

Chapter XVI: PORTFOLIO ASSESSMENT

Who takes it?

All students matriculating in or after the fall of 1999 are expected to develop and submit portfolios as a requirement for graduation. In May of 2005, 1099 students of the graduating class submitted completed portfolios.

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 three to four hours.

What office administers it?

Each discipline/program administers it, in conjunction with the director of the portfolio project.

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 the 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 2004-2005 academic year, a portfolio included a work demonstrating *critical thinking and writing*, 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 the portfolio project.

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 Higher Learning Commission 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. While some universities are using portfolios for assessment of general education or liberal studies, most do not use similar prompts or submission categories.

2005 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 2004-2005 academic year portfolio assessment findings, concluding with a discussion about changes to the portfolio project and about the use of the data for improving teaching and learning.

In May and June 2005, portfolios from 1099 students, representing 90.5% of the undergraduate degrees granted in fiscal year 2005, were read and evaluated by faculty readers¹. This percentage has increased significantly since 2002, when the participation rate was 67%. Thirty-one disciplines were represented in the portfolio project, compared to twenty-nine disciplines last year.

Forty-four faculty and staff members read and evaluated the portfolios, representing all ranks and twenty-one academic disciplines from every division except Education. Eight of the faculty participants were new readers (one more than last year). In order to ensure that the reading process was completed, several faculty members volunteered to read more than one week. The readings progressed in a timely fashion and faculty gained fresh perspective on the dynamics of group interaction. The portfolio director, who is a faculty member, organized the readings sessions, trained readers in holistic evaluation, facilitated discussions, and served as a second reader of materials that were difficult to assess. Newer readers were encouraged to seek advice of those with more experience when confronted with difficulties. Furthermore, two student employees assisted with data entry and file manipulation. Their help was critical to the success of this large assessment process.

This year, students were asked to submit their portfolios in digital format. A large group of students participated in a pilot project in 2004, where they submitted digital portfolios, but this was the first time that all students were to do so. In prior years, electronic submissions were printed out so that the reading process would not have to be modified. However, the director determined that printing out almost 1100 complete portfolios was neither effective nor efficient. Discussions with faculty readers in 2004 led to the decision to have readers use notebook computers to access files over a wireless network connection. A discussion of the effectiveness of this process is included in the concluding remarks of this report.

Reading sessions were scheduled over the three weeks from May 16 to June 3, 2005. Approximately one third of the readers participated during each week, gathering daily at 8:00 AM and ending at 4:30 PM (7:45 AM to 5:15 PM during the third 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. A number of years ago, the logistics of reading sessions were modified. Having tried other arrangements, it seems that twenty readers per week form an optimum cohort, allowing reasonable time for satisfactory discussions without compromising efficiency.

PORTFOLIOS BY MAJOR	
Accounting	60
Agricultural Science	13
Art	35
Art History	7
Biology	105
Business Administration	135
Chemistry	16
Classics	2
Communication	71
Communication Disorders	21
Computer Science	40
Economics	14
English	89
English: Linguistics	4
Exercise Science	48
French	12
German	3
Health Science	26
History	45
Justice Systems	35
Mathematics	26
Music	30
Nursing	33
Philosophy and Religion	15
Physics	4
Political Science	53
Psychology	100
Russian	1
Sociology/Anthropology	23
Spanish	15
Theater	18

¹ It should be noted that the number of degrees granted each year is greater than the number of graduating students, since numerous students have two or three majors. For example, 100 students submitting portfolios this past year listed a second major.

Student works sought with the 2005 portfolio were elicited by prompts for demonstrating “critical thinking and writing”, “interdisciplinary thinking”, “scientific reasoning”, “historical analysis” and “aesthetic analysis”, 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.

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| <p><u>The 2005 Portfolio</u></p> <ul style="list-style-type: none"> • Critical Thinking and Writing • Interdisciplinary Thinking • Scientific Reasoning • Historical Analysis • Aesthetic Analysis • Most Personally Satisfying Experience • Reflective Cover Letter |
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2005 Portfolio Findings

The findings of the 2005 Portfolio Project 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 prompts 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.

Because some students elect not to submit materials in certain categories, 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 that are collaborative or dealing with issues of race, class, gender or international perspectives.

<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
French	Economics	Nursing
German	Exercise Science	
History	Health Science	
Music	Mathematics	
Philosophy and Religion	Physics	
Russian	Political Science	
Sociology/Anthropology	Psychology	
Spanish		
Theatre		
370 Portfolios	445 Portfolios	284 Portfolios

Critical Thinking and Writing

Seniors submit works to demonstrate their abilities as critical thinkers and writers. In 2005, items were elicited with the following prompt:

Please include an example of your best writing that demonstrates your critical thinking skills. As stated in Truman's LSP outcomes, good writing is a reflection of good thinking. Thus, as a result of an intellectual process that communicates meaning to a reader, good writing integrates ideas through analysis, evaluation, and the synthesis of ideas and concepts. Good writing also exhibits skill in language usage and clarity of expression through good organization.

Faculty readers will evaluate your writing sample with attention to four areas:

1. *Thinking (developing ideas, making connections between ideas, integrating ideas to make meaning) For further information regarding the nature of critical thinking, review the prompt entitled "Critical Thinking Definitions".*
2. *Organization (communicating a purpose, writing clearly, making strong arguments, drawing conclusions)*
3. *Style (employing appropriate voice and tone, having an audience in mind, choosing appropriate words, using appropriate sentence structures)*
4. *Mechanics (adhering to the accepted conventions of grammar and punctuation, spelling words correctly)*

As you consider this category, you may find that a submission from another category demonstrates strong critical thinking and writing. If so, feel free to use that item for this category as well.

NOTE: Writing samples from ENG 190 ("Writing as Critical Thinking") are generally NOT the best examples of critical thinking.

This prompt emerged from the work of the ad hoc Writing Assessment Committee. After a lengthy exploration of various alternatives, the committee concluded that portfolio entries might provide an appropriate forum to conduct a summative evaluation of student writing. A successful pilot of the review occurred last year, using critical thinking submissions. The new prompt was crafted in light of the dual purpose of the category and reflects the input of portfolio readers from 2004. This report begins by discussing the results for critical thinking. Data and discussion for the writing assessment are presented in the subsequent section.

Critical Thinking at a Glance	
• Number of submissions:	1040
• Percent of "no submissions":	3.7%
• Mean critical thinking score (on a 0 – 3 scale):	1.92
• Highest scoring "group":	Arts/Humanities
• Lowest scoring "group":	Professional
• Most frequent source (course):	ENG 190
• Most frequent source (discipline):	ENG
Trend:	Improved critical thinking scores

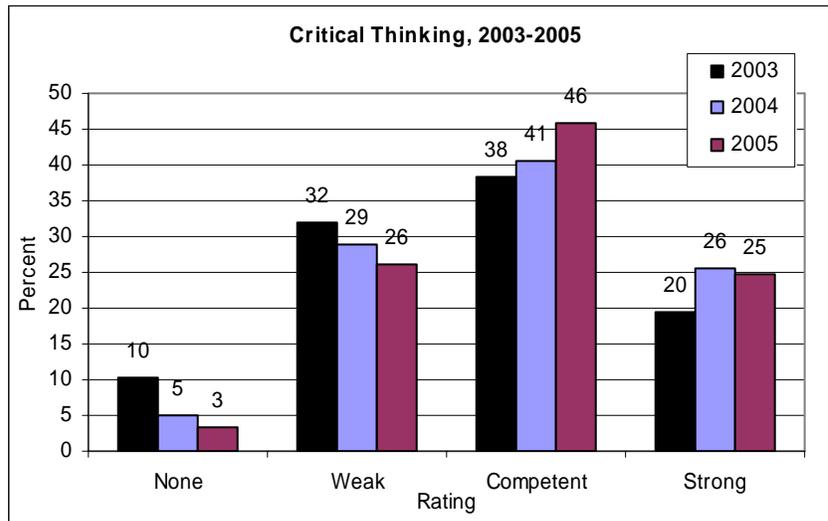
Out of the 1099 portfolios collected, 1040 (95%) submitted examples of critical thinking. The others did not include a submission for this category (n=41) or provided a "self-report" (described but did not include an assignment, n=18).

Faculty readers evaluated the works for the quality of critical thinking evidenced, and rated the thinking as "strong", "competent", "weak", or "none". In conjunction with the writing assessment project, a scoring rubric was developed that included descriptors for evidence of critical thinking. The following table presents the phrases used for evaluating critical thinking.

Critical Thinking Scoring Rubric

0 No Evidence	1 Weak Competence	2 Competence	3 Strong Competence
displays no real development of ideas	develops ideas superficially or inconsistently	develops ideas with some consistency and depth	displays insight and thorough development of ideas
lacks convincing support	provides weak support	develops adequate support	develops consistently strong support
exhibits no attempt to make connections between ideas	begins to make connections between ideas	makes some good connections between ideas	reveals mature and thoughtful connections between ideas
includes no real analysis, or synthesis, or interpretation, or ...	begins to analyze, or synthesize, or interpret, or ...	shows some analysis, or synthesis, or interpretation, or ...	shows sophistication in analysis, or synthesis, or interpretation, or ...
demonstrates no real integration of ideas (the author's or those of others) to make meaning	begins to integrate ideas (the author's or those of others) to make meaning	displays some skill at integrating ideas (the author's or those of others) to make meaning	is adept at integrating ideas (the authors or those of others) to make meaning

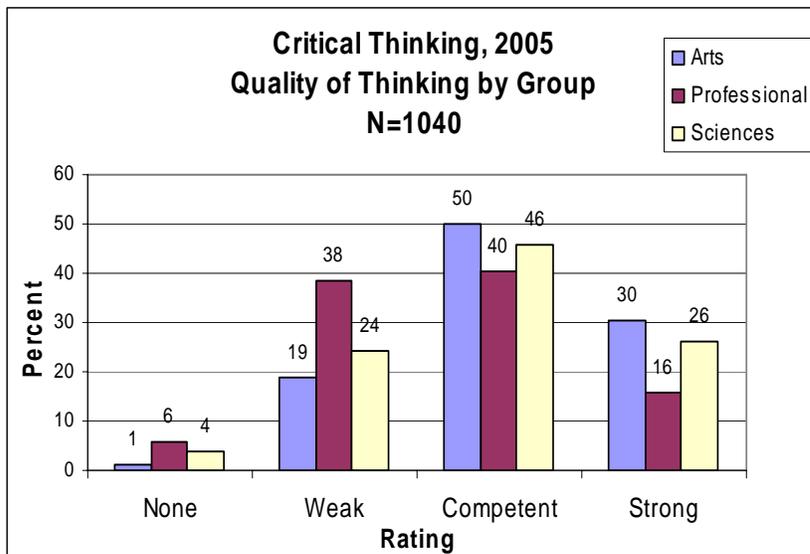
In 2005, 24.8% of seniors submitted material judged as demonstrating “strong” thinking; 45.8% submitted material with thinking judged as “competent”; 26.1% submitted material judged as showing “weak” thinking; and 3.4% submitted material judged as demonstrating no critical thinking. Typically, entries 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 or showing strong competence continues to increase. In 2003, 57.9% received these scores. In 2004, 66.1% did so and this year, 70.6% were scored in this manner.



When the data is sorted according to major groups, Arts/Humanities majors demonstrated stronger critical thinking skills than those with Science/Math or Professional majors. Thirty percent of Arts/Humanities students were found to be “strong” critical thinkers, while 26% of Science/Math majors and only 16% of Professional students were considered “strong” in their thinking. When the two highest categories are combined, 80% of Arts/Humanities majors’ submissions were judged as either competent or demonstrating strong competence, while 56% of Professional majors’ submissions were scored this way. Seventy two percent of Science/Math submissions received one of the two highest scores.

As with previous years, the majority of works chosen by seniors for this category were generated in the last two years of study. Thirty six percent of the submissions were examples of work done as a senior, 39% were from the junior year, 16.2% came from the sophomore year and 9.1% were produced during the freshman year.

Fifty percent of the submissions fulfilled assignments for classes in the major, 35% 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 (n = 168). JINS courses provided 147 submissions, and Philosophy and Religion classes provided 100 submissions.

Of the items submitted, 4% dealt with issues of class (up from 3.1% in 2004), 5.8% dealt with issues of race (down from 6.4% in 2004), and another 11% had international/intercultural perspectives (up from 9.3% in 2004). Almost 11% of the submissions dealt with issues of gender (up from 9% last year). The percentage of collaborative submissions was 8%, up from 7.9% in 2004.

Critical Thinking and Writing			
Top Ten Courses		Top Ten Disciplines	
ENG 190	56	ENG	168
PHRE 188	26	JINS	147
BSAD 460	24	PHRE	100
PHRE 185	24	BSAD	67
CHEM 421	20	POL	65
ED 389	16	COMM	64
ENG 265	14	PSYC	47
PHRE 186	14	HIST	43
HIST 328	12	JUST	40
POL 161	12	BIOL	28

Analytical Writing Assessment

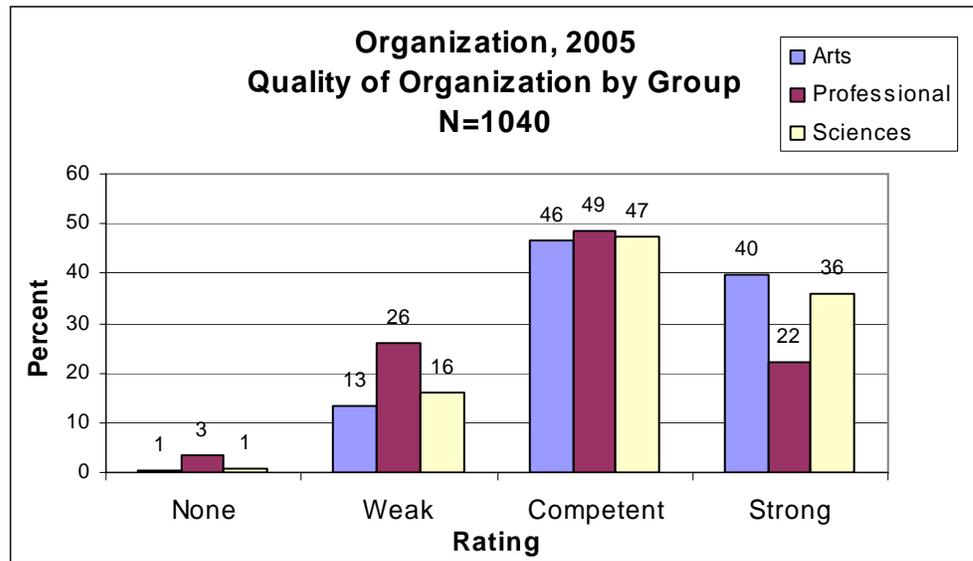
In addition to reading submissions for critical thinking, faculty readers assessed them for evidence of writing skills. Readers were trained by a member of the Writing Across the University Committee, with the assistance of the University Assessment Specialist and the Portfolio Project Director. As with other categories where works are scored, a group of student-produced writing samples were used to assist faculty in identifying relevant factors. A scoring rubric, first drafted by members of the Writing Assessment Committee, was used in conjunction with the assessment. Unlike other categories, readers were trained to conduct an analytical assessment, reviewing and scoring each submission in terms of organization, style, and mechanics. The descriptors for these categories are presented in the following rubric:

Rubric for Analytical Writing Assessment

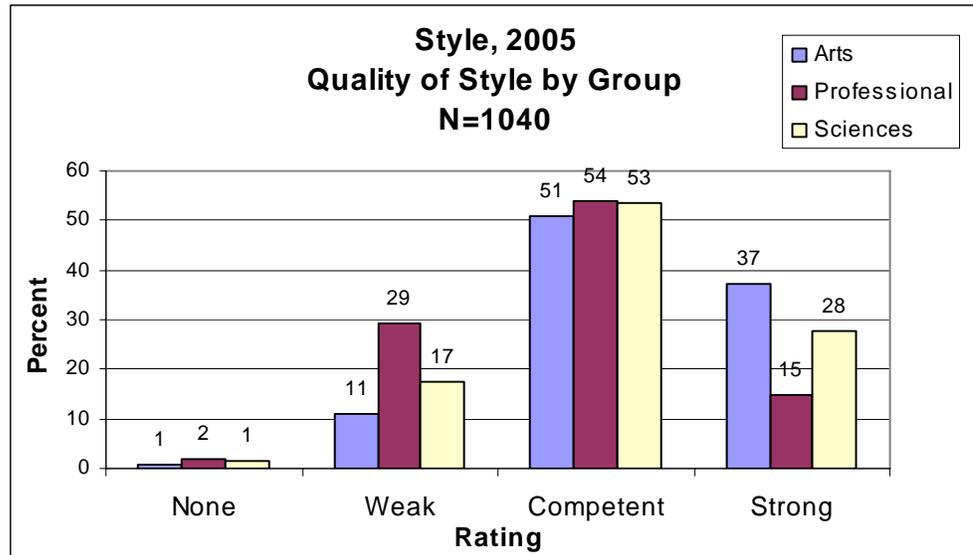
	0	1	2	3
Organization	lacks introduction lacks controlling idea lacks clarity lacks logical structure lacks conclusion	includes weak introduction displays controlling idea exhibits weak clarity exhibits weak logical structure includes weak conclusion	includes adequate introduction displays adequately developed controlling idea exhibits adequate clarity exhibits adequate logical structure includes adequate conclusion	includes strong introduction displays clear, well-developed controlling idea exhibits excellent clarity exhibits strong logical structure includes well-supported conclusion
Style	tone or voice is off-putting seems to have no audience in mind frequently chooses inappropriate words exhibits frequent inappropriate sentence structure uses no appropriate stylistic conventions	contains inconsistent tone or voice shows little audience awareness sometimes chooses inappropriate words exhibits occasional inappropriate sentence structure uses few appropriate stylistic conventions	contains occasional lapses in tone or voice shows audience awareness chooses appropriate words exhibits appropriate sentence structure uses appropriate stylistic conventions	maintains a consistent tone and voice shows consistent audience awareness exhibits skill in word choice exhibits sophisticated sentence structure skillfully uses appropriate stylistic conventions
Mechanics	lacks command of mechanical conventions: grammar, punctuation, or spelling errors present major distraction to readers	demonstrates weak command of mechanical conventions: grammar, punctuation, or spelling errors are occasionally distracting to readers	demonstrates adequate command of mechanical conventions: grammar, punctuation, or spelling errors are minimally distracting to readers	demonstrates excellent command of mechanical conventions: grammar, punctuation, and spelling small errors do not distract readers

Based on this scoring rubric, the 1040 critical thinking submissions averaged 2.13 for organization (up from 1.99 in 2004), 2.07 for style (up from 2.04 in 2004), and 2.23 for mechanics (up from 2.19 in 2004). Again this year, readers found that students are generally competent in all three aspects of writing for which they were evaluated. When scores are broken down by groups, similar patterns emerge. The charts presented here detail group scores for each category.

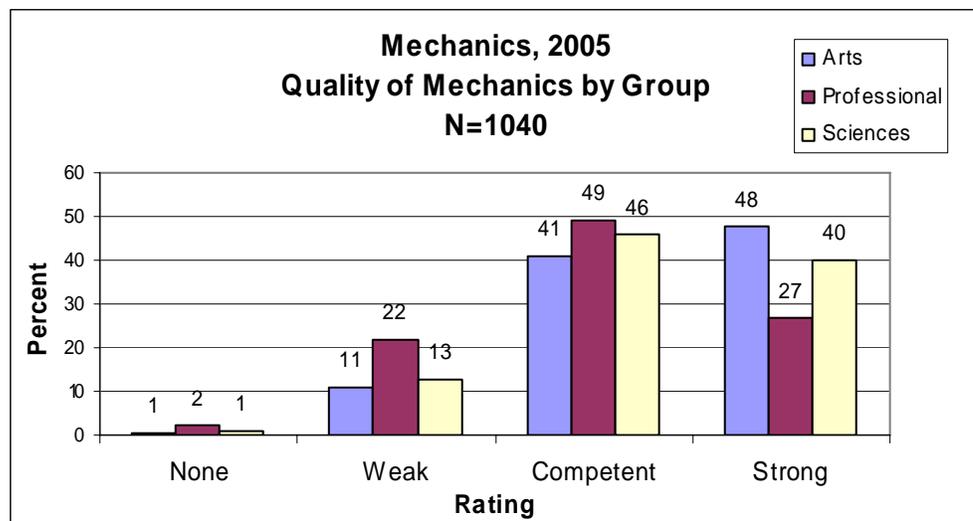
Scores for organization show that 86% of submissions from Arts/Humanities and 83% Science/Math majors were judged as competent or strongly competent. By comparison, 71% of Professional majors' submissions were scored in the two highest categories.



Judgments of writing style revealed that 88% of Arts/Humanities submissions were scored in the two highest categories. This compared to 81% of Science/Math submissions and 69% of Professional majors' submissions.



The final element, mechanics, demonstrates similar patterns. Again, Arts/Humanities majors' submissions were slightly stronger, with 89% of them rated as competent or strongly competent. Similarly, 86% of Science/Math submissions were scored this way, and 76% of Professional majors' works received these scores.



As was the case last year, faculty readers considered the writing assessment component a valuable assessment activity. Since all other categories are scored in a holistic manner, there was concern that readers would have difficulty shifting to analytical scoring. During the second and third weeks of readings this year, assessment of critical thinking and writing was moved to the beginning of the week. Readers commented that this was a welcome change, since they began with a scoring approach that was more familiar to them. As in 2004, readers were able to review all the submissions, despite the additional scoring responsibilities.

During the third week of readings, the University Assessment Specialist conducted a generalizability study in conjunction with the writing assessment. This study replicated and expanded upon a similar study conducted in 2004.

After two years, it is clear that using the portfolio for assessment of writing is empirically sound, widely supported, and fiscally advantageous. Though further analysis and interpretation of the data are warranted, this integration of two major assessment activities is a testament to the creativity and energy of the Truman State University community.

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.

To illustrate interdisciplinary thinking, consider reviewing the examples from the "Book of Fours," which is available on the Portfolio Project website. These outstanding works were submitted by Truman students for this category and demonstrate a strong command of interdisciplinary thinking skills.

In 2005, 3.5% of participating seniors did not submit an entry demonstrating "interdisciplinary thinking", which is higher than 2004 (2.6%). Approximately 2.5% provided "self-reports" of interdisciplinary work they remembered but no longer possessed (this is higher than the one percent reported in 2004). Because faculty readers did not have direct evidence of interdisciplinary thinking, self-reports were not evaluated. Altogether 1031 submissions were evaluated by a single faculty reader who read the works "holistically" while keeping in mind the following descriptors:

Interdisciplinary Thinking at a Glance

- Number of submissions: **1031**
- Percent of "no submissions": **3.5**
- Mean score (on a 0-4 scale): **1.52**
- Highest scoring "group": **Arts/Humanities**
- Lowest scoring "group": **Professional**
- Most frequent source (course): **JINS 325**
- Most frequent source (discipline): **JINS**
- Trends: **Stable Scores**

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

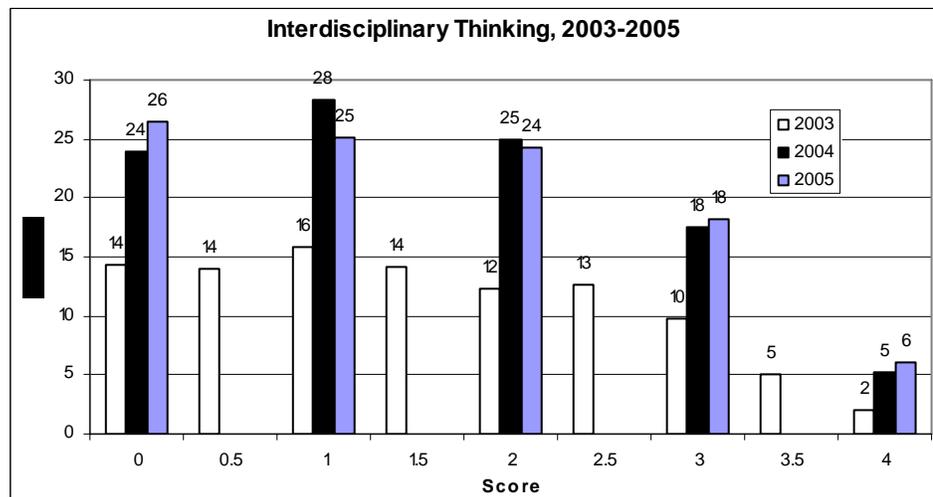
1 Weak Competence

- ❖ 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

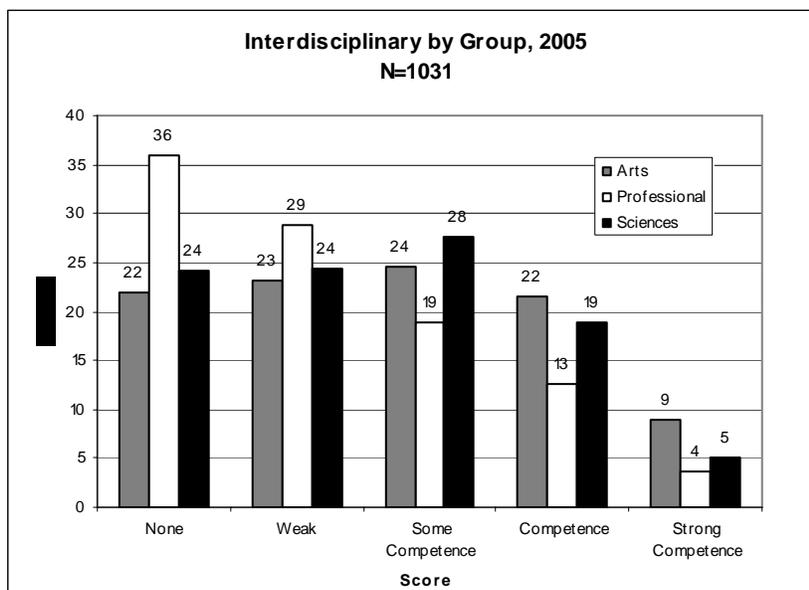
The histogram shows the results for “interdisciplinary thinking” in 2005 with the results for 2003 and 2004. Because of the change from double reading of submissions, the 2004 and 2005 scores are whole numbers only. While this makes direct comparison less straightforward, summary conclusions can be drawn. First of all, the total percent of submissions receiving a



score of 2 or better was 48.4%, compared to 47.7% in 2004 and 41.8% in 2003. Additionally, the mean score for interdisciplinary thinking this year was 1.52, which is identical to 2004, but slightly lower than the 2003 mean of 1.55.

This year, 58.6% of the submissions came from JINS courses, down from 63% in 2004. Furthermore, these submissions had a mean score of 1.72, while all other submissions had a mean score of 1.24. This data is similar to the findings in 2004 and continues to support the notion that the adoption of the JINS course in the Liberal Studies Program is having the desired effect: better comprehension and demonstration of interdisciplinary thinking by students.

The data sorted by major group is summarized in the following chart. Students from Arts/Humanities and Science/Math disciplines submitted fewer items with little or no interdisciplinary thinking than did students with Professional majors. In fact, 65% of Professional majors' submissions scored a 0 or a 1, compared to 45% of Arts/Humanities submissions and 48% of submissions from Science/Math majors.



The interdisciplinary items were selected by seniors from 36 academic disciplines, as well as independent research projects. The remainder were

transfer credits or were not identified by the student. As was the case last year, the use of JINS submissions outstripped all others combined. In fact, of the top 30 courses used for submissions in this category, only three were not JINS courses. Concomitantly, over 68% of submissions came from LSP courses, while 20% were drawn from the major. The rest were drawn from electives (5%), academic minor requirements (5%), and other miscellaneous sources (less than 1%). In addition to the 618 JINS entries, 55 came from English classes. PHRE courses were the next most frequent source of interdisciplinary submissions with 51 items followed by BSAD courses accounting for 33 items, and COMM with 30 submissions.

Most of the work reflected in the interdisciplinary submissions was accomplished by students in their junior and senior years (58% and 26%, respectively). Over 11% came from the sophomore year and 4% from the freshman year. Over 6% of the items were the result of collaborative work.

Portfolio readers keep a tally in each category of items dealing with race, class, gender, and international issues. In the interdisciplinary category, 16.7% of submissions dealt in some way with international issues, 9.7% with race, 9.7% with gender, and 7.2% dealt with class.

Interdisciplinary Thinking			
Top Ten Courses		Top Ten Disciplines	
JINS 325	47	JINS	618
JINS 301	34	ENG	55
JINS 341	33	PHRE	51
JINS 351	29	BSAD	33
JINS 322	27	COMM	30
JINS 336	23	POL	28
JINS 323	22	HIST	24
JINS 311	22	PSYC	20
JINS 353	21	BIOL	14
JINS 345	20	ART	12

Historical Analysis

The “Historical Analysis” category was developed in the fall of 2000, and implemented in the spring of 2001. The prompt for this category is provided below.

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, 4.5% of participating seniors did not submit a work for this category, which is lower than last year (4.9% in 2004). Just under 3% provided “self-reports” (n=32), which were not evaluated by faculty readers. A total of 1017 submissions were evaluated and scored, using the following descriptors:

<u>Historical Analysis at a Glance</u>	
• Number of submissions:	1017
• Percent of “no submissions”:	4.5
• Mean score (on a 0-3 scale):	1.62
• Highest scoring “group”:	Arts/Humanities
• Lowest scoring “group”:	Professional
• Most frequent source (course):	HIST 105
• Most frequent Source: (discipline):	History
• Trends:	Improved scoring

Some Descriptors of Competence in Historical Analysis

3 Strong Competence

Strong demonstration of historical analysis includes one or more of these features. The submission may:

- ❖ Evaluate historical resources.
- ❖ Actively engage historical context and chronology.
- ❖ Use good analytical thinking in making an argument.
- ❖ Show clear awareness of causation in examining changes over time.

2 Competence

Submissions that demonstrate competent historical analysis may:

- ❖ Employ historical resources.
- ❖ Show some awareness of historical context and chronology.
- ❖ Be uneven in supporting arguments.
- ❖ Demonstrate some awareness of causation in examining changes over time.

1 Minimal Competence

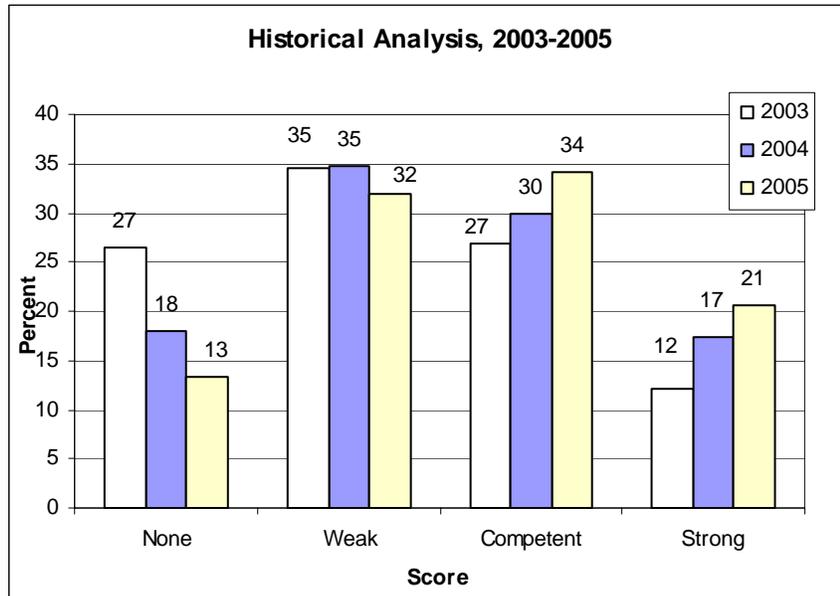
Minimally competent submissions may:

- ❖ Merely list historical resources.
- ❖ Have limited or confused use of historical context and chronology.
- ❖ Make an unsupported thesis or argument
- ❖ Show minimal awareness of causation in examining changes over time.
- ❖ Simply report historical facts

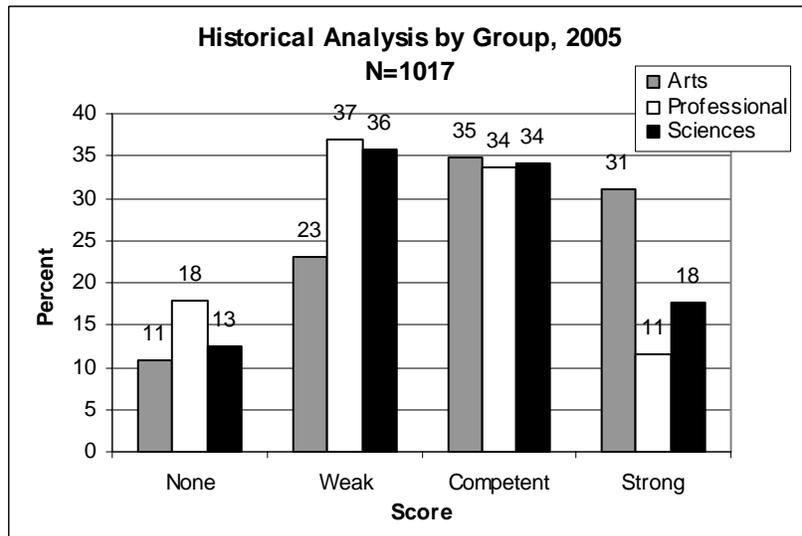
0 No Competence

- ❖ Ignore historical context
- ❖ No thesis, argument, or analysis
- ❖ Neglects changes over time
- ❖ Demonstrates lack of knowledge regarding basic historical facts

The table at right compares the data for the past three years. As was the case in 2004, the results show continued decreases in the number of submissions demonstrating no competence and a corresponding increase in those rated as competent or strongly competent. The mean score of 1.62 for 2005 is a marked improvement from the 2004 average of 1.47 and the 2003 average of 1.25.



The accompanying table presents the data sorted according to the major groupings. In this category, students majoring in the Arts/Humanities disciplines had a mean score of 1.86, compared to Science/Math majors' average of 1.57 and Professional majors' average of 1.39. Thirty one percent of students in the Arts/Humanities group submitted items judged as demonstrating strong competence, compared with only 18% of the items from the Science/Math group and 11% of the items submitted from the Professional major group. While two thirds of Arts/Humanities students scored at least "competent" (i.e., scores of 2 or 3), only 52% of Science/Math students, and 45% of Professional students were judged competent or better in historical analysis.



As expected, the discipline from which students chose work for this category most frequently was History. Slightly over 37% of the items came from history courses (n=388). JINS courses accounted for 12.2% of the submissions (n=128) and English courses accounted for 6.5% of the submissions (n=68). 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 over 15% of the total number. World Civilizations since 1700 (HIST 133) was the next most common item (n=47), followed by World Civilizations before 500 A.D. (HIST 131) with 29 items.

HISTORICAL SOURCES			
<u>Top Ten Courses</u>		<u>Top Ten Disciplines</u>	
HIST 105	101	HIST	388
HIST 104	69	JINS	128
HIST 133	47	ENG	68
HIST 131	29	PHRE	51
PSYC 429	29	POL	42
ENG 190	19	COMM	40
HIST 328	18	ART	38
PHRE 185	16	PSYC	38
HIST 132	15	BSAD	24
POL 161	15	ECON	20

Approximately 25% of the submissions were produced in the senior year, over 33% in the junior year, 22% in the sophomore year and 20% in the freshman year.

Over 52 percent of the items submitted were the result of work in LSP classes, 29% were assignments in major courses, 10% were from elective courses and 8% were produced in classes taken to fulfill minor requirements.

Of the 1017 submissions read for historical analysis, 24.5% dealt with international perspectives, 15% with race, 12% with issues of gender, and 6.5% with class issues. In this category, 3.9% of the items submitted were collaborative works.

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.

This year, 8.4% of seniors did not submit materials to demonstrate “an ability to reason scientifically”. This percentage is higher than the non-submission rate of 7.7% in 2004, but lower than the rate of 8.5% in 2003. Slightly less than two percent (n=21) of seniors submitted self-reports of work they recalled doing (.9% in 2004). Self-reported work was not evaluated by faculty readers.

Readers evaluated 986 submissions, 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”. Readers were assisted by a set of descriptors for scientific reasoning, compiled by a group of faculty from the natural science and professional disciplines. This set of descriptors is included below. Additionally, readers with questions about the quality of a submission consulted with colleagues from the sciences and social sciences.

<u>Scientific Reasoning at a Glance</u>	
• Number of submissions:	986
• Percent of “no submissions”:	8.4
• Mean score (on a 0-3 scale):	1.05
• Highest scoring “group”:	Science/Math
• Lowest scoring “group”:	Professional
• Most frequent source (course):	BIOL 100
• Most frequent Source: (discipline):	Biology
• Trends:	Continued Lower scores

SOME DESCRIPTORS OF COMPETENCE IN SCIENTIFIC REASONING

3 Strong Competence

The item may have some, many, or all of these features:

- ❖ Explicit discussion of research hypothesis or question
- ❖ Clear understanding of research design, including the method’s limitations and strengths
- ❖ Clear understanding of cause and effect appropriate to research level and design
- ❖ Clear indication of inductive or deductive reasoning underlying hypothesis
- ❖ Critical evaluation of results, including alternative explanations of results
- ❖ Meaningful discussion of experiment’s limitations
- ❖ Examines results in light of current state of knowledge

2 Competence

The item may have some, many, or all of these features:

- ❖ Attempts to generate and test a hypothesis or answer a research question
- ❖ Examines appropriateness of research design
- ❖ Considers reasoning underlying hypothesis
- ❖ Some interpretation and analysis of results, may consider alternative explanations of results
- ❖ Attempts to deal with experiment's limitations
- ❖ Examines results in light of current state of knowledge

1 Minimal Competence

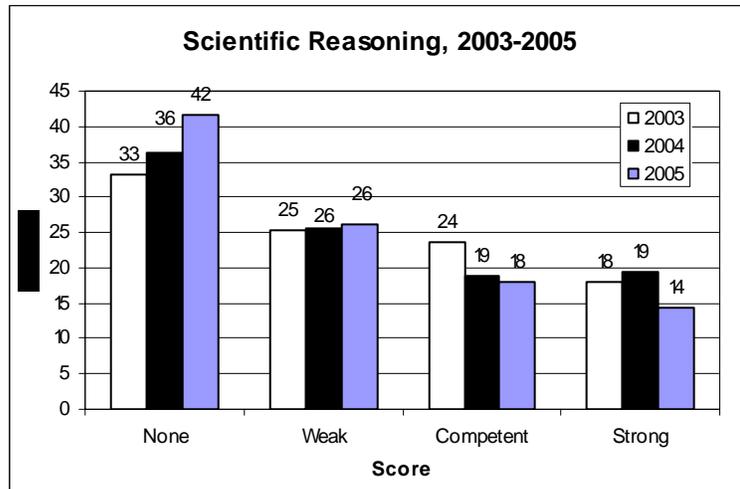
The item may have some, many, or all of these features:

- ❖ Recognition of problem/hypothesis, but not of derivation of testable hypothesis
- ❖ Description of methodology without thought on appropriateness of methods used
- ❖ Data analysis with minimal discussion or interpretation of results
- ❖ Little or no consideration of alternative explanations of results
- ❖ Ignores experimental limitations
- ❖ Fails to examine results with regard to current state of knowledge

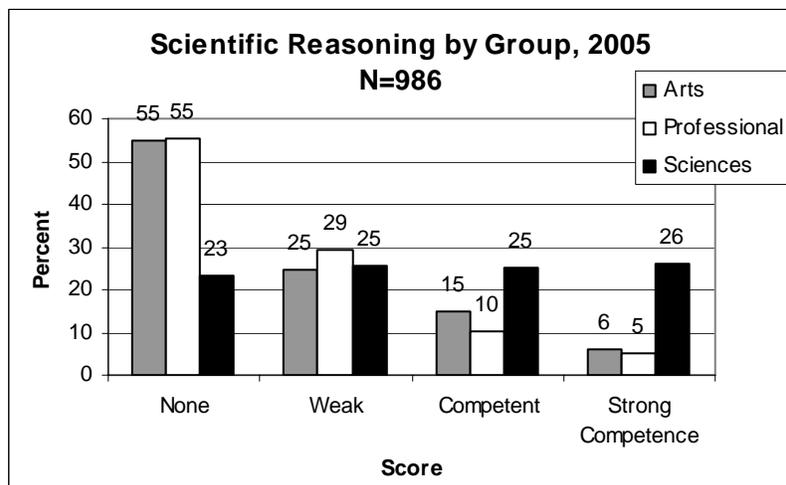
0 No demonstration of competence in scientific reasoning

- ❖ No discussion of problem/hypothesis
- ❖ No consideration of methodology for experiment
- ❖ Presents results without interpretation
- ❖ Neglects differences between expected (literature) values and experiment
- ❖ Demonstrates scientific knowledge, but without interpretation or analysis

As in past years, the most common finding was “no evidence”, while “strong competence” was found least often. This is the sixth consecutive year that submissions scored a zero outnumbered submissions judged “minimally competent”. Over the past three years, mean scores have steadily declined, moving from 1.25 in 2003, to 1.21 in 2004 and to 1.05 this year.



Again this year, seniors in Science/Math majors account for most of the higher scores, with a mean score of 1.56. Seniors majoring in the Professional disciplines had the lowest mean score (.65), followed by Arts/Humanities majors (.72). Almost 84% of the submissions from Professional majors were scored zero or one, while 80% of the



Arts/Humanities majors' submissions received the two lowest scores. Slightly over 48% of the submissions from Science/Math majors were scored zero or one.

While Biology remained the most popular source discipline, Psychology moved ahead of Chemistry. JINS submissions was fourth, as in 2004. The top five individual classes remained the same as last year, though in a slightly different order: BIOL 100, CHEM 100, BIOL 107, AGSC 100 and PSYC 466.

Submissions from the senior year accounted for 28.5%, 33.5% came from the junior year, 24% from the sophomore year, and almost 14% were generated by freshman students. Forty five percent of the submissions were generated by students satisfying requirements of their majors, 41.5% were from LSP courses, while minor and elective courses accounted for 6% and 6.6%, respectively.

Slightly over three percent of the submissions for scientific reasoning dealt with international perspectives. Gender issues were observed in 2.8% of the submissions; 1.3% of science submissions examined issues of race, and less than 1% touched upon issues of class. Over 30% of submissions were the results of collaborative work.

Scientific Reasoning Sources			
Top Ten Courses		Top Ten Disciplines	
BIOL 100	112	BIOL	277
CHEM 100	50	PSYC	110
BIOL 107	37	CHEM	109
AGSC 100	35	JINS	68
PSYC 466	29	POL	44
BIOL 200	24	AGSC	40
POL 300	23	ENG	40
BIOL 301	20	STAT	31
CHEM 421	20	BSAD	29
BIOL 325	17	PHYS	26

Aesthetic Analysis

Following the requests of faculty members in Fine Arts and Language and Literature, this category was significantly revised in 2002, so as to more appropriately assess the outcome statements for the Aesthetic Mode of Inquiry (both Fine Arts and Literature). The new prompt was introduced in the spring 2002 packets, and has been used since then. It reads as follows:

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.

This year, 7.1% of the portfolios failed to submit an item for this category. This is above the 6% non-submission rate in 2004. The mean score for the 991 submissions was 1.4, which is slightly lower than last year's mean of 1.49.

The following set of descriptors was created by relevant faculty members during the course of readings in 2004. This year's readers found the descriptors to be very helpful, particularly those who are not accustomed to assessing aesthetic analysis.

<u>Aesthetic Analysis at a Glance</u>	
• Number of submissions:	991
• Percent of "no submissions":	7.1%
• Mean score (on a 0-3 scale):	1.4
• Highest scoring "group":	Arts/Humanities
• Lowest scoring "group":	Professional
• Most frequent source (course):	MUSI 205
• Most frequent Source: (discipline):	ENG

SOME DESCRIPTORS OF COMPETENCE IN AESTHETIC ANALYSIS

3 Strong Competence

The item may have some, many, or all of these features:

- ❖ Reflective interpretation of the cultural artifact or production
- ❖ Sophisticated discussion of the significance or meaning of the artifact or production, incorporating the language of appropriate critical or theoretical discourse/perspective
- ❖ Connection of the artifact or production to its context, with discussion of its significance
- ❖ Analysis of the artifact or production's features and their significance
- ❖ Analysis of the artifact or production's form and its significance

2 Competence

The item may have some, many, or all of these features:

- ❖ Interpretive engagement with the cultural artifact or production
- ❖ Explanation of the significance or meaning of the artifact or production, including some language of appropriate critical or theoretical discourse/perspective
- ❖ Connection of the artifact or production to its context, with some discussion of its significance
- ❖ Discussion of the artifact or production's features and their significance
- ❖ Discussion of the artifact or production's form and its significance

1 Minimal Competence

The item may have some, many, or all of these features:

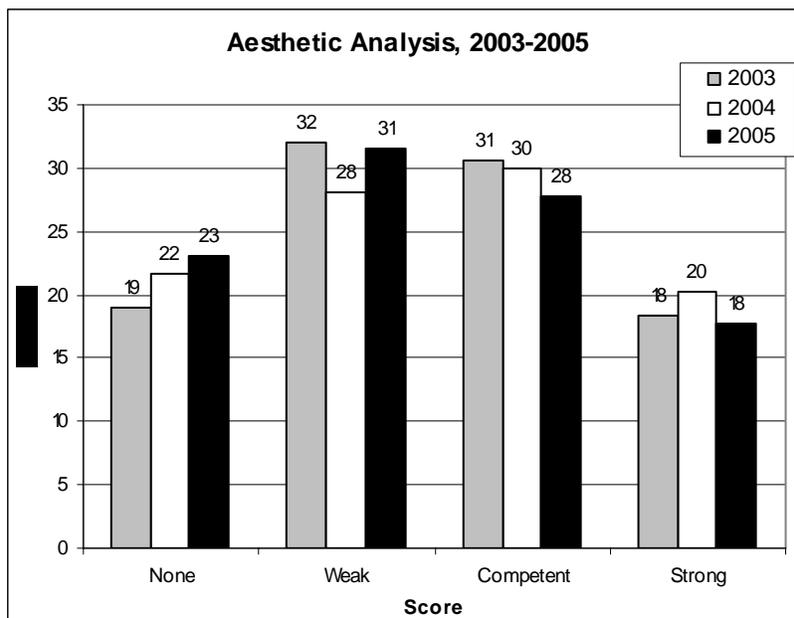
- ❖ Minimal evidence of engagement with the cultural artifact or production (creative works in visual art, music, literature, theatre, film, dance. . .)
- ❖ Placement of the artifact or production within a context (historical, cultural, period, aesthetic movement. . .)
- ❖ Description of the artifact or production's features (plot, musical elements, colors, lines. . .) without discussion of their significance
- ❖ Description of the artifact or production's form (genre, type. . .) without discussion of its significance

0 No demonstration of competence in aesthetic analysis

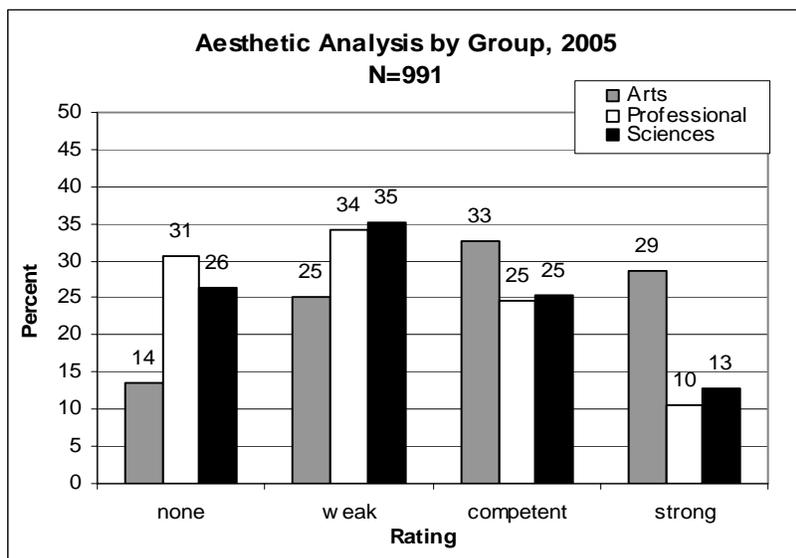
The item may have some, many, or all of these features:

- ❖ No evidence of engagement with the cultural artifact or production
- ❖ Analysis of the artifact or production on some basis other than aesthetic
- ❖ No explanation of the work's context, form, structure or significance

Since the guidelines for this category changed in the spring of 2002, this is the first time that trend data is available. Over the past three years, the proportion of submissions showing no evidence of competence has risen from 19% in 2003 to 23% this year. Conversely, the proportion demonstrating competence or strong competence has dropped. In 2003, 49% received one of these scores; this year, 46% did so.



When comparing the groups, Arts and Humanities majors scored significantly better than either Science/Math or Professional majors, averaging 1.76, versus 1.25 (for Science/Math) and 1.15 (for Professional). Again this year, the difference is most obvious when examining the submissions demonstrating strong competence. Twenty nine percent of Arts and Humanities majors' items received the highest score, while the other two groups achieved this score much less than half as often (Sciences = 13%, Professional = 10%).



As one might expect, entries for this category came primarily from English and Music. Interestingly, JINS courses were used by 138 students, while Art courses were used by 135 students. This is followed by Theatre, Philosophy and Religion, and History. MUSI 205 was the most popular course in this category, followed by MUSI 204, ART 203, THEA 275, ENG 265, and ART 223.

Of the 991 submissions where the year produced was identified, 21% were created during the senior year. Another 33.2% were produced during the junior year, while 21.4% were from the sophomore year and 24.3% from the freshman year.

Almost 63% of the submissions came from LSP courses, while 24.3% were from major courses. Roughly 6.5% were from minor course, and 5.9% from elective courses. Collaborative efforts comprised 2.2% of the submissions.

In this group, 13.1% dealt with international perspectives, 3.2% considered issues of class, 6.3% involved gender issues, and 6.1% examined issues of race.

Top Ten Courses		Top Ten Disciplines	
MUSI 205	49	ENG	254
MUSI 204	44	MUSI	172
ART 203	43	JINS	138
THEA 275	42	ART	135
ENG 265	37	THEA	56
ART 223	35	PHRE	41
ENG 225	32	HIST	37
MUSI 207	26	COMM	32
ENG 190	23	PSYC	19
ENG 209	17	ECON	12

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.

This year, 5% of the portfolios did not contain an item or a description representing a “most satisfying experience” (compared with less than 1% in 2003 and 2004). In all, the faculty readers reviewed 1044 submissions (964 in 2004).

The accompanying table presents the reasons why a submission was most satisfying. Items were included that received ten or more responses. Though students are asked for a single reason for the item’s inclusion, many identified several reasons. Thus, the total percentages exceed 100%.

Almost 33% explained that their satisfaction was the result of having achieved “significant personal growth”, 22% found the experience “especially challenging”, 20.5% considered it a “personal best”, and 19.1% were satisfied because they were able to “work as a professional”. Over 12 percent “achieved personal goals”, while 7.2% noted that it was a “collaborative effort”. Over five percent found it to be an “enjoyable educational experience” or fulfilled some “personal interest”. Finally, 5.4% gave no indication.

Students always point to a wide variety of settings for their most personally satisfying experiences. Many students submit academic work of which they are especially proud. Others talk about friends, family, religion, getting married or engaged, campus organizations, particular campus events in which the student played a role and a

Why Was It Satisfying?	Number	%
Achieved Significant Personal Growth	343	32.9
Especially Challenging	230	22.0
Personal Best	214	20.5
Working as a Professional	199	19.1
Achieved Personal Goals	128	12.3
Collaborative Effort	75	7.2
Enjoyable Educational Experience	54	5.2
Personal Interest	54	5.2
Required Much Time / Work / Effort	30	2.9
Self Reflection / Expression / Discovery	24	2.3
Friendships / Relationships	18	1.7
Effectuated Career Goals	14	1.3
Rewarding / Received Recognition	14	1.3
Successful Activity	11	1.1
Especially Creative	10	1.0

Context	Frequency	%
Major Class	390	38.0

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 or through independent research activities. 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.

Many aspects of campus culture were cited as a satisfying experience by students. Participation in sports (both varsity and club), involvement with fraternities and sororities, participation in theater performances and musical groups, and volunteer work, are but a few examples. Also of interest is that several students pointed to employment, both on-campus and off-campus, as their most satisfying experience.

Almost 42% of the "most satisfying experiences" occurred in the senior year (43% in 2004), 34% in the junior year (33% in 2003), 10.9% in the sophomore year (11.9% last year), and 7% in the freshman year (6.7% in 2004). The remaining 6.5% occurred over times spanning more than a year (5.3% last year).

Over seven percent of most personally satisfying experiences dealt with international perspectives (up from 6% in 2004 and 5% in 2003). Many of these were study abroad experiences and reflect the important role of this activity for Truman students. Issues of gender were considered in 2.7% of the submission (down slightly from 3% last year), while 2.6% with race issues (2.5% in 2004), and less than one percent dealt with issues of class (1.6% last year).

Reflective Cover Letters

Finally, the portfolio asks students to compose a cover letter addressed to the Liberal Arts and Science Portfolio Project Team. 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 one or more 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 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 2005 was 3.8 hours, up from 3.4 hours in 2004. 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. However, a number of students still remark that they were not reminded of the portfolio at any time between their freshman year and the capstone course.

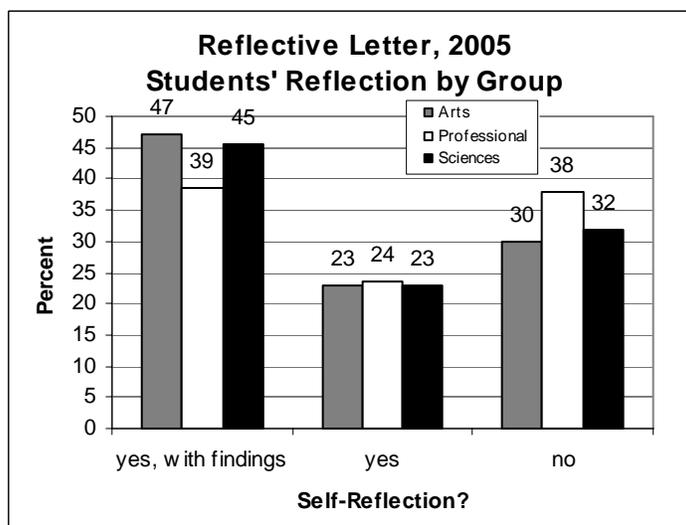
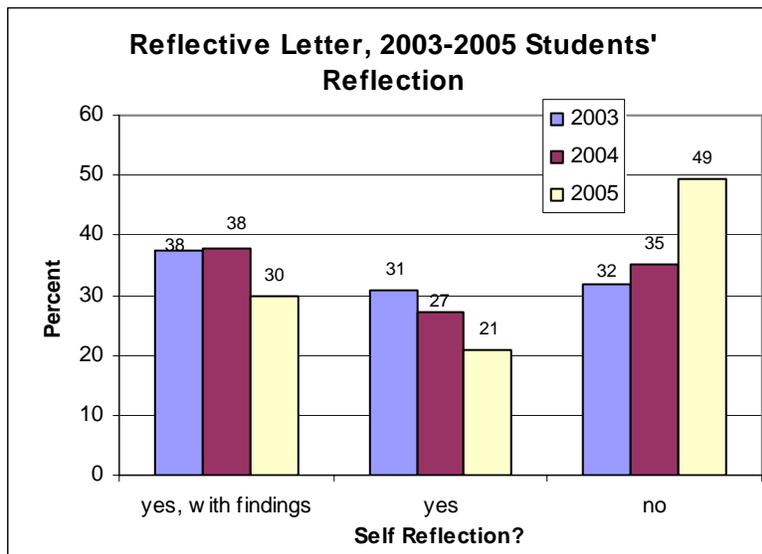
As the following letter from a Biology major illustrates, students who engaged in the process of putting together their portfolio throughout the semester found that process and the results more rewarding. This letter also provides insight regarding the role of faculty in facilitating a successful experience:

I benefited from putting together my portfolio. The process started toward the beginning of the semester. My biology senior seminar professor twice asked us to prepare submissions for class. It was good to start early. About two weeks prior to the due date of the portfolio, I began working on it more diligently. A few nights a week I would sit down for around half an hour and finish one of the categories. Overall, I spent about four and a half hours preparing my portfolio.

SELF REFLECTION IN COVER LETTERS

A hallmark of the portfolio process is the expectation that students engage in self-reflection as they near graduation. 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 2005 data shows a decline in the percentages of students providing some reflection. This year, 51% did so, compared to 68% in 2003 and 65% in 2004. Letters without reflection were mostly letters explaining the contents of their portfolio and the process they used in assembling it. This continued downward trend in self-reflection is disappointing and not easily understood. It may be due to students’ sense of urgency to complete the project, but more analysis would be necessary to better understand this finding.

Comparing the three major groupings show Arts/Humanities students to be slightly more likely to include findings in their self-assessment than are the students in Science/Math majors. Students in professional majors are less likely to engage in self-reflection than students in the other two groups. This continues the trend observed in



previous years. Overall, 70% of Arts/Humanities majors provided reflection, compared to 63% of Professional majors and 68% of Science/Math majors.

The reflections in cover letters are wide ranging. Some consider challenges they faced, while others share about their accomplishments. It is common for students to discuss growth in terms of academics, maturity, or skills. As in the past, each cover letter excerpted in this almanac was recommended by faculty readers for sharing with the university community.

This Physics major reflects upon growth in reasoning skills in the course of crafting his portfolio:

This process has also showed me how much I have forgotten. There are so many class periods, facts and ideas which have already slipped out of my memory. I remember so little about so many of my classes, but in retrospect I do not think that it is all that bad. The only real important thing is whether I have learned to reason well or not. It really doesn't matter if I remember the date for the battle of Waterloo or how to formally analyze a work of art. It is okay if I forget a principal part of $\epsilon\upsilon\rho\acute{\iota}\sigma\kappa\omega$ or can't remember all of Maslow's hierarchy of needs or what a manifold does in differential geometry. But it is not good if I forget how to think critically and logically. When I came to Truman I decided upon a physics major. At the time I did not know if I would like physics, but physics was the single subject in high school which really engaged my mind and challenged me to think. I'm glad I stayed with it. I'm also glad to see how my writing reflects a growth in critical thinking. Even if I forget everything in physics except $F = ma$ or dp/dt I will still consider my time here well spent. All I really wanted from college was to train my mind and that is what happened.

An English major considers the role of her educational experience in becoming more confident in her own abilities:

Though I had an interest in medicine and biology throughout high school, I decided I would make a "better" English teacher, because I was afraid I "wasn't smart enough" to handle the science courses. However, thinking about my undertakings as an English major, including two undergraduate research projects, working with hundreds of my peers as a consultant at the Writing Center, and being a part of the team that puts together the Windfall magazine, I realize I have accomplished things I never would have imagined as a shy high-schooler. Most importantly, I have learned that a constant process of revision and self-examination, whether of something as minute as the choice of a single word in an essay or as broad as the choice to change my entire educational track, is not only not a sign of weakness, but is crucial to living a fulfilled life.

A Spanish major comments on her growth in research and writing skills:

The only frustration that resulted during compilation of my portfolio would be the fact that I was not able to include many of my research projects that I am in the process of completing for my final semester here at Truman. I feel that many of these research papers reflect a significant improvement in both research and writing skills in my final semester. Nevertheless, I feel that this frustration is indicative of my constant scholastic improvement here at Truman, something that will continue to be a hallmark of my commitment to lifelong learning, something that I believe I share with the majority of the members of my university community. Perhaps what is most important is my realization that the road to effective research and scholarship is something that does not end as one leaves a particular learning institution. I am now excited about the prospect to apply what I have learned in college in service to my surrounding worldwide community. That, in a sense, is why I believe the portfolio project to be of significant importance to each individual student, and to the Truman community as a whole.

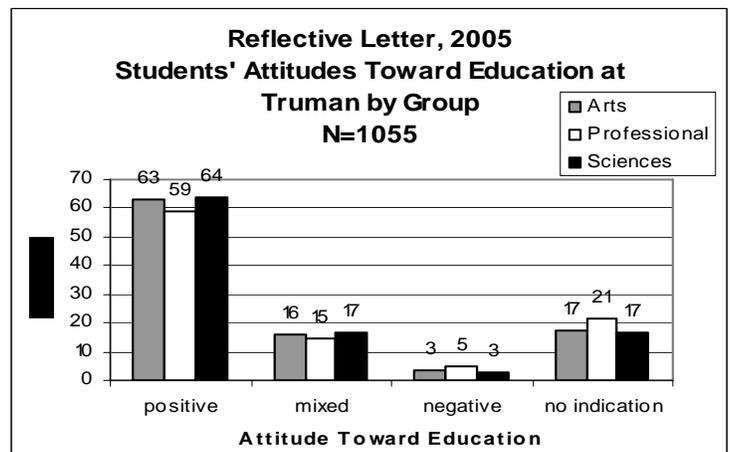
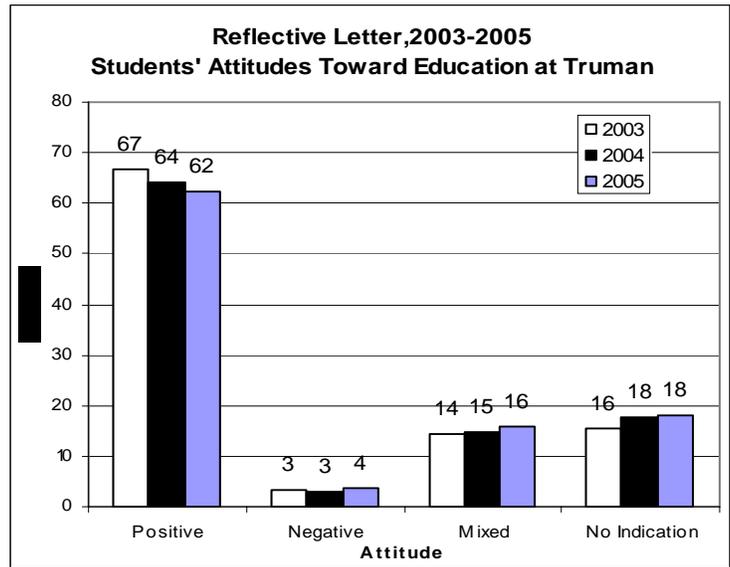
ATTITUDE TOWARD EDUCATION AT TRUMAN

The vast majority of students reflect positively upon their education at Truman. Again this year, the percent of positive attitudes expressed dropped slightly (down 2% from 2004 and 5% from 2003). The percentage of students expressing a negative attitude increased by 1%, as did those students expressing mixed sentiments.

As a group, professional students were less likely to express positive attitudes than science and mathematics or arts/humanities majors. This continues the pattern of previous years. Furthermore, professional students were more likely to have negative attitudes about their education and a higher percentage had no indication.

The following letters present a variety of negative or mixed feelings about the Truman experience. The first excerpt comes from a Music major, who expresses a number of concerns about the institution:

I think Truman tries to manufacture prestige. It bills itself as the "Harvard of the Midwest" and a highly selective university, both of which are to be applauded, but it doesn't seem to be able to figure out how to provide the sort of education from which prestige springs, rather than simply creating it from an ever-more extensive LSP with more and more requirements of the students and teachers. A university does not become prestigious because everyone has to take calculus; a university becomes prestigious when the quality of the education it provides leads those who partake of it to become great people. But what is prestige? In the case of the Ivy League, we see that more and more often, it is simply a matter of money. If a student comes from a rich family, they can reach any level of society they choose. If they do not, they must scrape together what resources they have to try to reach the level the rich have already been given. So this standard, this false pretext of academic prestige, is not the ideal toward which Truman should be striving. Truman will never be prestigious until it begins to value its students and teachers, rather than treating them as a commodity. This institution prides itself on having a lean administration, and while that is admirable, it is another false pretext. It's not that the administration has disappeared; instead, its responsibilities have been forced onto the faculty. Many of them manage to do well in this capacity in addition to their other academic responsibilities, but there are many others who don't, and who lead students astray due to their lack of training. I don't see this as the fault of those members of the faculty who haven't received training; I see it as the fault of the administration for not giving them the resources they need to help students. While my advisors have been very helpful, there are many other members of the faculty who have not been similarly able to guide students. I think that encouraging students and faculty to develop personal relationships is a noble, wonderful thing. I simply think that overburdening the faculty with more work is not the way to accomplish this.



As a student as well, it's very difficult not to feel stuck in place at Truman. I came here from the University of California, Santa Cruz, a university of 12,000 students. Now, at an institution half its size, I feel more keenly that I am simply passing through, another anonymous product of the education that Truman provides, unable to leave my mark or distinguish myself from my peers. A large contributor to this feeling is, I feel, the academic climate. I appreciate being in an environment in which studiousness is not only an ideal, it is nearly the norm. However, after some time here, one begins to see that studiousness for what it really is in many students: panic. So many of us feel that we are drowning in work, that if we don't pass this class or get an A in every subject, that we are failures as both students and people. This is not an exaggeration. This is an attitude I've encountered in nearly every serious student I've met. I think that the idea of the LSP is wonderful; students should be pushed to learn and move beyond their major. When these students are pushed, though, they should be allowed to falter without heavy consequences. Many of my peers live in terror of getting anything less than an A. Many others have simply given up, all the promise they brought from high school squandered, they feel, in a sea of classes that won't have any direct impact on their lives after Truman. Why encourage this neurosis? Why not let students know that a C is all right, as long as they try? UCSC was originally conceived as a school without grades. Because the faculty evaluated each student's progress through a personal evaluation, grades were deemed unnecessary. What I personally loved about this system was the emphasis that it placed on learning, rather than grades. Once I could relax and stop worrying about my GPA, I began to learn much more. I'm not suggesting that Truman do away with grades altogether, although I think that would be a wonderful idea. Instead, I think Truman should actively encourage students to let themselves fail on occasion. Many will not go on to graduate school or more formal education after they receive their undergraduate degree; why not emphasize that college is simply a passing phase of one's life, and that a C in statistics isn't the end of the world? It's possible for the Truman administration to be proactive in this. They can tell us that we should make the most we can of our time outside class, and not to worry so much about what goes on inside. Many of the students here are good enough that the grades will take care of themselves.

A Biology major discusses the lack of interdisciplinary emphasis:

Truman overall does very a very good job of teaching information, but the low level of diversity (almost unavoidable in a Missouri college) presents some limitations in other areas. However, one area which could be greatly improved is synthesis: classes are often geared toward imparting information with little emphasis on how to make use of it in a broader sense—relating to other classes or disciplines, or to life outside the university. While senior seminar does help to some extent, I feel that classroom subjects remain far too compartmentalized.

A History major was particularly negative about the faculty and their attitudes:

I find the bulk of the Truman faculty not well connected with the student body and use the class room for matters of personal interest and pomposity rather than a forum for sharing knowledge. I have had very few professors that treated me with the same respect with which I have treated them. As an alumnus of Truman State University, I will do all in my power to see that the quality of instructors at this institution is overhauled. Until that time I will encourage all high school seniors that I know, which my sister is a high school senior so I know many, not to attend Truman State University. I say this not only because I have experienced bad luck with instructors, but as a whole, I believe others have had the same experiences. This is based on communication I have had with many students over the years. I did not sit in a dorm room for four years; I got out and met people. When Truman was discussed, the arrogance of the faculty was always brought up.

Other students expressed more positive sentiments about their education here. The first excerpt, from an English and German double major, points out how Truman provided a truly liberal education:

As regards my education in general at Truman, I feel that I have received an excellent one. One of the best things about a liberal arts education is being able to go from a film class to a history class and then to a linguistics course and discuss more or less the same time period but from totally different perspectives. When my courses line up like that, it is like experiencing an educational parting of the clouds. That is my favorite thing about the liberal arts curriculum at Truman, that I can intelligently discuss the impact of one event on multiple disciplines. My education here has helped me to think in broader terms, yet to refine my studies at the same time. I feel more well-rounded because of the years I have spent here fulfilling LSP requirements, and better-equipped to take on whatever job I have in the future.

The opportunities provided by varsity athletics in the context of the larger Kirksville community are noted by this Biology major:

I have had a wonderful experience at Truman, one I would not change if I had to do it all over again. My experiences with classes and faculty have been great. As a varsity athlete here at Truman, I found the faculty to be particularly helpful and accommodating when it came to working with me around practice and game schedules. As far as basketball itself, that is the reason I am here at Truman in the first place. I have met some of my best (and lifelong) friends through basketball and other sports here at Truman. The camaraderie among the athletes is refreshing and it has been great to have the support of the other sports. I have also had the opportunity to be involved in several other activities/organizations, including Captain's Roundtable (Student-Athlete Advisory Committee), the Undergraduate Research Seminar, and Fellowship of Christian Athletes. Through these organizations I have been more involved not only with the campus, but with the Kirksville community as well. I am encouraged as I see more and more campus organizations becoming involved with the Kirksville community. I am originally from Kirksville, and I know how important it is to the residents to have Truman (such a big part of the community) students interact with them. They like to know that the university is not a separate entity from them.

A Physics major reflects upon the accessibility of the faculty and the curriculum in the following letter:

I did not really know what to expect when entering Truman as a freshman in the fall of 2002. I had a great high school experience, and I never really gave much thought in my college decision process. Fortunately for me, Truman offered me a happy and fulfilling college experience. Truman is special because I feel like I was challenged in all my classes, yet I never felt isolated because the professors were always so helpful. The interaction between students and faculty has been a major plus. As a student advisor for two years, I live for personal relationships and there is no limit to the number of personal relationships that one can establish at Truman. I also thoroughly enjoyed the Liberal Arts atmosphere. I love being knowledgeable in a variety of different areas. The LSP courses were exciting opportunities, as opposed to hoops that a student must jump through. I am also studying with other Truman students this summer in the Costa Rica study abroad program. All of these things together make me glad that I chose this small public university in Kirksville, MO.

Though students cite concerns with the lack of racial diversity on campus, this English major praises Truman as a place where diversity of ideas is evident:

My experiences at Truman have been invaluable. As a person I found a place where I could meet other people who were intellectually engaging and incredibly diverse. As a student I have found a forum in which to test and refine my ideas and my skills. I have been a critic as well as a creator. I have been exposed to the ideas of others, which I am sometimes uncomfortable with, and I have learned that to be comfortable with everyone is to be stagnant. I have learned that the most valuable ability is to be able to constantly revise myself and my mind. My education has certainly taught me many facts, but it has also given me a greater tool: a curious and questioning mind.

GENERAL ATTITUDES TOWARD ASSESSMENT AT TRUMAN

This year, students were specifically prompted to comment on assessment activities in addition to the portfolio project. Approximately 49% did so; 16.9% were negative, 14.6% were mixed, and 13% were positive. A total of 93 students wrote about one or more specific assessment instruments. The most commonly discussed task was the senior test, followed by the junior test. The table below summarizes the specific comments in terms of the attitudes expressed. It includes those activities mentioned at least five times.

Activity	Negative	Mixed	Positive
Senior Test	13	3	6
Junior Test	11	2	5
Standardized Tests	7	5	0
All	5	3	2
Junior & Senior Tests	4	3	1
SWE	5	1	2

ATTITUDE TOWARD THE PORTFOLIO PROCESS

This year, student attitudes towards the portfolio process were more negative than they have been in the past. The percentage of students expressing positive attitudes dropped considerably, from 42% in 2004 to 34.7% this year. Negative attitudes regarding the portfolio increased from 20% to 24.5%. The students providing no feedback decreased to 7.1%, while those expressing mixed attitudes increased to 34%. When the comments are sorted by groups, seniors in the science and mathematics majors are more positive about portfolio assessment than are students in the other two groups.

Many students described the portfolio as a “hoop to jump through” or a deadline to meet. This was often discussed in conjunction with a negative remark about the timing of the assignment, which often occurs during the last weeks of the final semester. Students lament that they are forced to spend this time compiling an irrelevant collection of papers when they would prefer preparing for final projects, completing job applications, or even spending time with friends.

In contrast, other students expressed surprise at discovering that the task was rather enjoyable or that they learned much about themselves in the process. A number of students noted that the project was important for institutional purposes, even though they derived little personal benefit.

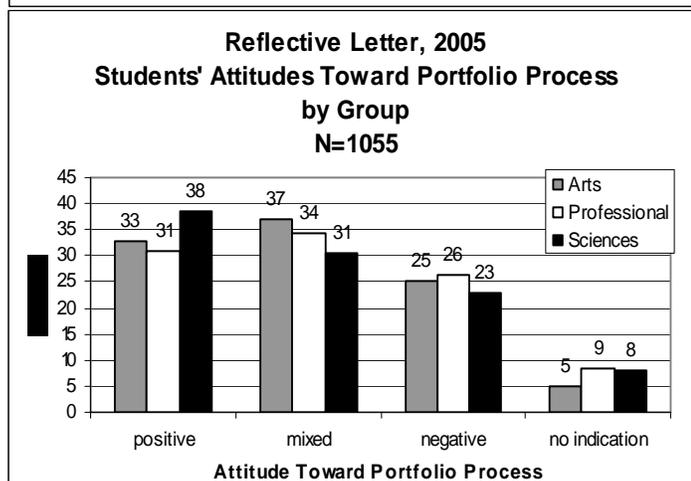
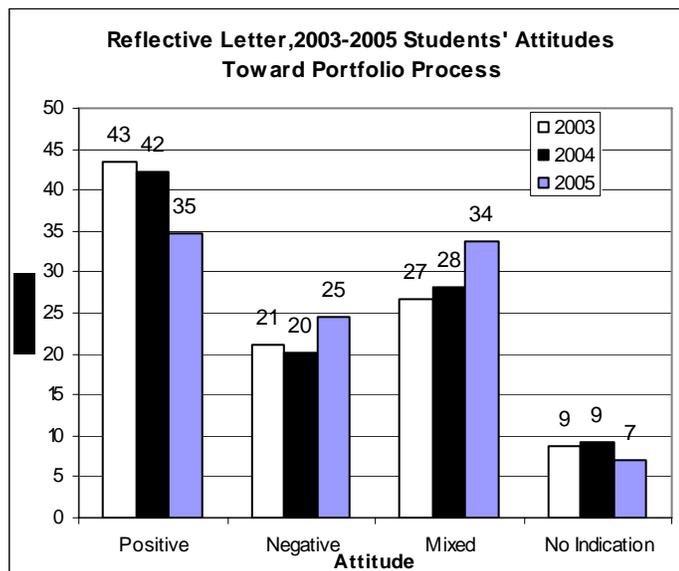
The following excerpts serve as examples of some of the negative attitudes students expressed toward the portfolio process:

This Spanish major was very forthright in his description of the portfolio as a waste of his time:

First, I was very, very frustrated with the way this had to be submitted. How about an actual Internet form instead of a word document that I have to open and mess around with?

Second, I'm really upset that my major did not take care of this, but rather I was reminded that I have to do it when I received my graduation packet. And don't say, "well this is supposed to be something you have collected and prepared for during your all your years here". What a bunch of crap. I have had better things to do than try and put together this inane portfolio. I guarantee you, going out and interacting, rather than preparing this during the last four years, has made my experience a great one and meaningful and all the other ambiguous adjectives that are used in describing this waste of time.

And yes, I really believe this is a waste of time. The last thing I need to be doing right now is working on this. And, like I said, saying I should have been doing it during all four years here is stupid. Who really has that little to do with their life? Anybody that anal needs to be in a mental institution somewhere and not at Truman. Returning to my complaint though, I have grad school stuff, figuring out what I am going to be doing this summer, actual classes, and trying to spend as much time with friends who I will not see



again anytime soon after graduating to worry about. I do not need to be wasting time doing this. It has done nothing to help me realize my experiences here, but all the more to make me bitter towards stupid red tape and useless policy done for nothing other than appearances.

This excerpt is from a Theatre major, who fails to see the usefulness of reviewing graded work:

Overall, I did not gain much from doing this project. I know that in my four years here I have grown as an individual, artist, and writer. I did not need any additional assessment to tell me this. Performing in shows and scenes, doing in class readings or projects, and the multitude of papers I have successfully written have been my hands-on assessment process. Truman is a wonderful institution and I can honestly say that I am satisfied with my collegiate experience, but down the road this portfolio project is of no help to me or to other individual students that may follow in my footsteps. These papers have already been graded once, is it really a valuable use of your time to sift through them again?

On the other hand, many students find the portfolio process to be rewarding or see its value in improving student learning. Again this year, a number of students who anticipated that the process would be a waste of time found it beneficial. The following excerpt from a Biology major points this out:

The portfolio assessment was surprisingly helpful to me. When I was first introduced to it in my freshmen seminar class, I thought it was just another hoop we had to jump through in order to graduate. But I realize now how important it is not only for the school to assess its effectiveness but how it is perhaps a better way of assessing myself besides just looking at my grades. Of all the types of assessment here at Truman, this is perhaps the one that has helped me the most.

The value of self-reflection is central to the portfolio process. The following letter from a Theatre major demonstrates that and also makes a suggestion for further improving the process:

As a future teacher, I have started to study the advantages of portfolio assessment. Although it is a time consuming process, I do believe if taken seriously it can be an excellent source of self-evaluation. Instead of getting feed back from an outside source, one is forced to assess their own work and make decisions as to what pieces most reflect their ability and growth. I think one way to improve this particular form of assessment here at Truman is to make it a bigger deal. (That doesn't mean I think it should reflect on a person's grades in a particular class.) I feel that professors should devote more time in Senior Capstone classes to both discussing what should go into the portfolio and why students are being required to turn one in (this would be helpful at the beginning of the last semester.) Although some will complain about the assignment, I think it is those who do not truly understand the possible gains of that work who do the complaining. Those who clearly see the advantages of the project, I feel, are more than willing to participate.

An English and Sociology/Anthropology double major was particularly descriptive of the process of self-reflection:

Assembling this portfolio was exciting because my years at Truman have been so full that I don't even remember what I've done. Peeling back pages and seeing what I've written and expressed is like rediscovering slips of sentiment and reminding myself that, at some point, I didn't know what I knew after that endeavor. It's a method of reminding myself that I have traveled intellectually. I have grown into someone who is more culturally aware, more prone to expressing her abilities rather than resting them in anonymity, more able to accept and even revel in challenges (i.e. the Calculus requirement for the LSP). I could spend hours shuffling through old tests and assignments and reading in them the reflection of who I was at each stage—and that's what I did in assembling this portfolio. I don't know how long it took; I'll just say a good little while.

Finally, this English major celebrates the process in ways that some students and faculty would consider remarkable:

I have known about the senior portfolio since freshman year. An upperclassman tried to scare me by describing the portfolio process as something as dull as watching an in-depth documentary comparing the drying speeds of various brands of paint. But this semester as I compiled my most noteworthy papers and projects, I couldn't help but feel sorry for this long-since-graduated bitter man. If his own portfolio bored the bejeezus out of him, I can't imagine that he had a very stimulating time in his classes at Truman.

Scanning my old papers, I would constantly catch myself making audible "Haha's" and "Oh I remember that's." The other students in the computer lab gave me funny looks but I really didn't mind. For

this project, I spent the majority of my time getting side-tracked. Not by games on the computer, not by email, but by my own work. Every paper I looked at would ignite a gun-powder explosion of nearly-forgotten memories. Silly snippets of the past would come to mind: the kid in my mythology class who sat behind me and never showered; the girl who always thought she knew everything but who didn't realize the teacher was poking fun at her in one of my British Literature classes; my professor who hypnotized a kid in front of the entire psychology class.

The biggest struggle of this massive project was certainly not with boredom, but rather with selecting just a few pieces to represent my progress here at Truman State University. I wanted the selections to reflect my personality; that's why I'm so thankful for the glorious "Most Personally Satisfying" section of the portfolio. It allowed me to include a quirky, creative false autobiography in which I'm raised by wolves in a Florida orange grove. My other entries give evidence that I am a devoted scholar with an open mind. Although my family does not yet know it, I do have a solid plan for the future: I plan to tell incoming freshman that the LAS portfolio is fun to compile.

Conclusion

The portfolio process has changed significantly in the last year, moving from paper format to an electronic/digital format. This past summer, faculty readers also began reviewing the submissions electronically. While there were initially some hesitations on the part of both students and faculty, it appears that the transition has been successful. Some students reported that they had lost artifacts because of hard drive failures or that they had difficulty converting paper items to a digital form. However, this problem should continue to decrease as students use networked drives for storage and become better acquainted with the submission expectations. It is also important to note that students have always provided "self reports" about papers or artifacts no longer in existence.

The transition to reading electronic portfolios was successful in many ways. Each faculty member was provided a notebook computer with wireless network access. This permitted us to retain the room configuration, enabling faculty to continue having constructive conversations regarding evidence of competence, sample works, and even the nuances of the concepts under review. At the beginning of each week, a brief training session occurred, where the readers learned how to use the computers to access the relevant drives and the naming conventions for student files. Many faculty commented that they learned much about computing during the week and some even noted that they were going to purchase a notebook computer for personal use.

USING PORTFOLIO RESULTS MORE EFFECTIVELY

As has been pointed out in the past, the portfolio project generates far more data than any annual report in the *Assessment Almanac* can accommodate. To ensure that the data can be made available for extended analysis, it has been saved in SPSS format since 2002. Data from 1998 through 2001 was 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 Master Plan and Assessment Workshop and the weekly lunch series (sponsored by The Center for Teaching and Learning) have been traditional venues for sharing and discussing portfolio results, and these should continue to be utilized. The Faculty Development Committee and the Assessment Committees should consider other experiences where portfolio findings are shared and the portfolio process is explained.

Now that student artifacts and results of the reading process are maintained electronically, linking this information to other assessment databases and student information should be considered an important next step in Truman's assessment program. This task presents numerous challenges, but it will reap a variety of benefits. Of greatest significance is enhancing our efforts regarding our ultimate goal: student learning. Like all assessment activities, the portfolio project truly succeeds where it helps us judge effectiveness in this matter.