

Chapter XI: PORTFOLIO PROJECT

Who takes it?

All students matriculating in or after the fall of 1999 develop and submit portfolios as a requirement for graduation. In academic year 2008-2009, 1194 students submitted portfolios, an increase from the previous year's 1096. This increase is an artifact of demographics, due to the increase in the number of graduates.

When is it administered?

Students submit during their senior year. Most students complete the process as part of their capstone experience.

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

The average is three to four hours.

What office administers it?

The Director of the Portfolio Project administers it in conjunction with each discipline/program.

Who originates the submission requirements for portfolios?

Faculty readers and evaluators, the Assessment Committee and the Director of the Portfolio Project design, evaluate and publish the requests for specific portfolio items.

When are results typically available?

The portfolios are read and evaluated in May. The results are available late in the fall or early in spring of the following year.

What type of information is sought?

Faculty evaluators and the Assessment Committee designate the types of works requested from students, but many of the requested items have remained constant. In the 2008-2009 academic year, a portfolio included works demonstrating 1) *critical thinking and writing*, 2) *interdisciplinary thinking*, 3) *historical analysis*, 4) *scientific reasoning*, and 5) *aesthetic analysis*. The portfolio also included a work or experience the student considered 6) *most personally satisfying*, and 7) *a cover letter* in which students reflect on ways they have changed while at Truman and offer any other thoughts they care to express about their experiences. Other items may be included, but these are evaluated separately. The *scientific reasoning* and *aesthetic analysis* prompts will rotate out after this year.

From whom are the results available?

The Director of the Portfolio Project puts results on the portfolio webpage and can release datasets or additional analyses upon request.

To whom are the results regularly distributed?

The overall results of the Portfolio Project are available to all members of the Truman community through this *Assessment Almanac*. 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. The Faculty and Student Senates have used the reports in developing planning documents and in curriculum review. Some faculty use the information to reform their curriculum, improve their major, and engage in self-study. Portfolio findings have also affected the assignments and syllabi of faculty that have participated as portfolio readers.

Are the results available by school or department?

Yes.

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.

2009 Liberal Arts and Sciences Portfolio

Since 1988, Truman State has utilized a locally designed senior portfolio for sampling and assessing student achievement and learning. It has been a graduation requirement since 1999. This volume reports and analyzes the 2008-2009 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 2009, portfolios from 1194 students, representing nearly 100% of graduates, were read and evaluated by faculty readers. The number of degrees conferred may not match the number of portfolios in any given year for two primary reasons. First, students who earn multiple degrees need only submit one portfolio. Second, many students submit the portfolio as part of their capstone course rather than in their final semester. For example, some students will have submitted their portfolio in December 2008 as part of their class, but graduated in August 2009, technically the following year. Students are listed by major in the table to the right. Students majoring in interdisciplinary studies are listed at the bottom. Students majoring in any major within the departments of Art, Classical and Modern Languages, and Music have been combined throughout this report to preserve individual anonymity. In most cases, they can be separated out by request.

The 2009 Portfolio Contents

- Critical Thinking and Writing
- Interdisciplinary Thinking
- Scientific Reasoning
- Historical Analysis
- Aesthetic Analysis
- Most Personally Satisfying Experience
- Reflective Cover Letter

The 2009 portfolio focused on students' work across the liberal arts and sciences curriculum. It elicited student works demonstrating "critical thinking and writing", "interdisciplinary thinking", "scientific reasoning", "historical analysis" and "aesthetic

analysis". A sixth prompt asked 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.

Fifty faculty and staff members read and evaluated the portfolios, representing all ranks, and four of the five new academic schools encompassing nineteen departments. Five of the faculty participants were new readers. Two student employees assisted with data entry and sorting. Their help was critical to the success of this large assessment process. Reading sessions were scheduled over the three weeks from May 11 to 29, 2009. One third of the readers participated during each week, with several participating more than one week. Most weeks, readers gathered daily at 9:00 AM and ended at 4:00 PM with an hour for lunch and a morning and afternoon break. The final week of reading had longer days, but did not meet on Monday, Memorial Day. Every week readers evaluated Interdisciplinary and Critical Thinking & Writing submissions, as well as cover letters and Most Personally Satisfying responses; every student's submission in these categories were read and scored. Over half of the submissions of the other three, mode-based, submissions were read; Scientific reasoning was scored only during the first week, Historical Analysis only during the second week, and Aesthetic Analysis only during the third week. Additional Historical Analysis submissions were read during a two-day session in August, so that all Historical submissions were eventually read and scored

| Maj. | | First Majors | |
|-----------------------------|-------------|--------------|------------|
| | | 2008 | 2009 |
| Arts and Letters | ART (all) | 34 | 47 |
| | CML (all) | 21 | 24 |
| | ENG | 113 | 105 |
| | LING | 9 | 8 |
| | MUS (all) | 37 | 42 |
| | THEA | 7 | 18 |
| | AAL | 221 | 243 |
| Business | ACCT | 58 | 68 |
| | BSAD | 133 | 113 |
| | BUS | 191 | 181 |
| Hlth. Sci. and Ed. | CMDS | 28 | 36 |
| | ES | 47 | 64 |
| | HLTH | 31 | 45 |
| | NU | 38 | 34 |
| | HSE | 144 | 179 |
| Social and Cultural Studies | COMM | 53 | 76 |
| | ECON | 13 | 11 |
| | HIST | 60 | 47 |
| | JUST | 36 | 38 |
| | PHRE | 16 | 6 |
| | POL | 38 | 47 |
| | SOAN | 16 | 27 |
| | SCS | 232 | 252 |
| Sciences and Mathematics | AGSC | 22 | 17 |
| | BIOL | 77 | 113 |
| | CHEM | 27 | 31 |
| | CS | 13 | 18 |
| | MATH | 24 | 37 |
| | PHYS | 8 | 9 |
| | PSYC | 109 | 105 |
| | SAM | 280 | 330 |
| | IDSM | 8 | 8 |
| All | 1076 | 1187 | |

2009 Portfolio Findings

This report presents the findings of the 2009 Portfolio Project for all students. Starting this year, groupings will be based on the five-school administrative structure now in place. 2008 and 2009 results have been produced using the new groupings and are available upon request. The table on the previous page shows how various majors are characterized in this scheme. When a student had more than one major, their first major was used for grouping. Re-grouping of two years of past data into this structure has been included to allow comparisons over time. Data older than that will also be reanalyzed according to the new schools and will be available upon request.

Because this assessment relies on students to first retain 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 type of approach requested by individual prompts. 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. Some complete the portfolio in stages, as part of a course, and show good engagement with the process. Others are quite frank in stating that they compiled their portfolio quickly because other 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.

In addition to the ratings of quality, 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. In some cases, students could not recall all of the details of when and why the work was created; except where a large percentage of students were missing data, we include percentages only for those students who did report the information. Finally, we report findings regarding the occurrences of submissions that are collaborative or dealing with issues of race, class, gender or international perspectives. Beginning next year, students are asked to self-identify their work on these categorizations, plus environmental perspectives, and to identify work that comes from a service learning or capstone experience.

With the exception of Interdisciplinary Thinking, all results are scoring using a 4 point scale with the following points: 0 (no competence demonstrated), 1 (minimal competence), 2 (competence) and 3 (strong competence). Interdisciplinary Thinking has an added category of 4 for exceptional papers. Papers scoring a 2 or higher are scored as “demonstrating competence” in that area.

Below is a summary table summarizing prompts across all categories. On the following pages, each prompt is examined in more detail, including a data breakdown by major. On those pages, only the past two years are examined.

| | Mean score | | | % Demonstrating Competence | |
|----------------------------|------------|------|------|----------------------------|-------|
| | 2007 | 2008 | 2009 | 2008 | 2009 |
| Interdisciplinary Thinking | 1.80 | 1.69 | 1.78 | 54.6% | 55.7% |
| Critical Thinking | 1.88 | 1.90 | 1.85 | 69.3% | 67.2% |
| Writing - Organization | 2.08 | 2.09 | 1.99 | 80.0% | 75.6% |
| Writing - Style | 2.09 | 2.06 | 1.97 | 95.4% | 75.2% |
| Writing - Mechanics | 2.16 | 2.21 | 2.04 | 86.3% | 80.8% |
| Historical Analysis | 1.5 | 1.58 | 1.68 | 54.1% | 53.4% |
| Aesthetic Analysis | 1.2 | 1.51 | 1.49 | 51.6% | 50.2% |
| Scientific Reasoning | 1.3 | 1.19 | 1.43 | 39.3% | 50% |

As the table above shows, scores have been stable over the past few years. This stability is not surprising, given the consistency of the LSP in recent years. One exception is scientific reasoning, which did improve in 2009.

Critical Thinking and Writing

Seniors submit works to demonstrate their abilities as critical thinkers and writers. 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: Do not submit a writing sample from ENG 190 ("Writing as Critical Thinking") simply because this course focuses on critical thinking and writing. Typically students compose their best critical writing later in college.

Of the 1189 portfolios collected, 1186 (99.7%) submitted readable examples of critical thinking. The others provided a corrupted electronic file, a file format that could not be translated, or had some other problem that prevented reading of the submission. 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 at a Glance | |
|--|------------------------------------|
| • Number of submissions read: | 1186 |
| • Median critical thinking (on a 0 – 3 scale): | 2 |
| • Mean critical thinking score (on a 0 – 3 scale): | 1.80 |
| • Highest scoring school: | Social and Cultural Studies |
| • Most frequent source (course): | ENG 190 |
| • Most frequent source (discipline): | ENG |
| • Trend: | Very stable |

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 2009, 67.2% of seniors submitted material judged as demonstrating “competence” or “strong competence.” Less than 5% submitted material judged as demonstrating no critical thinking. Typically, entries evaluated as “none” were creative writing or very short reports displaying neither analysis nor evaluation. The percentage of seniors with submissions judged as competent or showing strong competence has been stable since 2005, with the exception of a higher year in 2006.

Students whose majors fall in the schools of Arts and Letters, Social and Cultural Studies, and Science and Mathematics significantly outperform those in the schools of Business and Health Science and Education. No group had more than 5% of submissions demonstrating no competence.

| Year | # | Percent | Mean |
|-----------|-----|---------|------|
| Freshman | 132 | 11.8% | 1.45 |
| Sophomore | 170 | 15.1% | 1.71 |
| Junior | 449 | 40.0% | 1.93 |
| Senior | 372 | 33.1% | 1.97 |
| | | 100.0% | |

Year of submission was supplied by 1123 submissions. As given in the table above, the vast majority of submissions were from the later years in college. This is encouraging, because one would hope that students recognize that more advanced critical thinking is likely to occur later in the college career. Submissions produced early in a student’s career produced lower scores. Results are skewed further by the low scores typically received by submissions from ENG 190.

| Course Type | # | % | Mean |
|-------------|-----|-------|------|
| Elective | 108 | 10.1% | 1.86 |
| LSP | 347 | 32.3% | 1.61 |
| Major | 536 | 49.9% | 1.98 |
| Minor | 83 | 7.7% | 1.93 |

About half of the submissions fulfilled assignments for classes in the major, as shown. Scores of submissions from LSP courses were significantly lower than other submissions, due to the high number of submissions from ENG 190.

Of the items submitted, 18% dealt with issues of gender, 18% with issues of class, 15% with issues of race, and 18% with international perspectives. These were higher than in the past, we believe, because students were invited to self-identify whether their submissions met the criteria. In past years, faculty may have missed marking these categorizations.

Students drew from a wide variety of sources for this submission in this category. The table to the left shows those prefixes responsible for 5 or more submissions over the past two years. English leads the way, again owing to the large number of submissions from ENG 190, Writing as Critical Thinking. Omitting that course, JINS overtakes ENG as the most commonly used course prefix.

Over 350 different courses. Despite the suggestion on the prompt, Writing as Critical Thinking (ENG 190) was the single most common source of submissions with 62 submissions. Courses responsible for 10 to 15 more submissions were ED 389, ENG 209, BSAD 460, POL 468, ECON 372, and JUS 331.

Critical Thinking Scores by First Major

| Maj. | Count | | Mean Score | | % Competent | | |
|-----------------------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|
| | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 | |
| Arts and Letters | ART | 34 | 47 | 1.89 | 1.85 | 72.4% | 70.2% |
| | CML | 20 | 24 | 2.25 | 1.88 | 95.0% | 58.3% |
| | ENG | 111 | 103 | 2.12 | 2.06 | 77.5% | 76.7% |
| | LING | 9 | 8 | 2.44 | 2.38 | 88.9% | 100.0% |
| | MUS | 38 | 40 | 1.74 | 1.95 | 60.5% | 72.5% |
| | THEA | 7 | 18 | 1.86 | 1.72 | 71.4% | 72.2% |
| | AAL | 219 | 243 | 2.04 | 1.97 | 75.6% | 73.3% |
| Business | ACCT | 57 | 67 | 1.82 | 1.63 | 68.4% | 53.7% |
| | BSAD | 138 | 110 | 1.70 | 1.63 | 58.7% | 54.5% |
| | BUS | 195 | 180 | 1.74 | 1.63 | 61.5% | 54.2% |
| Hlth. Sci. and Ed. | CMDS | 28 | 36 | 2.07 | 1.61 | 75.0% | 58.3% |
| | ES | 48 | 63 | 1.60 | 1.78 | 45.8% | 65.1% |
| | HLTH | 30 | 45 | 1.67 | 1.53 | 60.0% | 53.3% |
| | NU | 38 | 34 | 1.82 | 2.06 | 65.8% | 82.4% |
| | HSE | 144 | 179 | 1.76 | 1.74 | 59.7% | 64.0% |
| Social and Cultural Studies | COMM | 53 | 75 | 2.07 | 1.96 | 71.7% | 68.0% |
| | ECON | 13 | 11 | 2.38 | 2.00 | 92.3% | 72.7% |
| | HIST | 60 | 47 | 2.03 | 1.85 | 75.0% | 70.2% |
| | JUST | 37 | 37 | 1.92 | 1.97 | 78.4% | 70.3% |
| | PHRE | 16 | 6 | 2.13 | 1.83 | 87.5% | 66.7% |
| | POL | 38 | 46 | 2.42 | 2.20 | 86.8% | 82.6% |
| | SOAN | 16 | 26 | 1.94 | 2.08 | 62.5% | 76.9% |
| | SCS | 233 | 248 | 2.11 | 2.00 | 77.7% | 72.6% |
| Sciences and Mathematics | AGSC | 23 | 15 | 1.83 | 1.80 | 69.6% | 73.3% |
| | BIOL | 78 | 112 | 2.05 | 1.96 | 80.8% | 75.9% |
| | CHEM | 26 | 31 | 1.31 | 2.03 | 42.3% | 74.2% |
| | CS | 14 | 17 | 1.23 | 1.71 | 64.3% | 58.8% |
| | MATH | 26 | 36 | 1.69 | 1.83 | 61.5% | 69.4% |
| | PHYS | 8 | 9 | 1.75 | 2.22 | 62.5% | 77.8% |
| | PSYC | 109 | 105 | 1.80 | 1.64 | 64.2% | 56.2% |
| | SAM | 284 | 328 | 1.79 | 1.84 | 66.9% | 67.7% |
| IDSM | 8 | 7 | 2.75 | 2.14 | 100.0% | 71.4% | |
| All | 1083 | 1186 | 1.90 | 1.85 | 69.3% | 67.2% | |

Critical Scores by Course Prefix

| Prefix | Count | | Mean Score | | % Competent | |
|--------|-------|------|------------|------|-------------|------|
| | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 |
| ENG | 208 | 227 | 1.85 | 1.69 | 66% | 60% |
| JINS | 171 | 149 | 1.87 | 1.82 | 71% | 64% |
| PHRE | 117 | 85 | 1.95 | 1.74 | 72% | 60% |
| COMM | 45 | 61 | 1.76 | 1.87 | 62% | 66% |
| POL | 38 | 56 | 2.47 | 2.20 | 95% | 84% |
| BIOL | 27 | 46 | 1.93 | 2.07 | 74% | 78% |
| HIST | 64 | 44 | 2.00 | 1.89 | 70% | 66% |
| BSAD | 72 | 43 | 1.68 | 1.84 | 58% | 65% |
| JUST | 32 | 40 | 2.16 | 1.98 | 81% | 65% |
| SOAN | 15 | 34 | 2.13 | 2.12 | 67% | 79% |
| ED | 28 | 31 | 1.75 | 1.84 | 64% | 74% |
| ECON | 26 | 25 | 2.15 | 2.12 | 88% | 76% |
| PSYC | 27 | 24 | 1.96 | 1.88 | 74% | 67% |
| NU | 28 | 22 | 1.93 | 2.09 | 68% | 82% |
| ART | 18 | 22 | 2.06 | 1.91 | 72% | 68% |
| ES | 16 | 22 | 1.75 | 1.86 | 56% | 77% |
| CHEM | 13 | 17 | 1.38 | 2.18 | 38% | 82% |
| ACCT | 17 | 17 | 1.94 | 1.65 | 82% | 59% |
| THEA | 4 | 15 | 2.25 | 2.00 | 100% | 87% |
| HLTH | 8 | 13 | 1.75 | 1.31 | 63% | 54% |
| MUSI | 1 | 10 | 3.00 | 1.80 | 100% | 70% |
| MATH | 12 | 10 | 1.42 | 1.50 | 58% | 50% |
| SED | 3 | 9 | 1.67 | 1.89 | 67% | 78% |
| SPAN | 4 | 8 | 2.50 | 1.88 | 100% | 63% |
| CMDS | 3 | 7 | 2.33 | 1.57 | 100% | 57% |
| AGSC | 18 | 6 | 1.83 | 1.50 | 67% | 67% |
| CS | 2 | 6 | 2.00 | 1.17 | 50% | 33% |
| RUSS | 6 | 5 | 2.17 | 2.00 | 100% | 80% |
| ITAL | 1 | 4 | 1.00 | 2.00 | 0% | 100% |
| NASC | 31 | 4 | 1.74 | 1.50 | 65% | 50% |
| STAT | 4 | 3 | 1.50 | 2.67 | 25% | 100% |
| CLAS | 6 | 3 | 1.83 | 2.33 | 67% | 100% |
| ENVS | 3 | 3 | 2.33 | 2.33 | 100% | 100% |
| GEOG | 2 | 3 | 2.50 | 2.33 | 100% | 67% |
| PHYS | 4 | 3 | 1.50 | 2.00 | 25% | 67% |

In the interest of inter-rater reliability, 750 submissions were read by two readers. A significant Pearson correlation of 0.6 was found, showing that, while not perfect, readers do substantially agree on Critical Thinking and Analytical Writing Scores. Reliability has not been measured for this prompt in the last several years, so these measures should be continued whenever possible.

| 2 nd Reader Difference | Critical Thinking | Writing - Organization | Writing - Style | Writing - Mechanics |
|-----------------------------------|-------------------|------------------------|-----------------|---------------------|
| Same Score | 56.5% | 57.8% | 54.8% | 58.4% |
| Off by +/- 1 | 40.7% | 38.1% | 41.7% | 38.7% |
| Off by +/- 2 | 2.5% | 4.1% | 3.3% | 2.9% |
| Off by +/- 3 | 0.3% | 0.0% | 0.2% | 0.0% |

Analytical Writing Assessment

In addition to reading submissions from this prompt for critical thinking, faculty readers assessed them for evidence of writing skills. As with other categories where works are scored, a group of student-produced writing samples were used to assist faculty in identifying relevant factors. Online scoring also allowed for ambiguous submissions to be considered by the whole group of readers. A scoring rubric, first drafted by members of the Writing Assessment Committee, was used. 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 | includes weak introduction | includes adequate introduction | includes strong introduction |
| | lacks controlling idea | displays controlling idea | displays adequately developed controlling idea | displays clear, well-developed controlling idea |
| | lacks clarity | exhibits weak clarity | exhibits adequate clarity | exhibits excellent clarity |
| | lacks logical structure | exhibits weak logical structure | exhibits adequate logical structure | exhibits strong logical structure |
| | lacks conclusion | includes weak conclusion | includes adequate conclusion | includes well-supported conclusion |
| Style | tone or voice is off-putting | contains inconsistent tone or voice | contains occasional lapses in tone or voice | maintains a consistent tone and voice |
| | seems to have no audience in mind | shows little audience awareness | shows audience awareness | shows consistent audience awareness |
| | frequently chooses inappropriate words | sometimes chooses inappropriate words | chooses appropriate words | exhibits skill in word choice |
| | exhibits frequent inappropriate sentence structure | exhibits occasional inappropriate sentence structure | exhibits appropriate sentence structure | exhibits sophisticated sentence structure |
| | uses no appropriate stylistic conventions | uses few appropriate stylistic conventions | uses appropriate stylistic conventions | skillfully uses appropriate stylistic conventions |
| Mechanics | lacks command of mechanical conventions: grammar, punctuation, or spelling | demonstrates weak command of mechanical conventions: grammar, punctuation, or spelling | demonstrates adequate command of mechanical conventions: grammar, punctuation, or spelling | demonstrates excellent command of mechanical conventions: grammar, punctuation, and spelling |
| | errors present major distraction to readers | errors are occasionally distracting to readers | errors are minimally distracting to readers | small errors do not distract readers |

Based on this scoring rubric, the median score was “competent” (2) for each of three categories. The percent of Students demonstrating competence and the mean are given for by major and school, below. This is particularly impressive given that the submission is not just for writing, but for critical thinking and writing.

Analytical Writing Results by First Major

| | | Count | | Organization | | | | Style | | | | Mechanics | | | |
|-----------------------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|--------------|-------------|--------------|--------------|--------------|
| | | | | Mean | | % Comp | | Mean | | % Comp | | Mean | | % Comp | |
| | | Year | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 | 2008 |
| Arts and Letters | ART | 34 | 47 | 2.06 | 1.91 | 73.6% | 78.7% | 2.21 | 2.09 | 88.3% | 80.9% | 2.29 | 2.15 | 85.3% | 83.0% |
| | CML | 17 | 24 | 2.29 | 2.08 | 100% | 79.2% | 2.25 | 2.00 | 100% | 70.8% | 2.69 | 1.79 | 100% | 66.7% |
| | ENG | 111 | 103 | 2.14 | 2.17 | 83.8% | 82.5% | 2.16 | 2.17 | 86.5% | 85.4% | 2.34 | 2.19 | 90.1% | 86.4% |
| | LING | 9 | 8 | 2.33 | 1.88 | 100% | 75.0% | 2.44 | 2.13 | 100% | 87.5% | 2.89 | 2.25 | 100% | 100% |
| | MUS | 38 | 40 | 2.00 | 1.98 | 78.9% | 77.5% | 2.03 | 2.25 | 84.2% | 90.0% | 2.21 | 2.18 | 94.7% | 85.0% |
| | THEA | 7 | 18 | 1.86 | 2.00 | 71.4% | 83.3% | 1.71 | 1.78 | 57.1% | 66.7% | 2.14 | 1.94 | 85.7% | 77.8% |
| | AAL | 216 | 240 | 2.11 | 2.06 | 82.9% | 80.4% | 2.15 | 2.12 | 87.1% | 82.5% | 2.35 | 2.13 | 91.2% | 83.3% |
| Business | ACCT | 57 | 67 | 2.11 | 1.79 | 84.2% | 67.2% | 2.02 | 1.82 | 80.7% | 67.2% | 2.09 | 2.01 | 86.0% | 77.6% |
| | BSAD | 138 | 110 | 1.99 | 1.85 | 73.9% | 70.9% | 1.87 | 1.75 | 70.3% | 65.5% | 2.06 | 1.84 | 80.4% | 71.8% |
| | BUS | 195 | 177 | 2.03 | 1.83 | 76.9% | 69.5% | 1.91 | 1.77 | 73.3% | 66.1% | 2.07 | 1.90 | 82.0% | 74.0% |
| Hlth.Sci.and Ed. | CMDS | 28 | 36 | 2.21 | 1.89 | 78.6% | 75.0% | 2.29 | 1.78 | 82.1% | 69.4% | 2.32 | 1.94 | 89.3% | 77.8% |
| | ES | 48 | 63 | 1.98 | 1.98 | 70.8% | 74.6% | 1.90 | 1.95 | 75.0% | 73.0% | 2.19 | 2.00 | 95.8% | 81.0% |
| | HLTH | 30 | 45 | 1.97 | 1.76 | 70.0% | 60.0% | 2.17 | 1.71 | 93.3% | 62.2% | 2.13 | 1.78 | 86.7% | 73.3% |
| | NU | 38 | 34 | 2.16 | 1.97 | 89.5% | 82.4% | 2.03 | 1.79 | 86.8% | 67.6% | 2.00 | 1.71 | 76.3% | 73.5% |
| | HSE | 144 | 178 | 2.07 | 1.90 | 77.1% | 72.5% | 2.07 | 1.83 | 83.3% | 68.5% | 2.15 | 1.88 | 87.5% | 77.0% |
| Social and Cultural Studies | COMM | 53 | 75 | 2.19 | 2.16 | 86.8% | 81.3% | 2.04 | 2.01 | 81.1% | 72.0% | 2.21 | 2.05 | 86.8% | 77.3% |
| | ECON | 13 | 11 | 2.23 | 2.27 | 76.9% | 81.8% | 2.31 | 2.36 | 84.6% | 90.9% | 2.46 | 2.27 | 92.3% | 81.8% |
| | HIST | 60 | 47 | 2.07 | 1.96 | 78.3% | 72.3% | 2.15 | 2.02 | 85.0% | 78.7% | 2.17 | 2.09 | 81.7% | 83.0% |
| | JUST | 37 | 37 | 2.19 | 2.11 | 81.1% | 78.4% | 2.11 | 2.03 | 75.7% | 75.7% | 2.35 | 2.03 | 86.5% | 75.7% |
| | PHRE | 16 | 6 | 2.25 | 2.17 | 87.5% | 83.3% | 2.19 | 2.17 | 87.5% | 83.3% | 2.44 | 2.17 | 100% | 100% |
| | POL | 38 | 46 | 2.42 | 2.39 | 92.1% | 91.3% | 2.26 | 2.26 | 92.1% | 91.3% | 2.50 | 2.26 | 89.5% | 87.0% |
| | SOAN | 16 | 26 | 1.88 | 2.00 | 75.0% | 73.1% | 2.13 | 1.92 | 87.5% | 73.1% | 2.13 | 2.04 | 75.0% | 76.9% |
| | SCS | 233 | 248 | 2.18 | 2.15 | 83.3% | 80.2% | 2.15 | 2.07 | 84.1% | 78.6% | 2.29 | 2.10 | 86.3% | 80.6% |
| Sciences and Mathematics | AGSC | 23 | 15 | 1.91 | 2.00 | 78.3% | 73.3% | 1.87 | 2.00 | 73.9% | 73.3% | 2.13 | 2.07 | 82.6% | 73.3% |
| | BIOL | 78 | 112 | 2.08 | 2.09 | 87.2% | 80.4% | 2.14 | 2.11 | 83.3% | 82.1% | 2.27 | 2.18 | 85.9% | 88.4% |
| | CHEM | 26 | 31 | 1.73 | 2.10 | 61.5% | 74.2% | 1.88 | 2.00 | 73.1% | 87.1% | 2.04 | 2.10 | 80.8% | 90.3% |
| | CS | 14 | 17 | 1.86 | 1.88 | 78.6% | 76.5% | 2.00 | 1.76 | 85.7% | 64.7% | 2.14 | 2.00 | 78.6% | 70.6% |
| | MATH | 26 | 36 | 1.88 | 1.78 | 69.2% | 61.1% | 1.81 | 1.81 | 65.4% | 72.2% | 1.96 | 1.92 | 76.9% | 77.8% |
| | PHYS | 8 | 9 | 2.38 | 2.00 | 100% | 77.8% | 2.38 | 1.89 | 87.5% | 66.7% | 2.38 | 2.00 | 100% | 77.8% |
| | PSYC | 109 | 105 | 1.96 | 1.90 | 76.1% | 70.5% | 1.97 | 1.85 | 75.0% | 69.5% | 2.15 | 2.05 | 86.2% | 85.7% |
| | SAM | 284 | 325 | 1.97 | 1.98 | 78.2% | 73.8% | 2.00 | 1.95 | 77.0% | 75.7% | 2.16 | 2.08 | 84.5% | 84.6% |
| IDSM | 8 | 7 | 2.38 | 2.00 | 100% | 71.4% | 2.63 | 2.43 | 100% | 100% | 2.75 | 2.43 | 100% | 100% | |
| All | 1080 | 1175 | 2.07 | 1.99 | 80.0% | 75.6% | 2.06 | 1.97 | 80.9% | 75.2% | 2.21 | 2.04 | 86.3% | 80.7% | |

As has been found in the past, analytical writing scores do correlate strongly with each other and with the critical thinking score. All correlations are significantly positive with a p-value smaller than 0.001.

| | Thinking | Organization | Style |
|---------------------|----------|--------------|-------|
| Organization | 0.657 | | |
| Style | 0.579 | 0.686 | |
| Mechanics | 0.500 | 0.577 | 0.725 |

Pearson Correlations between Analytical Writing and Critical Thinking Scores

When scores are broken down into groups, similar patterns emerge. The charts above detail group scores for each category. For organization, students whose majors fall in the schools of Arts and Letters, Social and Cultural Studies significantly outperform those in the schools of Science and Mathematics, Business, and Health Science and Education. In style and mechanics, the school of school of Science and Mathematics was in the higher group.

The submission numbers by prefix are the same as for Critical Thinking, of course, since the same submission was used for both purposes. For each prefix, the mean and % of submissions demonstrating competence on each of the three areas was given. Prefixes with fewer than five submissions over the past two years were omitted from the chart, but are available upon request.

| Prefix | Count | | Organization | | | | Style | | | | Mechanics | | | |
|--------|-------|------|--------------|------|--------|------|-------|------|--------|------|-----------|------|--------|------|
| | | | Mean | | % Comp | | Mean | | % Comp | | Mean | | % Comp | |
| | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 |
| ENG | 208 | 227 | 2.03 | 1.83 | 80% | 68% | 2.08 | 1.92 | 82% | 74% | 2.24 | 1.99 | 88% | 79% |
| JINS | 171 | 149 | 2.06 | 1.93 | 78% | 75% | 2.11 | 1.86 | 84% | 72% | 2.24 | 1.97 | 91% | 81% |
| PHRE | 117 | 85 | 1.98 | 1.82 | 79% | 68% | 2.00 | 1.92 | 75% | 71% | 2.18 | 2.05 | 81% | 82% |
| COMM | 45 | 61 | 2.04 | 2.11 | 80% | 82% | 1.91 | 1.95 | 76% | 72% | 2.04 | 2.05 | 80% | 82% |
| POL | 38 | 56 | 2.32 | 2.34 | 89% | 89% | 2.21 | 2.25 | 92% | 89% | 2.47 | 2.18 | 92% | 84% |
| BIOL | 27 | 46 | 1.96 | 2.20 | 78% | 78% | 2.00 | 2.17 | 74% | 85% | 2.22 | 2.22 | 81% | 89% |
| HIST | 64 | 44 | 2.20 | 2.07 | 86% | 80% | 2.22 | 2.02 | 91% | 80% | 2.19 | 2.09 | 84% | 82% |
| BSAD | 72 | 43 | 1.92 | 1.95 | 68% | 77% | 1.86 | 1.79 | 71% | 70% | 2.00 | 1.93 | 75% | 81% |
| JUST | 32 | 40 | 2.34 | 2.15 | 88% | 80% | 2.19 | 2.08 | 81% | 75% | 2.38 | 2.08 | 88% | 75% |
| SOAN | 15 | 34 | 2.00 | 2.09 | 87% | 76% | 2.13 | 2.00 | 87% | 79% | 2.33 | 2.06 | 87% | 79% |
| ED | 28 | 31 | 1.82 | 1.87 | 64% | 74% | 1.86 | 2.03 | 64% | 77% | 2.04 | 2.16 | 82% | 87% |
| ECON | 26 | 25 | 2.19 | 2.32 | 81% | 92% | 2.00 | 2.16 | 73% | 88% | 2.42 | 2.16 | 96% | 92% |
| PSYC | 27 | 24 | 2.19 | 2.25 | 85% | 83% | 2.19 | 2.17 | 85% | 75% | 2.33 | 2.17 | 93% | 88% |
| NU | 28 | 22 | 2.19 | 1.95 | 90% | 82% | 1.97 | 1.82 | 84% | 68% | 1.90 | 1.77 | 74% | 77% |
| ART | 18 | 22 | 2.39 | 2.23 | 89% | 95% | 2.33 | 2.32 | 94% | 95% | 2.39 | 2.45 | 89% | 95% |
| ES | 16 | 22 | 2.25 | 2.09 | 88% | 77% | 2.13 | 2.05 | 94% | 77% | 2.38 | 2.14 | 100% | 91% |
| CHEM | 13 | 17 | 2.35 | 2.24 | 94% | 88% | 2.12 | 2.18 | 94% | 94% | 2.18 | 2.24 | 94% | 88% |
| ACCT | 17 | 17 | 1.85 | 2.29 | 69% | 82% | 2.15 | 2.00 | 92% | 82% | 2.31 | 2.24 | 92% | 82% |
| THEA | 4 | 15 | | 2.00 | | 80% | | 1.87 | | 73% | | 2.07 | | 80% |
| HLTH | 8 | 13 | 2.38 | 1.54 | 100% | 46% | 2.25 | 1.54 | 100% | 54% | 2.25 | 1.69 | 100% | 69% |
| MUSI | 12 | 10 | 1.92 | 2.20 | 67% | 80% | 2.00 | 2.20 | 83% | 80% | 2.08 | 2.20 | 92% | 80% |
| SED | 3 | 9 | 2.00 | 2.33 | 87% | 100% | 2.13 | 2.00 | 87% | 89% | 2.33 | 2.22 | 87% | 89% |
| SPAN | 4 | 8 | | 2.38 | | 100% | | 2.38 | | 88% | | 1.63 | | 63% |
| CMD5 | 3 | 7 | | 2.00 | | 86% | | 1.86 | | 71% | | 2.00 | | 86% |
| AGSC | 18 | 6 | 2.00 | 2.00 | 83% | 67% | 1.78 | 1.83 | 61% | 50% | 2.17 | 1.83 | 83% | 50% |
| CS | 2 | 6 | | 1.00 | | 33% | | 0.83 | | 17% | | 0.83 | | 17% |
| RUSS | 6 | 5 | 2.17 | 2.40 | 100% | 100% | 2.17 | 2.60 | 100% | 100% | 2.67 | 2.40 | 83% | 100% |
| ITAL | 1 | 4 | | 2.25 | | 100% | | 2.00 | | 100% | | 2.00 | | 100% |
| NASC | 31 | 4 | | 1.50 | | 50% | | 1.50 | | 50% | | 2.00 | | 100% |
| STAT | 4 | 3 | 2.75 | 2.33 | 100% | 67% | 2.25 | 2.33 | 75% | 100% | 2.50 | 2.67 | 100% | 100% |
| CLAS | 6 | 3 | 2.00 | 1.67 | 83% | 67% | 2.00 | 1.67 | 83% | 67% | 2.17 | 2.00 | 83% | 67% |
| ENVS | 3 | 3 | | 2.00 | | 67% | | 2.33 | | 100% | | 2.67 | | 100% |
| GEOG | 2 | 3 | | 2.00 | | 67% | | 2.67 | | 100% | | 2.67 | | 100% |
| PHYS | 4 | 3 | 2.00 | 1.33 | 75% | 33% | 1.75 | 1.67 | 50% | 67% | 2.00 | 1.33 | 75% | 33% |

Interdisciplinary Thinking

Examples of student work demonstrating 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.

Interdisciplinary Thinking at a Glance

- | | |
|--------------------------------------|----------------------------|
| • Number of submissions read | 1092 |
| • Median score (on a 0-4 scale): | 2 |
| • Mean score (on a 0-4 scale): | 1.78 |
| • Highest scoring “group”: | Arts and Humanities |
| • Most frequent source (course): | JINS 309 |
| • Most frequent source (discipline): | JINS |
| • Trends in recent years: | up slightly |

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

When data are sorted by school, students whose first majors are in the schools of Arts and Letters and Social and Cultural Studies score significantly higher than those of the other schools; Science and Mathematics students score significantly higher than those in the school of Business. No other differences are statistically significant. Students in the school of business of a median score of 1, while students of all other schools have a median of 2.

Given that most of the submissions are from JINS courses, it is not surprising that most of the submissions, over 60%, came from the Junior year. Those who submitted Freshman artifacts were not as successful as those who submitted later works.

| | % | Mean | % Comp |
|-----------|-------|------|--------|
| Freshman | 3.6% | 1.10 | 34.1% |
| Sophomore | 14.1% | 1.84 | 67.1% |
| Junior | 60.1% | 1.88 | 65.6% |
| Senior | 21.9% | 1.64 | 50.8% |
| | | 1.79 | 61.4% |

Similarly unsurprising was that a majority of submissions were from LSP courses, and those submissions were the most successful.

| | % | Mean | % Comp |
|----------|-------|------|--------|
| Elective | 8.0% | 1.66 | 53.3% |
| LSP | 65.3% | 1.89 | 65.7% |
| Major | 20.9% | 1.49 | 51.5% |
| Minor | 5.5% | 1.94 | 60.3% |
| | | 1.78 | 61.1% |

Nineteen percent of submissions dealt in some way with gender issues, 27% with international issues, 20% with race, and 22% dealt with class.

Interdisciplinary Thinking Scores by First Major

| | Maj. | Count | | Mean Score | | % Competent | |
|-----------------------------|------------|-------------|-------------|-------------|-------------|--------------|--------------|
| | | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 |
| Arts and Letters | ART | 34 | 47 | 1.79 | 2.02 | 55.2% | 72.3% |
| | CML | 21 | 23 | 2.24 | 1.83 | 76.2% | 60.9% |
| | ENG | 113 | 105 | 1.96 | 2.04 | 61.9% | 71.4% |
| | LING | 9 | 8 | 2.44 | 2.63 | 66.7% | 87.5% |
| | MUS | 37 | 42 | 1.84 | 1.88 | 62.2% | 61.9% |
| | THEA | 7 | 18 | 1.14 | 2.00 | 26.8% | 77.8% |
| | AAL | 221 | 243 | 1.93 | 2.00 | 61.4% | 70.0% |
| Business | ACCT | 58 | 67 | 1.57 | 1.55 | 53.4% | 52.2% |
| | BSAD | 133 | 113 | 1.46 | 1.50 | 45.9% | 46.9% |
| | BUS | 191 | 180 | 1.49 | 1.52 | 48.2% | 48.9% |
| Hlth. Sci. and Ed. | CMDS | 28 | 36 | 1.61 | 1.50 | 53.6% | 47.2% |
| | ES | 47 | 64 | 1.53 | 1.59 | 46.8% | 54.7% |
| | HLTH | 31 | 45 | 1.74 | 1.76 | 67.7% | 60.0% |
| | NU | 38 | 34 | 1.45 | 1.38 | 42.1% | 44.1% |
| | HSE | 144 | 179 | 1.57 | 1.58 | 51.4% | 52.5% |
| Social and Cultural Studies | COMM | 53 | 75 | 1.60 | 1.93 | 52.8% | 70.7% |
| | ECON | 13 | 11 | 1.92 | 1.55 | 69.2% | 54.5% |
| | HIST | 60 | 46 | 1.80 | 2.13 | 60.0% | 76.1% |
| | JUST | 36 | 38 | 1.56 | 1.42 | 50.0% | 50.0% |
| | PHRE | 16 | 6 | 2.00 | 2.67 | 68.8% | 83.3% |
| | POL | 38 | 45 | 1.97 | 2.16 | 63.2% | 75.6% |
| | SOAN | 16 | 27 | 1.94 | 2.11 | 75.0% | 81.5% |
| | SCS | 232 | 248 | 1.78 | 1.95 | 59.5% | 70.1% |
| | | | | | | | |
| Sciences and Mathematics | AGSC | 22 | 17 | 1.27 | 1.88 | 36.4% | 64.7% |
| | BIOL | 77 | 112 | 1.79 | 1.84 | 54.5% | 61.6% |
| | CHEM | 27 | 31 | 1.70 | 1.65 | 55.6% | 58.1% |
| | CS | 13 | 17 | 1.23 | 1.41 | 46.2% | 52.9% |
| | MATH | 24 | 37 | 1.54 | 1.81 | 55.6% | 62.2% |
| | PHYS | 8 | 9 | 1.75 | 2.00 | 75.0% | 66.7% |
| | PSYC | 109 | 105 | 1.48 | 1.67 | 45.0% | 54.3% |
| | SAM | 280 | 328 | 1.57 | 1.75 | 49.8% | 58.8% |
| | | | | | | | |
| | | | | | | | |
| | IDSM | 8 | 8 | 3.13 | 1.88 | 100% | 75.0% |
| | All | 1076 | 1186 | 1.69 | 1.78 | 54.6% | 55.7% |

IDS Scores by Course Prefix

| Prefix | Count | | Mean Score | | % Competent | |
|--------|-------|------|------------|------|-------------|------|
| | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 |
| JINS | 645 | 553 | 1.91 | 2.03 | 64% | 72% |
| ENG | 53 | 40 | 1.19 | 1.39 | 28% | 44% |
| PHRE | 33 | 35 | 1.21 | 1.76 | 36% | 54% |
| COMM | 27 | 30 | 1.30 | 1.88 | 37% | 72% |
| BSAD | 29 | 26 | 1.00 | 1.26 | 31% | 44% |
| BIOL | 10 | 21 | 1.10 | 1.33 | 30% | 48% |
| HIST | 19 | 19 | 1.32 | 1.83 | 37% | 65% |
| POL | 19 | 17 | 1.58 | 1.72 | 47% | 56% |
| NU | 9 | 14 | 0.44 | 1.19 | 0% | 31% |
| ART | 11 | 13 | 2.09 | 1.88 | 64% | 63% |
| ES | 9 | 13 | 0.89 | 1.44 | 22% | 50% |
| SOAN | 7 | 13 | 1.86 | 2.00 | 71% | 79% |
| ACCT | 3 | 12 | 0.66 | 0.83 | 0% | 17% |
| PSYC | 17 | 12 | 1.35 | 1.06 | 35% | 29% |
| SPAN | 16 | 12 | 1.25 | 2.07 | 31% | 67% |
| MUSI | 19 | 11 | 1.47 | 1.12 | 53% | 35% |
| ECON | 18 | 10 | 1.06 | 1.64 | 22% | 36% |
| ED | 9 | 10 | 1.33 | 1.08 | 33% | 23% |
| JUST | 15 | 8 | 1.60 | 1.36 | 60% | 55% |
| THEA | 6 | 7 | 1.17 | 2.00 | 33% | 71% |
| AGSC | 10 | 6 | 1.60 | 1.63 | 50% | 63% |
| CS | 2 | 6 | 2.00 | 1.83 | 50% | 67% |
| GEOG | 2 | 6 | 2.50 | 2.5 | 100% | 83% |
| HLTH | 3 | 5 | 1.00 | 0.63 | 33% | 0% |
| IDSM | 7 | 5 | 3.00 | 2.17 | 100% | 67% |
| STAT | 6 | 4 | 0.50 | 1.00 | 17% | 17% |
| ENVS | 5 | 3 | 1.60 | 1.25 | 40% | 50% |
| EUR | 4 | 3 | 2.25 | 2.00 | 75% | 67% |
| MATH | 11 | 5 | 1.27 | 0.80 | 53% | 20% |
| NASC | 1 | 4 | 3.00 | 1.25 | 100% | 25% |

This year, JINS courses produced 54% of the submissions, slightly less than the 60-64% of the last few years. The remainder of the submissions were widely scattered across disciplines. Disciplines with fewer than four submissions in each of the last years are omitted from the chart at the left.

It is also notable that JINS courses were quite successful at achieving a successful score in interdisciplinary thinking. While several other disciplines and courses were also notably successful (COMM, HIST, SOAN, SPAN, THEA), the JINS course seems to be fulfilling its purpose of giving students interdisciplinary experiences.

Beginning next year, students will be asked to submit an artifact and reflection from their JINS class regardless of whether they believe this is their best interdisciplinary work. We hope that this will allow more students to have the best work submitted, and will allow for broad assessment of the JINS program.

Last year's *Assessment Almanac* noted that inter-reader reliability for interdisciplinary thinking was lower than desired and implied that corrections to the process would be made. Scott Alberts, the new director, worked with the portfolio committee to develop and implement some changes to the training routing for readers.

A new activity during the reading session focused on using theses and controlling ideas as a way of preparing to examine the rest of the submission. These theses were discussed among the group, with members discussing what one would expect to see in a paper with that thesis that hoped to be successful at demonstrating interdisciplinary thinking.

To measure the effectiveness of the new training, 890 submissions (83% of all IDS submissions) were read and scored by two readers. Mean scores overall stayed the same, but interreader reliability increased substantially, with almost 94% of second readers assigning either a score within one rating of the first scorer. Only four submissions differed by 3 levels (for instance, a first reader score assigning a score of zero while the other scored the submission as a three). No double-read submissions were off by four.

| 2 nd Reader Difference | % |
|-----------------------------------|-------|
| Same Score | 53.6% |
| Off by +/-1 | 40.2% |
| Off by +/-2 | 5.7% |
| Off by +/-3 | 0.4% |

A Pearson's correlation between the two readers was found to be 0.71, a very significant relationship, up from correlations below 0.5 for the past few years. In fact, this score was higher than any inter-rater correlation in recent history.

The increase in double-read submissions also led to the discovery of seven new papers that earn the distinction of being "double-fours," interdisciplinary papers that have been read by two readers and found to be excellent. Two of these papers were from non-JINS submissions, making them particularly distinctive.

Historical Analysis

The following prompt elicited 1083 submissions for Historical Analysis:

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.

| Historical Analysis at a Glance | |
|---------------------------------------|------------------------------------|
| • Number of submissions: | 1051 |
| • Median score (on a 0-3 scale): | 2.0 |
| • Mean score (on a 0-3 scale): | 1.56 |
| • Highest scoring “school”: | Social and Cultural Studies |
| • Most frequent source (course): | HIST 105 |
| • Most frequent Source: (discipline): | History |
| • Trend | Stable Scores |

These submissions were evaluated with the descriptors below.

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

| HISTORICAL SOURCES | |
|---------------------------------------|----|
| Top Ten Courses | |
| HIST 105: U.S. History II | 67 |
| HIST 104: U.S. History I | 67 |
| HIST 131: World Civ. before 500 AD | 27 |
| HIST 133: World Civ. since 1700 | 15 |
| PHRE185: Exploring Religions | 15 |
| ENG 190: Writing as Critical Thinking | 12 |
| HIST 343: Ancient Rome | 11 |
| JINS 316: Portrayals of Women | 11 |
| JINS 369: Why We Fight | 11 |
| ART 222: Caves to Cathedrals | 14 |

Historical Analysis Scores by First Major

| Year | Count | | Mean Score | | % Competent | | |
|-----------------------------|------------|-------------|-------------|-------------|-------------|------|-----|
| | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 | |
| Arts and Letters | ART | 34 | 45 | 1.79 | 1.78 | 71% | 64% |
| | CML | 21 | 22 | 2.19 | 1.68 | 81% | 64% |
| | ENG | 112 | 96 | 1.62 | 1.77 | 56% | 60% |
| | LING | 9 | 7 | 1.67 | 1.86 | 56% | 71% |
| | MUS | 38 | 39 | 1.55 | 1.74 | 55% | 69% |
| | THEA | 7 | 16 | 1.71 | 1.69 | 57% | 69% |
| | AAL | 221 | 225 | 1.69 | 1.76 | 61% | 64% |
| Business | ACCT | 58 | 60 | 1.34 | 1.42 | 45% | 45% |
| | BSAD | 138 | 107 | 1.49 | 1.30 | 52% | 39% |
| | BUS | 196 | 167 | 1.45 | 1.34 | 50% | 41% |
| Hth. Sci. and Ed. | CMDS | 28 | 35 | 1.25 | 1.26 | 43% | 40% |
| | ES | 45 | 42 | 1.16 | 1.10 | 33% | 33% |
| | HLTH | 31 | 27 | 1.29 | 1.19 | 39% | 37% |
| | NU | 37 | 34 | 1.24 | 1.12 | 43% | 41% |
| | HSE | 141 | 138 | 1.23 | 1.16 | 39% | 38% |
| Social and Cultural Studies | COMM | 52 | 74 | 1.63 | 1.66 | 52% | 58% |
| | ECON | 13 | 10 | 1.62 | 1.50 | 54% | 50% |
| | HIST | 60 | 42 | 2.53 | 2.57 | 92% | 90% |
| | JUST | 35 | 35 | 1.40 | 1.43 | 43% | 49% |
| | PHRE | 16 | 6 | 1.81 | 1.67 | 75% | 67% |
| | POL | 38 | 45 | 2.16 | 2.13 | 79% | 78% |
| | SOAN | 17 | 27 | 1.88 | 1.70 | 77% | 63% |
| | SCS | 231 | 239 | 1.95 | 1.87 | 69% | 67% |
| Sciences and Mathematics | AGSC | 23 | 0 | 1.22 | | 44% | 0% |
| | BIOL | 79 | 106 | 1.46 | 1.67 | 52% | 58% |
| | CHEM | 27 | 13 | 1.00 | 0.92 | 30% | 31% |
| | CS | 14 | 15 | 1.29 | 1.33 | 43% | 40% |
| | MATH | 25 | 33 | 1.52 | 1.27 | 48% | 36% |
| | PHYS | 8 | 9 | 2.00 | 1.22 | 75% | 22% |
| | PSYC | 109 | 100 | 1.54 | 1.37 | 52% | 46% |
| | SAM | 285 | 276 | 1.44 | 1.45 | 49% | 48% |
| | IDSM | 8 | 8 | 2.50 | 1.75 | 88% | 75% |
| | All | 1082 | 1053 | 1.58 | 1.56 | 55% | 53% |

Submissions in this category were more widely distributed across year than they were for Critical Thinking or Interdisciplinary: 25% of the Historical submissions were produced in the senior year, 41% in the junior year, 19% in the sophomore year and 16% in the first year.

Nearly half of the submitted works were produced in LSP classes, 32% were assignments in major courses, 12% were from elective courses and 9% were produced in classes taken to fulfill minor requirements. 32% dealt with international perspectives, 29% with race, 20% with issues of gender, and 30% with class issues. Again, these are all higher than previous years, we believe due to the ability of students to self-select the categorizations.

Due to an error, no Agricultural Science majors were measured on this category. We apologize and will present this data to that department at a later date and include it with next year's results.

Examining the results by major yields few surprises. History majors were, by far, the best at the category. As schools, Social and Cultural Studies and Arts and Letters were significantly higher than the other schools. Science and Mathematics students were significantly higher than students in the school of Health Sciences and Education.

As expected, students frequently chose works from history and JINS courses for this category. Thirty percent of the items came from history courses, and. JINS courses accounted for over 11% of the submissions, 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 13% of the total number.

| Prefix | Count | | Mean Score | | % Competent | |
|--------|-------|------|------------|------|-------------|------|
| | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 |
| HIST | 369 | 326 | 1.87 | 1.83 | 67% | 64% |
| JINS | 159 | 122 | 1.57 | 1.74 | 56% | 62% |
| ENG | 79 | 76 | 1.18 | 1.34 | 38% | 43% |
| ART | 41 | 48 | 1.85 | 1.73 | 68% | 60% |
| PHRE | 61 | 46 | 1.26 | 0.87 | 43% | 26% |
| MUSI | 32 | 39 | 1.41 | 1.51 | 44% | 54% |
| POL | 31 | 34 | 1.84 | 2.09 | 58% | 76% |
| COMM | 28 | 31 | 1.39 | 1.52 | 46% | 48% |
| SOAN | 13 | 25 | 1.54 | 1.28 | 54% | 48% |
| BSAD | 27 | 21 | 0.96 | 0.9 | 30% | 24% |
| ECON | 26 | 21 | 1.73 | 1.62 | 58% | 57% |
| PSYC | 13 | 15 | 0.46 | 0.67 | 0% | 7% |
| BIOL | 11 | 14 | 1.18 | 1.64 | 45% | 57% |
| ED | 9 | 13 | 1.22 | 1.15 | 22% | 31% |
| JUST | 10 | 11 | 1.30 | 1.09 | 30% | 27% |
| ACCT | 8 | 10 | 1.13 | 1.00 | 25% | 20% |
| ES | 11 | 10 | 0.73 | 0.9 | 9% | 20% |
| NASC | 11 | 10 | 1.82 | 2.2 | 64% | 90% |
| NU | 12 | 10 | 0.50 | 0.9 | 17% | 20% |
| THEA | 9 | 8 | 1.78 | 2 | 78% | 88% |
| MATH | 5 | 7 | 1.60 | 1.14 | 60% | 14% |
| SPAN | 12 | 7 | 1.58 | 2.14 | 58% | 86% |
| HLTH | 4 | 6 | 1.25 | 1.17 | 25% | 33% |
| MS | 5 | 5 | 1.60 | 0.8 | 40% | 20% |
| CLAS | 4 | 3 | 1.50 | 1.67 | 25% | 33% |
| CS | 5 | 2 | 1.60 | 1.5 | 80% | 50% |
| AGSC | 6 | 1 | 1.17 | 3 | 17% | 100% |

Scientific Reasoning

After this year, the Scientific Reasoning prompt will rotate out of the portfolio and will not be collected in the near future. This prompt is one of the original prompts, and has not been substantially revisited in some time. It is hoped that a group of faculty will work to examine outcome statements, assessment tools, and course content to revive this prompt at some point in the future.

Examples of scientific work 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.

Readers evaluated 513 submissions, roughly half of those submitted. 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, compiled by a group of faculty from the natural science and professional disciplines. This set of descriptors is below.

SOME DESCRIPTORS OF COMPETENCE IN SCIENTIFIC REASONING³ 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

Scientific Reasoning at a Glance

- | | |
|---------------------------------------|---------------------------|
| • Number of submissions read: | 513 |
| • Fraction of submissions read: | about half |
| • Median score | 1.0 |
| • Mean score (on a 0-3 scale): | 1.43 |
| • Highest scoring “school”: | Science and Math |
| • Most frequent source (course): | BIOL 100 |
| • Most frequent Source: (discipline): | Biology |
| • Trends: | Slight improvement |

As in past years, the most common finding was “no evidence”. This is the tenth consecutive year that submissions scored a zero outnumbered any other category. Some of these works showed knowledge of facts, but no reasoning, and thus scored zero.

As might be expected, Science & Math students score notably better than other majors. Submissions from Science & Mathematics majors had a median score of two. Students in Arts and Letters had a median score of zero, while all others had a median score of one.

By year, 33% of the submissions came from the senior year; 31% came from the junior year; 20% came from the sophomore year; and 15% were generated by first-year students. 47% of submissions were generated by students satisfying requirements of their majors, 36% were from LSP courses 6% were from minor courses and electives. Submissions from majors were significantly higher than those from other sources, likely reflecting that majors who require scientific reasoning courses show more success in this prompt.

Scientific Scores by First Major

| Prefix | Count | | Mean Score | | % Competent | |
|--------|-------|------|------------|------|-------------|-------|
| | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 |
| BIOL | 246 | 96 | 1.38 | 1.61 | 45.5% | 61.5% |
| PSYC | 115 | 38 | 1.34 | 1.29 | 42.6% | 44.7% |
| JINS | 79 | 24 | 0.38 | 0.42 | 8.9% | 12.5% |
| AGSC | 69 | 23 | 1.43 | 1.57 | 50.7% | 60.9% |
| PHYS | 48 | 23 | 1.02 | 0.96 | 25.0% | 30.4% |
| CHEM | 70 | 22 | 1.34 | 1.32 | 47.1% | 40.9% |
| ENG | 30 | 21 | 0.93 | 1.1 | 23.3% | 38.1% |
| POLI | 37 | 21 | 1.95 | 2 | 70.3% | 71.4% |
| SOAN | 23 | 16 | 1.39 | 2.19 | 47.8% | 68.8% |
| BSAD | 58 | 15 | 1.16 | 1.47 | 36.2% | 46.7% |
| ES | 36 | 13 | 1.92 | 1.77 | 66.7% | 53.8% |
| STAT | 16 | 12 | 1.56 | 1.92 | 56.3% | 75.0% |
| CMDS | 17 | 9 | 1.59 | 1.89 | 58.8% | 55.6% |
| COMM | 27 | 9 | 0.93 | 1.67 | 29.6% | 66.7% |
| NU | 25 | 7 | 0.68 | 1.14 | 16.0% | 42.9% |
| ECON | 17 | 5 | 0.82 | 1.80 | 23.5% | 60.0% |
| ACCT | 5 | 4 | 0.60 | 0.25 | 0.0% | 0.0% |
| ART | 7 | 4 | 0.00 | 0.75 | 0.0% | 25.0% |
| JUST | 16 | 4 | 1.06 | 1 | 37.5% | 25.0% |
| PHRE | 19 | 4 | 0.21 | 0 | 0.0% | 0.0% |
| HLTH | 6 | 3 | 1.50 | 1 | 50.0% | 33.3% |
| MUSI | 5 | 3 | 0.00 | 0 | 0.0% | 0.0% |
| CS | 5 | 2 | 0.00 | 1 | 0.0% | 50.0% |
| ED | 9 | 2 | 0.33 | 1 | 0.0% | 50.0% |
| MATH | 8 | 2 | 0.63 | 0.5 | 25.0% | 0.0% |

| Year | Count | | Mean Score | | % Competent | |
|------------|-------------|------------|-------------|-------------|--------------|--------------|
| | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 |
| ART | 34 | 19 | 0.64 | 0.68 | 54.2% | 26.3% |
| CML | 17 | 9 | 0.82 | 0.44 | 17.6% | 22.2% |
| ENG | 112 | 52 | 0.86 | 1.08 | 23.2% | 36.5% |
| LING | 8 | 1 | 1.13 | 2.00 | 37.5% | 100.0% |
| MUS | 36 | 22 | 0.75 | 0.73 | 19.4% | 22.7% |
| THEA | 7 | 7 | 1.14 | 0.86 | 28.6% | 28.6% |
| AAL | 214 | 110 | 0.82 | 0.88 | 27.8% | 30.9% |
| ACCT | 58 | 30 | 0.81 | 1.03 | 24.1% | 40.0% |
| BSAD | 136 | 43 | 1.03 | 0.95 | 29.4% | 34.9% |
| BUS | 194 | 73 | 0.96 | 0.99 | 27.8% | 37.0% |
| CMDS | 28 | 18 | 1.43 | 1.44 | 53.6% | 44.4% |
| ES | 48 | 30 | 1.75 | 1.97 | 64.6% | 70.0% |
| HLTH | 30 | 17 | 1.63 | 1.82 | 56.7% | 58.8% |
| NU | 39 | 15 | 0.92 | 1.00 | 25.6% | 33.3% |
| HSE | 145 | 80 | 1.44 | 1.64 | 50.4% | 55.0% |
| COMM | 52 | 27 | 0.96 | 0.89 | 28.8% | 33.3% |
| ECON | 13 | 3 | 1.63 | 2.00 | 53.8% | 66.7% |
| HIST | 57 | 24 | 0.74 | 1.17 | 19.3% | 41.7% |
| JUST | 37 | 14 | 1.05 | 1.36 | 37.8% | 42.9% |
| PHRE | 16 | 4 | 0.88 | 0.50 | 31.3% | 0.0% |
| POL | 38 | 21 | 2.03 | 2.29 | 71.1% | 81.0% |
| SOAN | 17 | 7 | 1.29 | 2.29 | 47.1% | 71.4% |
| SCS | 230 | 100 | 1.15 | 1.43 | 37.8% | 49.0% |
| AGSC | 23 | 12 | 1.70 | 1.75 | 60.9% | 58.3% |
| BIOL | 78 | 41 | 1.60 | 2.20 | 56.4% | 80.5% |
| CHEM | 27 | 17 | 1.70 | 2.82 | 63.0% | 100.0% |
| CS | 15 | 8 | 0.80 | 1.38 | 20.0% | 50.0% |
| MATH | 24 | 22 | 1.04 | 1.45 | 33.3% | 54.5% |
| PHYS | 8 | 2 | 1.50 | 3.00 | 50.0% | 100.0% |
| PSYC | 109 | 45 | 1.56 | 1.73 | 51.4% | 62.2% |
| SAM | 284 | 147 | 1.51 | 1.95 | 51.4% | 70.1% |
| IDSM | 8 | 3 | 1.38 | 1.33 | 37.5% | 66.7% |
| All | 1075 | 513 | 1.19 | 1.43 | 39.3% | 50.5% |

Aesthetic Analysis

After this year, the Scientific Reasoning prompt will rotate out of the portfolio and will not be collected in the near future.

The following prompt for Aesthetic Analysis has been used since spring 2002:

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.

Aesthetic Analysis at a Glance

| | |
|---------------------------------------|-------------------------|
| • Number of submissions read: | 480 |
| • Fraction of submissions read: | about 40% |
| • Median score (on a 0-3 scale): | 2 |
| • Mean score (on a 0-3 scale): | 1.5 |
| • Highest scoring "group": | Arts and Letters |
| • Most frequent source (course): | MUSI 204 |
| • Most frequent Source: (discipline): | ENG |
| • Trend | Stable scores |

The following set of descriptors was created by relevant faculty members during the course of readings in 2004, and have been used since that time.

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

The 2009 median score for Aesthetic submissions was two, the same as last year, continuing an improving trend. The mean also continued an increase over the last several years.

Aesthetic Scores by First Major

| Year | Count | | Mean Score | | % Competent | | |
|-----------------------------|-------------|------------|-------------|-------------|--------------|--------------|--------------|
| | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 | |
| Arts and Letters | ART | 34 | 11 | 2.41 | 2.73 | 88.2% | 90.9% |
| | CML | 21 | 7 | 1.90 | 2.00 | 61.9% | 71.4% |
| | ENG | 112 | 46 | 1.93 | 2.28 | 70.5% | 84.8% |
| | LING | 9 | 5 | 2.33 | 2.00 | 88.9% | 60.0% |
| | MUS | 38 | 18 | 2.32 | 2.00 | 84.2% | 72.2% |
| | THEA | 7 | 7 | 2.00 | 1.71 | 71.4% | 71.4% |
| | AAL | 221 | 94 | 2.09 | 2.20 | 75.5% | 79.8% |
| Business | ACCT | 58 | 32 | 1.31 | 1.34 | 41.4% | 46.9% |
| | BSAD | 135 | 53 | 1.32 | 1.02 | 48.9% | 30.2% |
| | BUS | 193 | 85 | 1.32 | 1.14 | 46.6% | 36.5% |
| Hlth. Sci. and Ed. | CMDS | 28 | 14 | 1.18 | 1.71 | 32.1% | 64.3% |
| | ES | 45 | 33 | 0.84 | 0.82 | 22.2% | 15.2% |
| | HLTH | 30 | 17 | 0.97 | 1.00 | 23.3% | 29.4% |
| | NU | 38 | 16 | 1.18 | 1.00 | 42.1% | 31.3% |
| | HSE | 141 | 80 | 1.03 | 1.05 | 29.8% | 30.0% |
| Social and Cultural Studies | COMM | 51 | 33 | 1.61 | 1.55 | 54.9% | 54.5% |
| | ECON | 13 | 5 | 1.77 | 1.80 | 61.5% | 80.0% |
| | HIST | 59 | 14 | 1.51 | 1.79 | 50.8% | 64.3% |
| | JUST | 37 | 18 | 1.65 | 1.33 | 62.2% | 50.0% |
| | PHRE | 16 | 1 | 1.56 | 2.00 | 62.5% | 100.0% |
| | POL | 38 | 26 | 1.55 | 1.77 | 55.3% | 61.5% |
| | SOAN | 16 | 12 | 1.94 | 1.58 | 68.8% | 50.0% |
| | SCS | 230 | 109 | 1.61 | 1.61 | 57.0% | 57.8% |
| Sciences and Mathematics | AGSC | 23 | 5 | 0.96 | 1.40 | 21.7% | 40.0% |
| | BIOL | 78 | 35 | 1.24 | 1.40 | 42.3% | 45.7% |
| | CHEM | 27 | 13 | 1.15 | 1.31 | 33.3% | 46.2% |
| | CS | 13 | 5 | 1.46 | 0.60 | 61.5% | 0.0% |
| | MATH | 24 | 18 | 1.54 | 1.33 | 50.0% | 44.4% |
| | PHYS | 8 | 0 | 1.00 | 0.00 | 25.0% | |
| | PSYC | 110 | 39 | 1.37 | 1.31 | 46.4% | 43.6% |
| | SAM | 283 | 115 | 1.29 | 1.31 | 42.4% | 42.6% |
| | IDSMS | 8 | 3 | 3.13 | 2.33 | 62.5% | 66.7% |
| All | 1076 | 486 | 1.51 | 1.49 | 51.6% | 50.2% | |

Comparing schools, Arts and Letters did significantly better than all other schools. Social and Cultural studies did significantly better than the remaining schools, and the school of Science and Mathematics was significantly higher than the two remaining schools.

Not surprisingly, submissions were mainly from English, Music, JINS, and Art.

| Prefix | Count | | Mean Score | | % Competent | |
|--------|-------|------|------------|------|-------------|------|
| | 2008 | 2009 | 2008 | 2009 | 2008 | 2009 |
| ENG | 298 | 111 | 1.66 | 1.76 | 60% | 64% |
| MUSI | 166 | 87 | 1.54 | 1.44 | 46% | 0% |
| JINS | 167 | 70 | 1.51 | 1.49 | 57% | 41% |
| ART | 114 | 45 | 1.92 | 1.82 | 68% | 67% |
| THEA | 46 | 28 | 1.80 | 1.79 | 65% | |
| COMM | 32 | 19 | 1.63 | 1.58 | 53% | 53% |
| PHRE | 24 | 11 | 1.13 | 1.27 | 38% | 33% |
| HIST | 21 | 10 | 1.33 | 0.7 | 43% | 30% |
| ES | 8 | 9 | 0.50 | 0.56 | 13% | 11% |
| SPAN | 19 | 7 | 2.05 | 1.43 | 84% | |
| NU | 4 | 6 | 0.00 | 0.33 | 0% | 36% |
| FREN | 6 | 5 | 1.50 | 1.8 | 33% | 60% |
| BSAD | 14 | 4 | 0.07 | 0.25 | 0% | 0% |
| RUSS | 6 | 4 | 2.00 | 2 | 67% | 57% |
| SOAN | 0 | 4 | | 0.75 | | 68% |
| BIOL | 6 | 3 | 0.83 | 0.33 | 33% | 0% |
| CMDS | 5 | 3 | 0.60 | 0.33 | 0% | 0% |
| ITAL | 8 | 3 | 2.25 | 1.67 | 88% | 53% |
| POL | 7 | 3 | 1.43 | 1 | 57% | 75% |
| CHIN | 5 | 2 | 0.60 | 1 | 0% | 0% |
| CLAS | 13 | 2 | 1.62 | 2 | 62% | 100% |
| HLTH | 5 | 2 | 0.20 | 0 | 0% | 67% |
| PSYC | 11 | 2 | 0.00 | 0.5 | 0% | 25% |

The works represented a relatively even distribution across year of production, with a slight favoring of the junior year. Fifty-three percent of the submissions came from LSP courses, while 26% were from major courses. 5% were from minor courses, and 10% from elective courses.

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.

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. The

Most Personally Satisfying - Where did this experience occur? By First Major

| | Year | Count 2009 | Major | | Minor | | LSP | | Elective | | Out-of-Class | |
|-----------------------------|-------------|---------------|--------------|--------------|-------------|-------------|--------------|--------------|-------------|--------------|--------------|--------------|
| | | | Yes | Pct. | Yes | Pct. | Yes | Pct. | Yes | Pct. | Yes | Pct. |
| Arts and Letters | ART | 47 | 16 | 34.0% | 2 | 4.3% | 5 | 10.6% | 4 | 8.5% | 16 | 34.0% |
| | CML | 24 | 9 | 37.5% | 3 | 12.5% | 1 | 4.2% | 1 | 4.2% | 7 | 29.2% |
| | ENG | 105 | 62 | 59.0% | 6 | 5.7% | 6 | 5.7% | 10 | 9.5% | 27 | 25.7% |
| | LING | 8 | 3 | 37.5% | 0 | 0.0% | 0 | 0.0% | 1 | 12.5% | 3 | 37.5% |
| | MUS | 42 | 22 | 52.4% | 1 | 2.4% | 6 | 14.3% | 5 | 11.9% | 7 | 16.7% |
| | THEA | 18 | 6 | 33.3% | 0 | 0.0% | 2 | 11.1% | 1 | 5.6% | 8 | 44.4% |
| | AAL | 244 | 118 | 48.4% | 12 | 4.9% | 20 | 8.2% | 22 | 9.0% | 68 | 27.9% |
| Business | ACCT | 68 | 19 | 27.9% | 0 | 0.0% | 11 | 16.2% | 3 | 4.4% | 19 | 27.9% |
| | BSAD | 113 | 51 | 45.1% | 9 | 8.0% | 19 | 16.8% | 7 | 6.2% | 37 | 32.7% |
| | BUS | 181 | 70 | 38.7% | 9 | 5.0% | 30 | 16.6% | 10 | 5.5% | 56 | 30.9% |
| Hlth. Sci. and Ed. | CMDS | 36 | 16 | 44.4% | 2 | 5.6% | 4 | 11.1% | 2 | 5.6% | 15 | 41.7% |
| | ES | 64 | 28 | 43.8% | 1 | 1.6% | 8 | 12.5% | 0 | 0.0% | 15 | 23.4% |
| | HLTH | 45 | 17 | 37.8% | 0 | 0.0% | 5 | 11.1% | 4 | 8.9% | 19 | 42.2% |
| | NU | 34 | 28 | 82.4% | 0 | 0.0% | 6 | 17.6% | 0 | 0.0% | 17 | 50.0% |
| | HSE | 179 | 89 | 49.7% | 3 | 1.7% | 23 | 12.8% | 6 | 3.4% | 66 | 36.9% |
| Social and Cultural Studies | COMM | 76 | 26 | 34.2% | 6 | 7.9% | 7 | 9.2% | 11 | 14.5% | 24 | 31.6% |
| | ECON | 11 | 6 | 54.5% | 1 | 9.1% | 2 | 18.2% | 0 | 0.0% | 3 | 27.3% |
| | HIST | 47 | 35 | 74.5% | 3 | 6.4% | 4 | 8.5% | 1 | 2.1% | 8 | 17.0% |
| | JUST | 38 | 17 | 44.7% | 4 | 10.5% | 1 | 2.6% | 3 | 7.9% | 18 | 47.4% |
| | PHRE | 6 | 6 | 100.0% | 0 | 0.0% | 0 | 0.0% | 1 | 16.7% | 2 | 33.3% |
| | POL | 47 | 25 | 53.2% | 1 | 2.1% | 5 | 10.6% | 3 | 6.4% | 4 | 8.5% |
| | SOAN | 27 | 7 | 25.9% | 5 | 18.5% | 3 | 11.1% | 2 | 7.4% | 8 | 29.6% |
| | SCS | 252 | 122 | 48.4% | 20 | 7.9% | 22 | 8.7% | 21 | 8.3% | 67 | 26.6% |
| Sciences and Mathematics | AGSC | 17 | 8 | 47.1% | 2 | 11.8% | 8 | 47.1% | 0 | 0.0% | 1 | 5.9% |
| | BIOL | 113 | 24 | 21.2% | 7 | 6.2% | 16 | 14.2% | 23 | 20.4% | 33 | 29.2% |
| | CHEM | 31 | 8 | 25.8% | 0 | 0.0% | 6 | 19.4% | 1 | 3.2% | 8 | 25.8% |
| | CS | 18 | 7 | 38.9% | 2 | 11.1% | 2 | 11.1% | 1 | 5.6% | 6 | 33.3% |
| | MATH | 37 | 2 | 5.4% | 3 | 8.1% | 6 | 16.2% | 5 | 13.5% | 16 | 43.2% |
| | PHYS | 9 | 4 | 44.4% | 0 | 0.0% | 1 | 11.1% | 1 | 11.1% | 3 | 33.3% |
| | PSYC | 105 | 40 | 38.1% | 10 | 9.5% | 13 | 12.4% | 10 | 9.5% | 34 | 32.4% |
| | SAM | 330 | 93 | 28.2% | 24 | 7.3% | 52 | 15.8% | 41 | 12.4% | 101 | 30.6% |
| | IDSMS | 8 | 3 | 37.5% | | 0.0% | 1 | 12.5% | | 0.0% | 4 | 50.0% |
| All | 1194 | 495 | 41.5% | 68 | 5.7% | 148 | 12.4% | 100 | 8.4% | 362 | 30.3% | |

Based on submissions from previous years, faculty readers were asked to examine whether the student found the experience personally satisfying because it 1) represented a personal best, 2) was especially challenging, 3) achieved personal goals 4) modeled working as a professional, 5) achieved significant personal growth, 6) was a collaborative effort, or was 7) enjoyable". If none of these was a good representation of the student's reasoning, a more detailed explanation was given. Of the 1081 submissions, 14, about 2% gave no indication of why they found the experience satisfying.

Most Personally Satisfying - Why did you find it Satisfying? Content Analysis, by First Major

| Year | Count 2009 | Pers. Best | | Pers. Goals | | Pers. Growth | | Challenging | | Collaborative | | Professional | | Enjoyable | | |
|-----------------------------|---------------|------------|------------|-------------|------------|--------------|------------|-------------|------------|---------------|------------|--------------|------------|------------|-----------|------------|
| | | Yes | Pct. | Yes | Pct. | Yes | Pct. | Yes | Pct. | Yes | Pct. | Yes | Pct. | Yes | Pct. | |
| Arts and Letters | ART | 47 | 13 | 28% | 11 | 23% | 18 | 38% | 11 | 23% | 2 | 4% | 14 | 30% | | 0.0% |
| | CML | 24 | 7 | 29% | 5 | 21% | 10 | 42% | 14 | 58% | 2 | 8% | 5 | 21% | 1 | 4% |
| | ENG | 105 | 35 | 33% | 22 | 21% | 34 | 32% | 33 | 31% | 8 | 8% | 25 | 24% | 4 | 4% |
| | LING | 8 | 3 | 38% | 2 | 25% | 1 | 13% | 4 | 50% | | 0% | 1 | 13% | 1 | 13% |
| | MUS | 42 | 15 | 36% | 15 | 36% | 18 | 43% | 17 | 40% | 8 | 19% | 7 | 17% | 1 | 2% |
| | THEA | 18 | 3 | 17% | 3 | 17% | 9 | 50% | 6 | 33% | 1 | 6% | 6 | 33% | | 0% |
| | AAL | 244 | 76 | 31% | 58 | 24% | 90 | 37% | 85 | 35% | 21 | 9% | 58 | 24% | 7 | 3% |
| Business | ACCT | 68 | 19 | 28% | 10 | 15% | 32 | 47% | 21 | 31% | 11 | 16% | 11 | 16% | 3 | 4% |
| | BSAD | 113 | 28 | 25% | 20 | 18% | 40 | 35% | 34 | 30% | 20 | 18% | 24 | 21% | 2 | 2% |
| | BUS | 181 | 47 | 26% | 30 | 17% | 72 | 40% | 55 | 30% | 31 | 17% | 35 | 19% | 5 | 3% |
| Hlth.Sci.and Ed. | CMDS | 36 | 7 | 19% | 5 | 14% | 22 | 61% | 14 | 39% | 7 | 19% | 8 | 22% | | 0% |
| | ES | 64 | 17 | 27% | 16 | 25% | 20 | 31% | 24 | 38% | 10 | 16% | 28 | 44% | 12 | 19% |
| | HLTH | 45 | 12 | 27% | 11 | 24% | 18 | 40% | 19 | 42% | 6 | 13% | 14 | 31% | 7 | 16% |
| | NU | 34 | 4 | 12% | 8 | 24% | 10 | 29% | 7 | 21% | 2 | 6% | 6 | 18% | | 0% |
| | HSE | 179 | 40 | 22% | 40 | 22% | 70 | 39% | 64 | 36% | 25 | 14% | 56 | 31% | 19 | 11% |
| Social and Cultural Studies | COMM | 76 | 22 | 29% | 12 | 16% | 35 | 46% | 26 | 34% | 9 | 12% | 16 | 21% | 1 | 1% |
| | ECON | 11 | 3 | 27% | 4 | 36% | 1 | 9% | 4 | 36% | | 0% | 2 | 18% | | 0% |
| | HIST | 47 | 21 | 45% | 11 | 23% | 14 | 30% | 19 | 40% | | 0% | 4 | 9% | 1 | 2% |
| | JUST | 38 | 6 | 16% | 13 | 34% | 14 | 37% | 15 | 39% | 6 | 16% | 9 | 24% | 1 | 3% |
| | PHRE | 6 | 1 | 17% | 1 | 17% | 4 | 67% | 1 | 17% | | 0% | | 0% | | 0% |
| | POL | 47 | 17 | 36% | 5 | 11% | 16 | 34% | 29 | 62% | 1 | 2% | 7 | 15% | 1 | 2% |
| | SOAN | 27 | 7 | 26% | 6 | 22% | 12 | 44% | 5 | 19% | 3 | 11% | 4 | 15% | | 0% |
| | SCS | 252 | 77 | 31% | 52 | 21% | 96 | 38% | 99 | 39% | 19 | 8% | 42 | 17% | 4 | 2% |
| Sciences and Mathematics | AGSC | 17 | 4 | 24% | 2 | 12% | 4 | 24% | 5 | 29% | 1 | 6% | 4 | 24% | 7 | 41% |
| | BIOL | 113 | 30 | 27% | 30 | 27% | 38 | 34% | 48 | 42% | 9 | 8% | 27 | 24% | 3 | 3% |
| | CHEM | 31 | 12 | 39% | 3 | 10% | 9 | 29% | 15 | 48% | 4 | 13% | 7 | 23% | 6 | 19% |
| | CS | 18 | 6 | 33% | 5 | 28% | 3 | 17% | 9 | 50% | 3 | 17% | | 0% | 1 | 6% |
| | MATH | 37 | 11 | 30% | 4 | 11% | 9 | 24% | 16 | 43% | 5 | 14% | 5 | 14% | | 0% |
| | PHYS | 9 | 4 | 44% | 3 | 33% | 2 | 22% | 4 | 44% | | 0% | 3 | 33% | | 0% |
| | PSYC | 105 | 20 | 19% | 23 | 22% | 44 | 42% | 32 | 30% | 10 | 10% | 27 | 26% | 1 | 1% |
| | SAM | 330 | 87 | 26% | 70 | 21% | 109 | 33% | 129 | 39% | 32 | 10% | 73 | 22% | 18 | 5% |
| IDSM | 8 | | 0% | 1 | 13% | 3 | 38% | 2 | 25% | | 0% | | 0% | | 0% | |
| All | 1194 | 327 | 27% | 250 | 21% | 437 | 37% | 432 | 36% | 128 | 11% | 264 | 22% | 53 | 4% | |

As in the past year, the most frequent settings for these experiences are academic. Other seniors talk about friends, family, religion, 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. The great majority of submitted artifacts were papers, essays, projects, and lab reports generated in classes or through independent research activities. It is possible that selecting academic works for other categories primes students to think of academic works that are personally satisfying, but it is interesting that so many students are most proud of some artifact of their academic experience.

Forty-six percent of the "most satisfying experiences" occurred in the senior year, 30% in the junior year, 12% in the sophomore year, and 6% in the first year. 2% occurred across multiple years.

Reflective Cover Letters

Finally, the portfolio asks students to compose a cover letter addressed to the Liberal Arts and Science Portfolio Project Team. In 2009, 97.5% of seniors submitted a cover letter. This is especially impressive, given that portfolios must be resubmitted if they are missing one of the academic prompts, but portfolios without cover letters are accepted. While the academic works submitted in other categories provide direct insight into student achievement, the cover letters provide a more personal view of student attitudes and opinions. The content of cover letters varies widely, and many students do not talk about all topics. Therefore, when data are reported for this category, any student not reporting an opinion is listed as “no indication.” This is true even when a student gives no indication because they submitted no cover letter.

During the weeks of portfolio assessment and evaluation, the student letters are generally reserved for the last day. 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 praise.

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 track the number of hours devoted to the portfolio assembly, and look for self-reflection in the letters. When students express attitudes about the portfolio, about assessment and about their education, readers note whether those opinions are positive, mixed, or negative. Finally, readers designate parts of letters containing relevant insights, or specific suggestions, to be given a broader audience. Some of these insights and suggestions are shared openly with the other readers as described above, and some are included as quotes here.

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. In 2009, the modal response was three hours, the median was three hours, and the mean was 3.8. The lowest assembly time reported was 15 minutes total and the most was 36 hours. This average includes all responses that could be put into quantitative form – some students did not address the time they spent on this task, and others gave responses like “I spent a little bit each week for the whole semester” Even as such, a small number of students reporting a very large amount of time makes this average a bit misleading, and probably an overestimate. One quarter of students reported spending two hours or less. Fifty percent of students reported spending 3 hours or less. Eighty-five percent reported 8 hours or less. This is an increase over the past few years, perhaps due to more senior seminar and capstone classes requiring work on it each week.

The following quote summarizes the positive process one student found.

Assembling my portfolio was a relaxing and enjoyable experience for me. I have heard horror stories about portfolios. People told me it was very difficult and time consuming. Others told me it was really easy but it was busy work. I found the experience to be simple yet thought provoking. It was like a thoughtful stroll down “memory lane.” As I looked for papers and projects that would fulfill the requirements it gave me a moment to reflect on my time here at Truman and all that I have been able to accomplish. It took me about two hours to complete the portfolio. I kept all of my papers and documents over the years so it took quite a while to sift through those, but again it was enjoyable to do so. As I read the papers and projects starting at my freshman

| <u>Cover Letter at a Glance</u> | |
|--------------------------------------|--------------------------------|
| • Number of submissions: | 1190 |
| • Median time to complete portfolio: | 3 hours |
| • Attitudes to Truman Education | Very Positive |
| • Attitudes to portfolio | Positive |
| • Common themes | Growth in writing skill |
| | Praise to faculty |
| | Varied opinions on LSP |

year and coming to the present, I found that I had really grown here at Truman. The papers were more thoughtful and better constructed. The change in my writing and thinking had been so gradual that it had gone unnoticed but as a read my papers and projects from the last four years it surprises me how much I have really changed. I think the portfolio assessment is perfect in its present form.

Many students used the same work for multiple categories; some explained their decision process. "I submitted works from my time at Truman that fit each category. One of the major projects of my time here was the final research paper for my JINS course, a survey of the history and physics of nuclear weapons. Thus, this submission fits well into the critical thinking, interdisciplinary, and historical analysis categories. "

REFLECTION IN COVER LETTERS

Ideally, the portfolio serves as an opportunity for students to reflect on their experiences at the University. Ideally, all students will present specific insights into their growth or lack of growth. Many students did engage in self-assessment, and this percent has been increasing for several years after a mid-decade trough. As in the past, those without reflection mostly just explained the contents of their portfolio and the process they used in assembling it.

Across majors, the proportion who engages in reflection is fairly consistent. No particular school or area jumps out as particularly reflective, although it is somewhat surprising that many pre-professional majors are reflective.

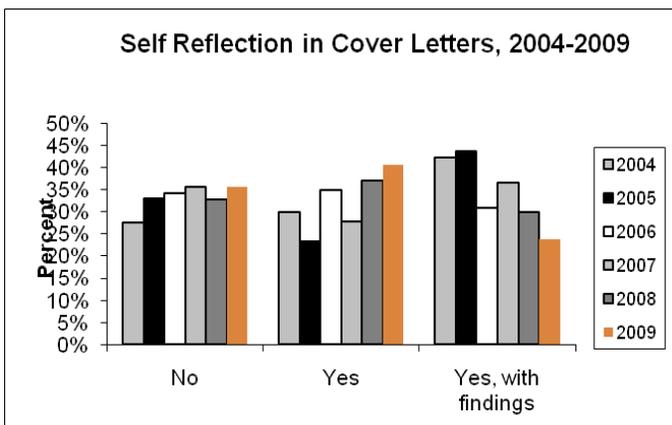
When students do share the results of self-reflection, many comment on improvement in their writing. For example, one student writes

In going through all my documents for my portfolio, I have learned that I have truly grown and improved as a writer. I can tell a vast different from my writings I did my freshman year compared to the pieces I have produced in the last couple years. My analytical abilities have greatly improved, as well as my general writing ability. I feel that my growth can be attributed to the liberal arts education of Truman.

I found that my earlier papers definitely lacked the sense of continuity that my later papers do.

Some move beyond that into thinking, outlook, and attitude.

| Year | Count | Evidence of Self-reflection | | | | |
|-----------------------------|-------------|-----------------------------|------------|------------|--------------|--------------|
| | | No | Yes | Findings | % Reflect | |
| Arts and Letters | ART | 47 | 17 | 19 | 11 | 63.8% |
| | CML | 24 | 7 | 5 | 12 | 70.8% |
| | ENG | 105 | 39 | 37 | 29 | 62.9% |
| | LING | 8 | 4 | 1 | 3 | 50.0% |
| | MUS | 42 | 19 | 13 | 10 | 54.8% |
| | THEA | 18 | 7 | 8 | 3 | 61.1% |
| AAL | 244 | 93 | 83 | 68 | 61.9% | |
| Business | ACCT | 68 | 24 | 25 | 18 | 63.2% |
| | BSAD | 113 | 40 | 38 | 35 | 64.6% |
| | BUS | 181 | 64 | 63 | 53 | 64.1% |
| Hlth.Sci.and Ed. | CMDS | 36 | 8 | 17 | 11 | 77.8% |
| | ES | 64 | 17 | 34 | 12 | 71.9% |
| | HLTH | 45 | 15 | 25 | 5 | 66.7% |
| | NU | 34 | 16 | 9 | 9 | 52.9% |
| | HSE | 179 | 55 | 85 | 37 | 68.2% |
| Social and Cultural Studies | COMM | 76 | 28 | 31 | 17 | 63.2% |
| | ECON | 11 | 5 | 4 | 2 | 54.5% |
| | HIST | 47 | 22 | 18 | 7 | 53.2% |
| | JUST | 38 | 17 | 14 | 7 | 55.3% |
| | PHRE | 6 | 1 | 4 | 1 | 83.3% |
| | POL | 47 | 16 | 20 | 11 | 66.0% |
| | SOAN | 27 | 10 | 9 | 8 | 63.0% |
| | SCS | 252 | 99 | 100 | 53 | 60.7% |
| Sciences and Mathematics | AGSC | 17 | 6 | 11 | 0 | 64.7% |
| | BIOL | 113 | 38 | 51 | 24 | 66.4% |
| | CHEM | 31 | 8 | 19 | 4 | 74.2% |
| | CS | 18 | 7 | 7 | 4 | 61.1% |
| | MATH | 37 | 14 | 15 | 8 | 62.2% |
| | PHYS | 9 | 3 | 5 | 1 | 66.7% |
| | PSYC | 105 | 32 | 46 | 27 | 69.5% |
| | SAM | 330 | 108 | 154 | 68 | 67.3% |
| | IDSM | 8 | 4 | | 4 | 50.0% |
| All | 1194 | 423 | 485 | 283 | 64.3% | |



Looking back over four years of work, I don't see as much improvement in my actual writing assignments so much as in my way of thinking about the world.

Looking at the trend over time, we see that the amount of reflection has stayed about the same, but the percent of students who are reported as having

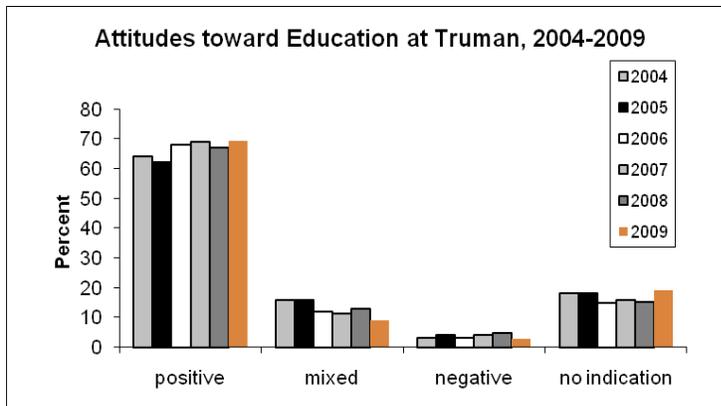
made findings has decreased. It might be that as the cover letter has moved online, students are less likely to engage in deep reflection; an alternate hypothesis is that, as faculty read portfolios online and now on the web browser, perhaps they are judging them differently.

ATTITUDE TOWARD EDUCATION AT TRUMAN

| Year | Count 2008 | Attitude toward Education at Truman | | | | | Attitude toward Education in the Major | | | | | |
|-----------------------------|---------------|--|------------|------------|------------|-------------------|---|-----------|------------|------------|-------------------|--------------|
| | | Neg. | Mix. | Pos. | None | Weighted % Pos | Neg. | Mix. | Pos. | None | Weighted % Pos | |
| Arts and Letters | ART | 47 | 2 | 3 | 29 | 13 | 89.7% | 1 | 3 | 11 | 32 | 83.3% |
| | CML | 24 | 1 | 1 | 14 | 8 | 90.6% | 1 | 2 | 7 | 14 | 80.0% |
| | ENG | 105 | 1 | 14 | 78 | 12 | 91.4% | 1 | 1 | 34 | 69 | 95.8% |
| | LING | 8 | 1 | 0 | 4 | 3 | 80.0% | 0 | 0 | 2 | 6 | 100.0% |
| | MUS | 42 | 0 | 3 | 26 | 13 | 94.8% | 0 | 2 | 17 | 23 | 94.7% |
| | THEA | 18 | 2 | 0 | 12 | 4 | 85.7% | 1 | 0 | 8 | 9 | 88.9% |
| | AAL | 244 | 7 | 21 | 163 | 53 | 90.8% | 4 | 8 | 79 | 153 | 91.2% |
| Business | ACCT | 68 | 3 | 5 | 50 | 10 | 90.5% | 0 | 0 | 23 | 45 | 100.0% |
| | BSAD | 113 | 3 | 14 | 80 | 16 | 89.7% | 1 | 6 | 31 | 75 | 89.5% |
| | BUS | 181 | 6 | 19 | 130 | 26 | 90.0% | 1 | 6 | 54 | 120 | 93.4% |
| Hlth. Sci. and Ed. | CMDS | 36 | 1 | 3 | 29 | 3 | 92.4% | 0 | 3 | 14 | 19 | 91.2% |
| | ES | 64 | 2 | 6 | 48 | 8 | 91.1% | 1 | 1 | 30 | 32 | 95.3% |
| | HLTH | 45 | 1 | 1 | 32 | 11 | 95.6% | 0 | 0 | 24 | 21 | 100.0% |
| | NU | 34 | 5 | 5 | 19 | 5 | 74.1% | 4 | 7 | 8 | 15 | 60.5% |
| | HSE | 179 | 9 | 15 | 128 | 27 | 89.1% | 5 | 11 | 76 | 87 | 88.6% |
| Social and Cultural Studies | COMM | 76 | 0 | 11 | 46 | 19 | 90.4% | 3 | 2 | 16 | 55 | 81.0% |
| | ECON | 11 | 1 | 1 | 7 | 2 | 83.3% | 0 | 1 | 3 | 7 | 87.5% |
| | HIST | 47 | 2 | 5 | 32 | 8 | 88.5% | 1 | 1 | 16 | 29 | 91.7% |
| | JUST | 38 | 2 | 4 | 21 | 11 | 85.2% | 1 | 2 | 7 | 28 | 80.0% |
| | PHRE | 6 | 0 | 0 | 6 | 0 | 100% | 0 | 0 | 4 | 2 | 100.0% |
| | POL | 47 | 0 | 1 | 40 | 6 | 98.8% | 0 | 0 | 13 | 34 | 100.0% |
| | SOAN | 27 | 1 | 5 | 12 | 9 | 80.6% | 1 | 3 | 11 | 12 | 83.3% |
| | SCS | 252 | 6 | 27 | 164 | 55 | 90.1% | 6 | 9 | 70 | 167 | 87.6% |
| Sciences and Mathematics | AGSC | 17 | 1 | 1 | 13 | 2 | 90.0% | 0 | 1 | 1 | 15 | 75.0% |
| | BIOL | 113 | 1 | 11 | 83 | 18 | 93.2% | 1 | 2 | 45 | 65 | 95.8% |
| | CHEM | 31 | 0 | 2 | 22 | 7 | 95.8% | 0 | 0 | 10 | 21 | 100.0% |
| | CS | 18 | 0 | 2 | 10 | 6 | 91.7% | 0 | 1 | 6 | 11 | 92.9% |
| | MATH | 37 | 1 | 1 | 25 | 10 | 94.4% | 2 | 2 | 5 | 28 | 66.7% |
| | PHYS | 9 | 0 | 0 | 5 | 4 | 55.5% | 0 | 0 | 4 | 5 | 100.0% |
| | PSYC | 105 | 1 | 9 | 79 | 16 | 93.8% | 1 | 1 | 28 | 75 | 95.0% |
| | SAM | 330 | 4 | 26 | 237 | 63 | 93.6% | 4 | 7 | 99 | 220 | 93.2% |
| IDSM | 8 | | 1 | 4 | 3 | 90.0% | | | 3 | 5 | 100.0% | |
| All | 1194 | 32 | 109 | 826 | 227 | 91.1% | 20 | 41 | 381 | 752 | 90.8% | |

W% Pos = (# positive responses + # of mixed responses/2)/ Number who discussed issue

The trend of these attitudes over the past few years has been stable.



Student attitudes regarding their education at Truman continue to be primarily positive. Differences across major groups were small. One frequent theme in positive comments was about rewarding experiences with faculty. The following are representative.

One of the best parts of Truman for me has been the personal relationship that I have formed with so many of my professors. I have felt that almost every one of them genuinely cares about me and about my classmates. Each has had such a passion for what he or she teaches and has shared with us their knowledge.

Most of my experience and education here at Truman has been very positive. I feel that the majority of the teachers are dedicated to teaching and students are devoted to bettering themselves

I think the psychology professors are incredibly talented. They care about student's academic achievement and their quality of life while at college. My advisor asked me one semester, 'which class are you taking for fun?' I was kind of caught off guard and didn't have an answer. She proceeded to tell me that I needed to have a fun class every semester. I thought that was a great approach, because we all need a little fun in our lives.

Many of the professors in the English department challenged me to always do better and helped to validate me as a student and my interest in literature. I believe I have received a well-rounded education while studying at Truman...

My experiences and education here has definitely been positive overall. I have had many wonderful professors, had a lot of fun, and have learned so much. I would never trade my experience here for anything.

Truman's general education curriculum, the Liberal Studies Program (LSP), is mentioned frequently. However, opinions on the efficacy of the LSP and of the value of liberal arts in general were highly varied. The following provide some idea of the range of comments.

I have enjoyed the LSP program, since I have always had interest in a number of different genres, and I know it is easy to be suckered into one's own major and never think about anything else. I wish that my major had allowed me to take more LSPs at the beginning of my Truman career rather than making me squeeze quite a few of them into my last semester at Truman.

One of the main reasons I chose Truman was fact that it is a liberal arts university. While being here, I enjoyed being educated in a variety of subjects and I feel as though it has helped me truly grown as a person. Being a psychology major, I have had other great opportunities while at Truman. I was fortunate to be able to join a faculty research team which introduced me to opportunities to perform experimental research for two years.

I have gained so much general knowledge that makes me feel confident in my ability to succeed at whatever I put my mind to. I have had professors who genuinely care about their students and have made the best friends I could ever hope to have.

...some glitch of technology has caused the work to be lost. Honestly, this seems to sum up so many of my experiences at Truman

ATTITUDES TOWARD ASSESSMENT AT TRUMAN

| | Year | Count 2008 | Attitude toward the Portfolio Process | | | | | Attitude toward Assessment (Other than Portfolio) | | | | |
|-----------------------------|-------------|---------------|--|------------|------------|--------------|--------------|--|------------|------------|--------------|--------------|
| | | | Neg. | Mix. | Pos. | None | W% Pos | Neg. | Mix. | Pos. | None | W% Pos |
| Arts and Letters | ART | 47 | 8 | 7 | 21 | 11 | 68.1% | 4 | 3 | 5 | 35 | 54.2% |
| | CML | 24 | 3 | 4 | 8 | 9 | 66.7% | 1 | 2 | 5 | 16 | 75.0% |
| | ENG | 105 | 18 | 19 | 53 | 15 | 69.4% | 10 | 13 | 16 | 66 | 57.7% |
| | LING | 8 | 3 | 4 | 0 | 1 | 28.6% | 3 | 0 | 0 | 5 | 0.0% |
| | MUS | 42 | 5 | 10 | 18 | 9 | 69.7% | 4 | 8 | 5 | 25 | 52.9% |
| | THEA | 18 | 6 | 4 | 3 | 5 | 38.5% | 4 | 5 | 2 | 7 | 40.9% |
| | AAL | 244 | 43 | 48 | 103 | 50 | 65.5% | 26 | 31 | 33 | 154 | 53.9% |
| Business | ACCT | 68 | 13 | 14 | 31 | 10 | 65.5% | 6 | 6 | 20 | 36 | 71.9% |
| | BSAD | 113 | 21 | 29 | 43 | 20 | 61.8% | 11 | 13 | 16 | 73 | 56.3% |
| | BUS | 181 | 34 | 43 | 74 | 30 | 63.2% | 17 | 19 | 36 | 109 | 63.2% |
| Hlth, Sci. and Ed. | CMDS | 36 | 3 | 11 | 19 | 3 | 74.2% | 5 | 9 | 3 | 19 | 44.1% |
| | ES | 64 | 11 | 22 | 23 | 8 | 60.7% | 6 | 4 | 11 | 43 | 61.9% |
| | HLTH | 45 | 5 | 12 | 22 | 6 | 71.8% | 1 | 2 | 3 | 39 | 66.7% |
| | NU | 34 | 10 | 9 | 9 | 6 | 48.2% | 3 | 2 | 3 | 26 | 50.0% |
| | HSE | 179 | 29 | 54 | 73 | 23 | 64.1% | 15 | 17 | 20 | 127 | 54.8% |
| Social and Cultural Studies | COMM | 76 | 8 | 26 | 27 | 15 | 65.6% | 10 | 12 | 6 | 48 | 42.9% |
| | ECON | 11 | 1 | 3 | 4 | 3 | 68.8% | 1 | 2 | 1 | 7 | 50.0% |
| | HIST | 47 | 10 | 16 | 17 | 4 | 58.1% | 11 | 3 | 6 | 27 | 37.5% |
| | JUST | 38 | 7 | 11 | 11 | 9 | 56.9% | 5 | 3 | 1 | 29 | 27.8% |
| | PHRE | 6 | 0 | 1 | 5 | 0 | 91.7% | 0 | 1 | 1 | 4 | 75.0% |
| | POL | 47 | 3 | 15 | 21 | 8 | 73.1% | 8 | 8 | 9 | 22 | 52.0% |
| | SOAN | 27 | 5 | 7 | 8 | 7 | 57.5% | 3 | 2 | 5 | 17 | 60.0% |
| | SCS | 252 | 34 | 79 | 93 | 46 | 64.3% | 38 | 31 | 29 | 154 | 45.4% |
| Sciences and Mathematics | AGSC | 17 | 4 | 5 | 7 | 1 | 59.4% | 3 | 1 | 1 | 12 | 30.0% |
| | BIOL | 113 | 25 | 22 | 50 | 16 | 62.9% | 13 | 9 | 21 | 70 | 59.3% |
| | CHEM | 31 | 9 | 14 | 5 | 3 | 42.9% | 1 | 5 | 2 | 23 | 56.3% |
| | CS | 18 | 6 | 3 | 7 | 2 | 53.1% | 2 | 1 | 3 | 12 | 58.3% |
| | MATH | 37 | 12 | 4 | 18 | 3 | 58.8% | 4 | 3 | 6 | 24 | 57.7% |
| | PHYS | 9 | 2 | 3 | 3 | 1 | 56.3% | 1 | 1 | 0 | 7 | 25.0% |
| | PSYC | 105 | 18 | 40 | 43 | 4 | 62.4% | 13 | 16 | 21 | 55 | 58.0% |
| | SAM | 330 | 76 | 91 | 133 | 30 | 59.5% | 37 | 36 | 54 | 203 | 56.7% |
| IDSM | 8 | 2 | 1 | 2 | 3 | 50.0% | 2 | | | 6 | 0.0% | |
| All | 1194 | 218 | 316 | 478 | 182 | 62.8% | 135 | 134 | 172 | 753 | 54.2% | |

W% Pos = (# positive responses + # of mixed responses/2)/ Number who discussed issue

Students are also invited to discuss their attitudes toward assessment at Truman overall, although just over one-third of students actually discuss assessment besides the portfolio itself. Positive comments about assessment slightly outnumbered negative ones.

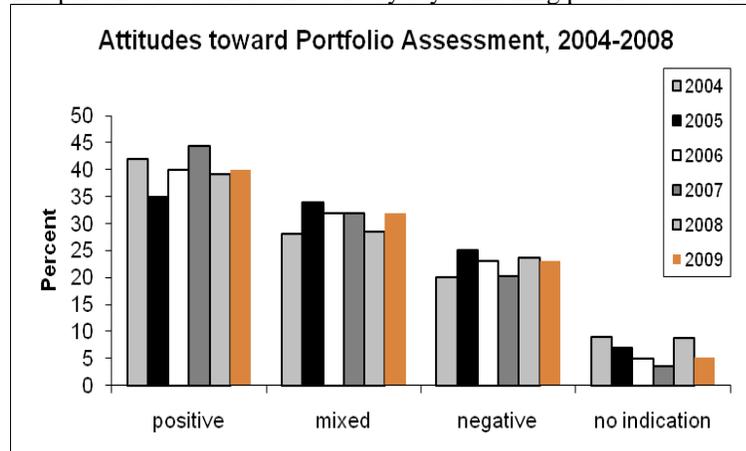
Those students who made positive comments often had brief remarks about how assessment is good for the university. Those with negative comments were often about how they were frustrated by assessments that had little impact on them personally. For example:

Assessment here at Truman is something that I can see is taken very seriously. Through the junior and senior tests, it is obvious that the administration at Truman State University is trying to better the education for future students every year.

I hate to say, not in support for assessment. With all of the classes we take that build off one another as well as the capstone requirements, I feel this assignment is outdated and offers little rewards compared to other requirements. My professors in the past have said things like the MFAT and the senior portfolio should be taken seriously for pride's sake. I believe that is an unrealistic statement. We take pride in our educations and yet things like this take valuable time away from our educations.

ATTITUDE TOWARD THE PORTFOLIO PROCESS

The percent of students who actively say something positive about the portfolio has been stable in the last few years.



Some students report that their attitude toward the portfolio was negative before they started, but positive after they finished. For example

To be honest, before beginning work on my portfolio I thought the entire process was a little unnecessary. However, the process has encouraged much reflection on my time here at Truman. I have now witnessed first hand how much I've grown as a person throughout my undergraduate years. In addition, not only am I a trained scientist, but I am also more well-rounded because of all the classes I have taken to fulfill my LSP requirements.

Whilst I was a bit upset about having to do this portfolio, putting the portfolio made me remember some of the classes that I had been in and some of the assignments I had done that I had forgotten about. This made me proud and gave a sense of accomplishment.

I honestly feel like the portfolio assignment is a necessary evil at Truman. Everyone including myself dreads completing it as we are all extremely busy finishing up school here at Truman. However, it really is the best way to assess the Truman experience. It took me around four hours to complete the portfolio, and it gave me the chance to reflect on my time here at Truman. Looking back, I actually did complete some really meaningful assignments that helped me grow both personally and professionally. The senior portfolio assignment isn't necessarily fun, but it illustrates the overall knowledge gained that no test can provide.

I didnt really enjoy the task of completing a portfolio, mostly because I do not feel that I am a strong writer. I did, however, enjoy looking back on my time at Truman. This project allowed me the chance to revisit each of my 4 years white attending TSU, and brought back memories of hard times and joyous times alike. This project reminded me of just how much I have grown since I first moved in 4 years ago.

Positive comments, like each of the following, often recognize the value of the reflection occasioned by the process of looking through their previous work.

I think the portfolio is a good idea because it really helps you to reflect on your time at Truman because some of the papers I chose I forgot that I even wrote. It just helps remind you how much hard work you put in with your time spent here at Truman. I think Truman has good assessment procedures for its students and holds high standards for them, which will be useful later in life when we are set in our careers.

I spent much time deliberating as to which papers I thought truly represented my time here at Truman. Once those papers were selected, writing about them seemed a simple task, and putting this portfolio together took only a few hours. Through this process, I have witnessed the personal growth I've experienced throughout my four year here. This growth is not just that of a writer, but personal, academic, and social growth as well. I have so many experiences from Truman that have truly shaped who I have become. These experiences are reflected in my writing and in my improved ability to think critically.

The portfolio assessment is an interesting idea. It was nice to look back at all my old papers and think about what I have accomplished in the last four years.

When I heard that I was required to submit a portfolio I was unsure of the purpose. I did not realize how a compilation of my works and experiences would be beneficial to anyone besides me.

With the portfolio project I felt that the work was more of a reward or a victory lap for all of the hard work I've put into various papers throughout my education. I was reminded by the critical thinking that I had to implement time and time again.

Negative comments were often about how the portfolio took too much time away from things they saw as more meaningful.

I have no motivation to make this better than it is because this project has placed unnecessary stress on me at a time when I don't need it because of everything else I have going on.

As in years past, many students have trouble seeing any value in assessment that does not directly measure the major, while others feel that their major doesn't fit well with the portfolio.

As a mathematics major and computer science minor, many of my works that I put the most effort into have been proofs and computer programs, neither of which can be sufficiently evaluated by this assessment format.

Furthermore, students occasionally bemoan the fact that there is neither incentive nor punishment based on the quality of the work. Some suggest that had they figured it out sooner, the quality would be even worse.

The process I went through to create this folder involved three major steps:

- 1. Looking through folders for files I prayed I hadn't lost on my y:*
- 2. Trying to bullshit my way through making my weak assignments match criteria*
- 3. Wishing I had just submitted blank Word documents because that would have been a LOT simpler and of equal quality.*

Anecdotally, fewer students seem to be complaining about not having heard about the portfolio. With the new course-embedded submissions going online in the coming year, we hope that this will continue to improve.

Future Plans

Now that the online system seems to be working well, we are making plans to go even further. As part of the broader review of assessment at Truman, a review of the portfolio was also in order. As a result of discussions with a revamped portfolio committee and campus discussions with many different constituencies, several “strategic motivators” were developed and shared:

- A. Efficiency: Everything in the portfolio should be used for campus assessment and anything not useful should be removed.
- B. Feedback: Evolve the portfolio away from being a “black hole” where students submit work but never receive feedback about that work.
- C. Technology Improvements allow greater opportunities and flexibility.
- D. Student Buy-in and motivation: Can we convince more of them to care?
- E. Faculty Buy-In and motivation: Can we convince more of them to care?
- F. Baselines: As a new curriculum is being implemented, what do we need to measure now so that we will recognize changes once they happen?

These motivators have led us towards making some changes in the portfolio process. Some can and will be implemented quickly, while others will take longer to phase in. A goal is to have a new system in place for freshman entering in Fall 2010, so that their senior portfolio will include all of the changes.

As part of the curriculum discussions, we were also invited to examine how students consider creativity and how Truman can measure the creative things our students do already. From that a new, temporary prompt, “Creative Work and Reflection” is being implemented for 2009-2010. We may look at measuring other hard-to-measure outcomes, like ethics, leadership, and other things mentioned in Truman’s guiding documents and vision statement.

Technology has also aided us. Our database is now robust enough and storage space is inexpensive enough that we plan to implement a system where multiple submissions may be made for each prompt, and many of those submissions will be course-embedded. In fall 2010, we have started a pilot project with embedded submissions in ENG 190 and COMM 170, and plan to expand this in the spring to JINS courses. This should make the process of compiling and reflection on the portfolio much easier for seniors as they prepare to graduate.

So that those instructors can help their students, we have made an interface where any faculty member can see what their students have already submitted for their portfolio. Senior seminar instructors can monitor student submissions, but more importantly, advisors and others can help and encourage their students along the way.

We can also have students rate their own submissions, and mark their own descriptors such as identifying when their papers refer to race and gender. We can embed a traditional survey in the portfolio to ask students about broad outcomes and experiences through their time at Truman.

The hope of smart classrooms and classroom capture has emboldened us to call for a public speaking submission of all who enter Truman after Fall 2009. Beginning in Fall 2010, this will also be a double-measure, with one submission done early in a student’s career and one later.

Summary

Student performance remains stable. We have increased inter-rater reliability for our two campus-wide content prompts, Interdisciplinary Thinking and Critical Thinking and Analytical Writing. Our students generally demonstrate competence at Interdisciplinary Thinking and Critical Thinking, and strong competence in Analytical Writing. As we phase out several mode-based prompts, we start implementing new innovations.