or accomplished. Consider the following excerpt from a Philosophy and Religion major:

The portfolio process was a good way in which to review just how much I've changed during my time here at Truman - what things were important to me then, what are now, how I think about things, the professors that encouraged me in learning different things. I think I knew that I had grown as a thinker but had not yet taken the time to look back at work that I had produced with a fresh eye. I had recognized explicitly how I had changed as a person but not necessarily that the way I think about things had changed too. I think that the process was helpful in making me reflect upon my time here; something I probably would have done anyway, but not until I had left the university. After doing my portfolio and reflecting on it I am now better able to savor the last few months that I have here and make the most of it in ways that I might not have thought to do previously.

This Health Science major expressed similar sentiments:

Through the portfolio process I have been able to catch a glimpse of all that I have learned while attending Truman. I was really surprised to see how far I have come in many areas of critical thinking, evaluation and writing. The portfolio project has provided me with an excellent summation of the time I have spent here. It has also reminded me that there is more to learn and always room to grow. In general, I think the portfolio assessment project is a great idea. It must provide a wealth of qualitative data that pre- and post-testing cannot provide.

An English major sees the portfolio as a valuable self-assessment tool, and contrasts it with other assessment instruments:

The main thing that I realized that I have learned through all of my courses and through this reflective process is that I still have a lot more learning to do. Therefore, assembling my portfolio was definitely a valuable experience. I thought at first that it would be another one of those things that everyone always says is just a pain and doesn't have much value, like the sophomore writing experience and freshman and junior testing (I do agree with that attitude on those issues). However, this was a

rewarding experience that forced me dig up old coursework, remember lessons that I have learned, and inspire me to never stop my education.

The theme of self-reflection is also clear in this passage from a Heath Science major:

I found it very interesting to go back and read papers and works dating back to my freshman year. Over the years, my writing has definitely changed. This experience has helped to learn more about myself. As I encountered new experiences and matured as a person, my writing has also grown along with me. This includes everything from the subject matter to the context of the writings. One thing in particular I noticed in my writings is that when I first arrived at Truman State the majority of my writings were secular, in which I was the primary focus. Over the years as I became more involved in extra-curricular organizations and in the community, my writings started to involve more outside experiences and universal subject matters. I believe I began to look more "outside the box" and see how things relate as a whole. The portfolio process gave me the chance to think about what I have gained and learned over my 4 years. If it wasn't for this process, it is doubtful that I would have even looked at most of these papers ever again. It was truly an "eye-opening" experience that helped me to learn a lot about myself and how I have changed.

Recommendations for LAS Portfolio Assessment

Both students and faculty readers have offered recommendations about the process of portfolio assessment. To maximize the benefits to students, faculty and the university community, and to keep step with changes occurring within the university, the portfolio process must be assessed and amended each year.

ACCULTURING THE COMMUNITY

Again in 2002, faculty readers expressed strong opinions about the value of the portfolio assessment process. First-time faculty readers tell us that coming into the process, they had little idea what the LAS portfolio is, how it is evaluated, and what value it has for the university, for the seniors who assemble the portfolio, and for the faculty who read and evaluate the portfolios. By the end of the week of reading, faculty participants are transformed. They can articulate many ways the LAS portfolio is valuable to all constituents, they express a deeper understanding of the value of reflection and self-assessment as integral aspects of the university's culture, and they leave, after a week of reading, with new ideas for their classes and for their advising inspired by their experiences reading portfolios.

Unfortunately, the LAS portfolio, and the process used to extract useful data from them remains a mystery to some faculty and many students at Truman. Faculty readers believe that the more that is known about the LAS portfolio and the portfolio evaluation process, the less cynicism there will be about portfolio assessment campus-wide.

With the implementation of portfolios as a graduation requirement (beginning with the Class of 2003), faculty and students will grow to perceive the portfolio project as a more important aspect of the Truman culture than it has been previously. It will underline the value of reflection and self-assessment articulated in the current master plan and equalize the opportunity for all seniors. It should afford all students the opportunity to engage in self-reflection and even out what students have told us they perceive as inconsistency and unfairness in their graduation requirements. It should provide the university with a more complete picture of the curriculum as experienced by all majors.

Truman's residential college program and the extended freshman experience both provide important opportunities to acculturate students to the benefits of reflection and self-assessment available through the development of a personal portfolio. Programming in these two aspects of the Truman culture should ensure that no student reach the senior year without expecting to compile and submit a portfolio of their works.

The most effective means for acculturating faculty about the benefits of portfolio assessment is through the reading sessions. There is no substitute for the deep engagement with student work product and for the intensive cross-disciplinary discussion about student learning that faculty experience during those sessions. As in past years,

faculty readers endorsed the process of recruiting readers from all disciplines and ranks and recommended that new faculty be encouraged early in their careers to participate.

An additional mechanism now available for educating students and faculty regarding the portfolio process is the Portfolio website (<http://portfolio/truman.edu>). It includes a brief history of the project, answers to frequently asked questions (FAQ's), and guidelines regarding expectations. This year, incoming freshmen received a flyer publicizing the site in lieu of a brochure. Furthermore, a number of faculty have begun to use the site in discussing the process with their students in senior seminars.

FUTURE PORTFOLIOS

The portfolio project continues to evolve. Some portfolio "categories" have remained constant, others were tried for a year or two and discontinued, and still others were added after the first year of the project and continue as a valuable component of the portfolio. Responding to the kinds of works students choose to submit for a particular portfolio "category," the prompts used to elicit submissions from seniors are regularly edited to enhance clarity.

The annual portfolio cycle demands new portfolio packets be available for students in the fall. The fall 2002 portfolio contains the same categories as the spring 2001 portfolios. As in the past, suggestions from faculty readers will result in changes in the wording of some prompts.

The issue of electronic storage and submission of portfolios should be considered in the near future. Other institutions have adopted "virtual portfolios," which are stored on network drives and accessed via file management protocols or web browsers. The works themselves are presented as a collection extracted to a compact disk or via a web page.

Electronic portfolios produce benefits in addition to those derived from the process itself. First of all, electronic portfolios are dynamic, enabling students to modify their entries quite easily. This encourages students to engage in regular self-reflection and to consider their portfolio throughout their academic career.

Secondly, electronic portfolios encourage the use of multiple formats. Students may submit video and audio clips, html documents, as well as presentations (generally in PowerPoint format) and portable document files (pdf). In the past, students have digitized audio and video clips, but the hardware and software requirements made this time-consuming and difficult. Current technology has improved accessibility and computer users are able to produce quality multi-media presentations much more easily. Thus, students are encouraged to submit works that cannot be adequately captured via paper documents and that better represent the variety inherent in their academic endeavors.

Thirdly, electronic portfolios can serve multiple purposes. Students may create several versions of an electronic portfolio, using one for prospective employers, another for self-reflection, and a third for submission under University guidelines. The options are limited only by the student's imagination and wishes. Many students have commented on the perceived lack of utility for the LAS portfolio, since it is put together at the end of their time at Truman and is only returned ten years later. An electronic portfolio is perceived as a "customized" work that is shared with others, yet retained for personal use. Students who complete such portfolios tend to value them more highly and to take greater care to submit quality works.

Finally, electronic portfolios enable students to demonstrate increasing levels of computer literacy. This learning outcome is currently not assessed, but these portfolios would provide an appropriate venue for consideration of student abilities.

SHARING PORTFOLIO ASSESSMENT FINDINGS

The portfolio assessment generates richer data than any annual report in the **Assessment Almanac** can accommodate. Raw data from the 2002 assessment is saved as an SPSS data file, while data from 1998 through 2001 is saved in Excel spreadsheet format.

Starting in 1998, portfolio findings have been sorted by student major and the results for each major have been disseminated to the corresponding disciplines through their division heads. The disciplines are encouraged to

study how their majors' portfolios were evaluated and to consider those findings as they engage in program review and curriculum development.

Starting in 1999 disciplines also receive data showing which classes in their disciplines served as sources for portfolio entries and how those works were scored. Again, this information is intended to stimulate discussion in the disciplines regarding their curriculum and to provide data for disciplines considering reforms.

The summer planning workshop and faculty development luncheons have been traditional venues for sharing and discussing portfolio results, and these should continue to be utilized. The Faculty Development Committee should consider designing other workshop experiences where portfolio findings are shared and the portfolio process is explained.