

Chapter 10: PORTFOLIO ASSESSMENT

Portfolio Assessment

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 2009-2010, 1159 students submitted portfolios.

When is it administered?

Most students complete the process as part of their capstone experience, so students usually submit portfolios during their senior year. Some submit earlier, while others have actually completed their Truman course work and submit after they have finished their time on campus. As a graduation requirement, students who do not submit their portfolio are subject to transcript/diploma/verification holds and even removal from graduation lists.

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

The average is three to four hours, including time to retrieve and upload previously written files,

What office administers it?

The director of the portfolio administers collection of the portfolio in conjunction with each discipline/program. Evaluation and scoring of the portfolio is done by teams of faculty working in groups of approximately twenty, who also participate in faculty development and campus discussion.

Who originates the submission requirements for portfolios?

The Assessment Committee evaluate and publish the requests for specific portfolio items, led by the Portfolio director working with faculty assessors and the Portfolio Committee (a standing subcommittee of the Assessment Committee)

When are results typically available?

The portfolios are read and evaluated in May and August. 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 2009-2010 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 offers any other thoughts they care to express about their experiences. Other items may be included, but these are evaluated separately.

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.

Are the results available by school or department?

Yes.

To whom are results regularly distributed?

The overall results of portfolio assessment are available to all members of the Truman community through this [Assessment Almanac](#). More detailed data are accessible through 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 departments use the information to reform their curriculum, improve programs, and engage in self-study. Portfolio findings frequently affect the assignments and syllabi of faculty who participate as portfolio readers.

Are the results comparable to data of other universities?

No. While some universities are using portfolios for assessment of general education or liberal studies, most do not use similar prompts or submission categories.

2010 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 2010, portfolios from 1159 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 2009 as part of their class, but graduated in August 2010, 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 2010 Portfolio Contents

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

The 2010 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.

A total of sixty-two faculty and staff members read and evaluated portfolios, representing all ranks (including three continuing Graduate Teaching Assistants from English, and several professional staff), all academic schools, and twenty-one of Truman's academic departments. Fifteen participants were new readers. Two student workers assisted with processing, technical support, and sorting, providing critical support to the success of this complicated process. Reading sessions were scheduled over three weeks during the May and August interims, from May 10 to 14, May 17-21, and August 12-17 2010. One third of the readers participated during each week, with a handful participating in a May week and the August week. Readers gathered daily at 8:30 AM and ended at 4:30 PM with an hour for lunch and a morning and afternoon break. 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 in Historical analysis were scored during the first week of reading.

Two new topics were investigated this year. Each week, pilot audio-video submissions submitted voluntarily by those presenting at Truman's Student Research Conference in April 2010 were also scored using a new Critical Thinking and Speaking rubric. In addition, our new "Rapid Response" prompt, "Creative Work and Reflection" was also scored and evaluated.

		Maj.	First Major		
			2008	2009	2010
Arts and Letters	ART (all)		34	47	40
	CML (all)		21	24	34
	ENG		113	105	112
	LING		9	8	8
	MUS (all)		37	42	29
	THEA		7	18	14
	AAL		221	243	237
Business	ACCT		58	68	94
	BSAD		133	113	117
	BUS		191	181	211
Hlth.Sci.and Ed.	CMDS		28	36	38
	ES		47	64	71
	HLTH		31	45	36
	NU		38	34	30
	HSE		144	179	175
Social and Cultural Studies	COMM		53	76	70
	ECON		13	11	10
	HIST		60	47	57
	JUST		36	38	40
	PHRE		16	6	8
	POL		38	47	32
	SOAN		16	27	15
	SCS		232	252	232
Sciences and Mathematics	AGSC		22	17	14
	BIOL		77	113	113
	CHEM		27	31	25
	CS		13	18	19
	MATH		24	37	25
	PHYS		8	9	15
	PSYC		109	105	86
	SAM		280	330	297
IDSM		8	8	7	
	All		1076	1187	2161

2010 Portfolio Findings

This report presents the findings of the 2010 Portfolio Project for all. Grouping are based on the five-school administrative structure. 2009 and 2010 results have been produced 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. 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 identifying 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		
	2008	2009	2010	2008	2009	2010
Interdisciplinary Thinking	1.69	1.78	1.79	54.6%	55.7%	59.4%
Critical Thinking	1.90	1.85	1.83	69.3%	67.2%	66.8%
Writing - Organization	2.09	1.99	1.95	80.0%	75.6%	75.3%
Writing - Style	2.06	1.97	1.93	80.9%	75.2%	75.9%
Writing - Mechanics	2.21	2.04	2.00	86.3%	80.8%	81.5%
Historical Analysis	1.58	1.68	1.5	54.1%	53.4%	50.2%

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.

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 1159 portfolios collected, 1158 (99.9%) submitted readable examples of critical thinking. Only one was provided as 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:	1158
• Median critical thinking (on a 0 – 3 scale):	2
• Percent demonstrating Competence:	67%
• 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

Critical Thinking Scores by First Major

In 2010, 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	109	11.0%	1.34
Sophomore	133	13.4%	1.82
Junior	396	39.9%	1.92
Senior	354	35.7%	1.87
		100.0%	

Year of submission was supplied by 992 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 students career produced lower scores. Results are skewed further by the low scores typically received by submissions from ENG 190.

Course Type	#	%	Mean
Elective	103	10.9%	1.75
LSP	289	30.6%	1.63
Major	474	50.2%	1.93
Minor	78	8.3%	1.82

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

Of the items submitted, 20.1% dealt with issues of gender, 25.7% with issues of class, 15.0% with issues of race, and 19.4% 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

Maj.	Count			Mean Score			% Competent			
	2008	2009	2010	2008	2009	2010	2008	2009	2010	
Arts and Letters	ART	34	47	40	1.89	1.85	2.05	72%	70%	80%
	CML	20	24	33	2.25	1.88	2.03	95%	58%	79%
	ENG	111	103	112	2.12	2.06	1.97	78%	77%	75%
	LING	9	8	8	2.44	2.38	2.00	89%	100%	88%
	MUS	38	40	29	1.74	1.95	1.76	61%	73%	62%
	THEA	7	18	14	1.86	1.72	2.00	71%	72%	71%
	AAL	219	243	236	2.04	1.97	1.97	76%	73%	75%
Business	ACCT	57	67	94	1.82	1.63	1.66	68%	54%	56%
	BSAD	138	110	117	1.70	1.63	1.74	59%	55%	66%
	BUS	195	180	211	1.74	1.63	1.70	62%	54%	62%
Hlth. Sci. and Ed.	CMDS	28	36	38	2.07	1.61	1.74	75%	58%	66%
	ES	48	63	71	1.60	1.78	1.70	46%	65%	59%
	HLTH	30	45	36	1.67	1.53	1.58	60%	53%	56%
	NU	38	34	30	1.82	2.06	1.87	66%	82%	70%
	HSE	144	179	175	1.76	1.74	1.71	60%	64%	62%
Social and Cultural Studies	COMM	53	75	70	2.07	1.96	2.01	72%	68%	77%
	ECON	13	11	10	2.38	2.00	1.80	92%	73%	80%
	HIST	60	47	57	2.03	1.85	1.93	75%	70%	70%
	JUST	37	37	40	1.92	1.97	1.93	78%	70%	65%
	PHRE	16	6	8	2.13	1.83	2.25	88%	67%	88%
	POL	38	46	32	2.42	2.20	1.84	87%	83%	66%
	SOAN	16	26	15	1.94	2.08	2.00	63%	77%	87%
	SCS	233	248	232	2.11	2.00	1.95	78%	73%	73%
Sciences and Mathematics	AGSC	23	15	14	1.83	1.80	1.79	70%	73%	71%
	BIOL	78	112	113	2.05	1.96	1.83	81%	76%	66%
	CHEM	26	31	25	1.31	2.03	1.44	42%	74%	40%
	CS	14	17	19	1.23	1.71	1.58	64%	59%	53%
	MATH	26	36	25	1.69	1.83	1.80	62%	69%	64%
	PHYS	8	9	15	1.75	2.22	2.27	63%	78%	93%
	PSYC	109	105	86	1.80	1.64	1.71	64%	56%	59%
	SAM	284	328	297	1.79	1.84	1.76	67%	68%	63%
	IDSM	8	7	7	2.75	2.14	1.86	100%	71%	57%
All	1083	1186	1158	1.90	1.85	1.83	69%	67%	67%	

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 were used for this submission. Despite the suggestion on the prompt, Writing as Critical Thinking (ENG 190) was the single most common source of submissions with 45 submissions. Courses responsible for 10 or more submissions were ACCT 367, ED 389, ENG 209, BSAD 460, PHRE 186, PHRE 188, and SED 535.

In the interest of inter-rater reliability, 367 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.

Critical Thinking Scores by Course Prefix

Prefix	Count			Mean Score			% Competent		
	2008	2009	2010	2008	2009	2010	2008	2009	2010
ENG	208	227	236	1.85	1.69	1.71	66%	60%	60%
JINS	171	149	126	1.87	1.82	1.93	71%	64%	72%
PHRE	117	85	91	1.95	1.74	1.76	72%	60%	65%
COMM	45	61	76	1.76	1.87	1.76	62%	66%	64%
BSAD	72	43	67	1.68	1.84	1.88	58%	65%	75%
HIST	64	44	54	2	1.89	1.87	70%	66%	70%
POL	38	56	48	2.47	2.2	2.00	95%	84%	73%
BIOL	27	46	46	1.93	2.07	2.11	74%	78%	78%
JUST	32	40	33	2.16	1.98	2.03	81%	65%	70%
ED	28	31	33	1.75	1.84	1.82	64%	74%	76%
ES	16	22	29	1.75	1.86	1.62	56%	77%	52%
PSYC	27	24	29	1.96	1.88	1.86	74%	67%	66%
ART	18	22	23	2.06	1.91	2.22	72%	68%	87%
NU	28	22	23	1.93	2.09	1.87	68%	82%	74%
ACCT	17	17	23	1.94	1.65	1.96	82%	59%	74%
ECON	26	25	21	2.15	2.12	2.00	88%	76%	76%
SED	3	9	16	1.67	1.89	1.63	67%	78%	69%
SOAN	15	34	15	2.13	2.12	2.07	67%	79%	60%
SPAN	4	8	15	2.5	1.88	2.07	100%	63%	80%
MUSI	1	10	14	3	1.8	1.43	100%	70%	43%
CMDS	3	7	10	2.33	1.57	1.40	100%	57%	50%
HLTH	8	13	10	1.75	1.31	1.40	63%	54%	40%
CHEM	13	17	8	1.38	2.18	2.13	38%	82%	75%
AGSC	18	6	7	1.83	1.5	1.71	67%	67%	71%
RUSS	6	5	7	2.17	2	2.14	100%	80%	71%
THEA	4	15	8	2.25	2	1.88	100%	87%	75%
CLAS	6	3	6	1.83	2.33	2.33	67%	100%	67%
CS	2	6	5	2	1.17	1.40	50%	33%	40%
PHYS	4	3	5	1.5	2	1.60	25%	67%	40%
IDSM			4			2.00			75%
STAT	4	3	4	1.5	2.67	2.00	25%	100%	100%
Other	58	133	66	1.74	1.81	1.652	62%	66%	59%
All	1083	1186	1158	1.90	1.85	1.83	69%	67%	67%

2 nd Reader Difference	Critical Thinking	Writing - Organization	Writing - Style	Writing - Mechanics
Same Score	55.1%	56.1%	54.7%	57.1%
Off by +/- 1	42.2%	40.4%	41.6%	39.4%
Off by +/- 2	2.7%	3.5%	3.5%	3.5%
Off by +/- 3	0.0%	0.0%	0.3%	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

	Year	Count			Organization						Style					
		Count			Mean			% Comp			Mean			% Comp		
		2008	2009	2010	2008	2009	2010	2008	2009	2010	2008	2009	2010	2008	2009	2010
Arts and Letters	ART	34	47	40	2.06	1.91	2.10	74%	79%	85%	2.21	2.09	2.08	88%	81%	85%
	CML	17	24	33	2.29	2.08	2.18	100%	79%	88%	2.25	2.00	2.15	100%	71%	85%
	ENG	111	103	112	2.14	2.17	1.99	84%	83%	77%	2.16	2.17	2.10	87%	85%	84%
	LING	9	8	8	2.33	1.88	1.75	100%	75%	75%	2.44	2.13	2.13	100%	88%	88%
	MUS	38	40	29	2.00	1.98	1.86	79%	78%	76%	2.03	2.25	1.93	84%	90%	69%
	THEA	7	18	14	1.86	2.00	2.29	71%	83%	100%	1.71	1.78	2.07	57%	67%	100%
	AAL	216	240	236	2.11	2.06	2.03	83%	80%	81%	2.15	2.12	2.08	87%	83%	83%
Business	ACCT	57	67	94	2.11	1.79	1.84	84%	67%	69%	2.02	1.82	1.89	81%	67%	76%
	BSAD	138	110	117	1.99	1.85	1.91	74%	71%	75%	1.87	1.75	1.85	70%	65%	72%
	BUS	195	177	211	2.03	1.83	1.88	77%	69%	73%	1.91	1.77	1.87	73%	66%	73%
Hlth. Sci. and Ed.	CMDS	28	36	38	2.21	1.89	1.84	79%	75%	74%	2.29	1.78	1.84	82%	69%	76%
	ES	48	63	71	1.98	1.98	2.07	71%	75%	83%	1.90	1.95	1.92	75%	73%	79%
	HLTH	30	45	36	1.97	1.76	1.78	70%	60%	67%	2.17	1.71	1.56	93%	62%	50%
	NU	38	34	30	2.16	1.97	2.03	90%	82%	77%	2.03	1.79	2.17	87%	68%	87%
	HSE	144	178	175	2.07	1.90	1.95	77%	72%	77%	2.07	1.83	1.87	83%	69%	74%
Social and Cultural Studies	COMM	53	75	70	2.19	2.16	2.00	87%	81%	74%	2.04	2.01	1.99	81%	72%	76%
	ECON	13	11	10	2.23	2.27	2.20	77%	82%	90%	2.31	2.36	1.80	85%	91%	70%
	HIST	60	47	57	2.07	1.96	2.04	78%	72%	88%	2.15	2.02	2.07	85%	79%	81%
	JUST	37	37	40	2.19	2.11	1.90	81%	78%	68%	2.11	2.03	2.03	76%	76%	83%
	PHRE	16	6	8	2.25	2.17	2.25	88%	83%	88%	2.19	2.17	2.50	88%	83%	88%
	POL	38	46	32	2.42	2.39	1.94	92%	91%	66%	2.26	2.26	1.78	92%	91%	59%
	SOAN	16	26	15	1.88	2.00	1.93	75%	73%	67%	2.13	1.92	1.93	88%	73%	73%
	SCS	233	248	232	2.18	2.15	2.00	83%	80%	76%	2.15	2.07	1.99	84%	79%	76%
Sciences and Mathematics	AGSC	23	15	14	1.91	2.00	1.86	78%	73%	79%	1.87	2.00	1.79	74%	73%	71%
	BIOL	78	112	113	2.08	2.09	1.99	87%	80%	77%	2.14	2.11	1.97	83%	82%	81%
	CHEM	26	31	25	1.73	2.10	1.64	62%	74%	52%	1.88	2.00	1.56	73%	87%	64%
	CS	14	17	19	1.86	1.88	1.79	79%	76%	68%	2.00	1.76	1.68	86%	65%	63%
	MATH	26	36	25	1.88	1.78	2.00	69%	61%	80%	1.81	1.81	1.92	65%	72%	76%
	PHYS	8	9	15	2.38	2.00	2.13	100%	78%	73%	2.38	1.89	2.13	88%	67%	73%
	PSYC	109	105	86	1.96	1.90	1.84	76%	70%	69%	1.97	1.85	1.78	75%	70%	70%
	SAM	284	325	297	1.97	1.98	1.91	78%	74%	72%	2.00	1.95	1.86	77%	76%	74%
	IDSM	8	7	7	2.38	2.00	1.86	100%	71%	57%	2.63	2.43	1.71	100%	100%	43%
	All	1080	1175	1158	2.07	1.99	1.95	80%	76%	75%	2.06	1.97	1.93	81%	75%	76%

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	0.671		
Style	0.583	0.677	
Mechanics	0.488	0.551	0.657

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					
	2008	2009	2010	Mean			% Comp		
				2008	2009	2010	2008	2009	2010
ENG	208	227	236	2.03	1.83	1.83	80%	68%	67%
JINS	171	149	126	2.06	1.93	1.96	78%	75%	75%
PHRE	117	85	91	1.98	1.82	1.88	79%	68%	77%
COMM	45	61	76	2.04	2.11	1.84	80%	82%	67%
BSAD	72	43	67	1.92	1.95	2.12	68%	77%	85%
HIST	64	44	54	2.20	2.07	2.04	86%	80%	87%
POL	38	56	48	2.32	2.34	2.02	89%	89%	73%
BIOL	27	46	46	1.96	2.20	2.13	78%	78%	83%
ED	28	31	33	1.82	1.87	1.70	64%	74%	67%
JUST	32	40	33	2.34	2.15	1.94	88%	80%	70%
ES	16	22	29	2.25	2.09	2.17	88%	77%	90%
PSYC	27	24	29	2.19	2.25	2.21	85%	83%	93%
ACCT	17	17	23	1.85	2.29	2.22	69%	82%	83%
ART	18	22	23	2.39	2.23	2.13	89%	95%	87%
NU	28	22	23	2.19	1.95	2.09	90%	82%	78%
ECON	26	25	21	2.19	2.32	2.05	81%	92%	81%
SED	3	9	16	2.00	2.33	2.06	87%	100%	88%
SOAN	15	34	15	2.00	2.09	1.67	87%	76%	53%
SPAN	4	8	15		2.38	2.00		100%	80%
MUSI	12	10	14	1.92	2.20	1.86	67%	80%	79%
CMDS	3	7	10		2.00	1.50		86%	60%
HLTH	8	13	10	2.38	1.54	1.80	100%	46%	60%
CHEM	13	17	8	2.35	2.24	2.50	94%	88%	100%
THEA	4	15	8		2.00	2.00		80%	88%
AGSC	18	6	7	2.00	2.00	1.86	83%	67%	86%
RUSS	6	5	7	2.17	2.40	2.14	100%	100%	71%
CLAS	6	3	6	2.00	1.67	2.33	83%	67%	83%
CS	2	6	5		1.00	1.80		33%	60%
PHYS	3		5	2.00		1.40		33%	40%
STAT	4	3	4	2.75	2.33	2.00	100%	67%	75%
GEOG	2	3	3		2.00	2.00		67%	100%
ITAL	1	4	3		2.25	2.33		100%	100%
ENVS	3	3	2		2.00	1.50		67%	50%
NASC	31	4	2		1.50	0.50		50%	100%

Prefix	Count			Style					Mechanics						
	2008	2009	2010	Mean		% Comp			Mean				% Comp		
				2009	2010	2008	2009	2010	2008	2009	2010	2008	2009	2010	
ENG	208	227	236	1.92	1.90	82%	74%	75%	2.24	1.99	2.03	88%	79%	84%	
JINS	171	149	126	1.86	2.04	84%	72%	83%	2.24	1.97	2.13	91%	81%	89%	
PHRE	117	85	91	1.92	1.81	75%	71%	75%	2.18	2.05	1.91	81%	82%	79%	
COMM	45	61	76	1.95	1.82	76%	72%	67%	2.04	2.05	1.82	80%	82%	70%	
BSAD	72	43	67	1.79	2.03	71%	70%	85%	2.00	1.93	1.97	75%	81%	78%	
HIST	64	44	54	2.02	2.11	91%	80%	87%	2.19	2.09	2.07	84%	82%	85%	
POL	38	56	48	2.25	1.98	92%	89%	69%	2.47	2.18	1.98	92%	84%	73%	
BIOL	27	46	46	2.17	2.20	74%	85%	89%	2.22	2.22	2.24	81%	89%	91%	
ED	28	31	33	2.03	1.73	64%	77%	70%	2.04	2.16	1.88	82%	87%	85%	
JUST	32	40	33	2.08	2.03	81%	75%	88%	2.38	2.08	2.12	88%	75%	82%	
ES	16	22	29	2.05	1.93	94%	77%	79%	2.38	2.14	1.97	100%	91%	83%	
PSYC	27	24	29	2.17	1.90	85%	75%	72%	2.33	2.17	1.93	93%	88%	79%	
ACCT	17	17	23	2.00	2.09	92%	82%	78%	2.31	2.24	2.22	92%	82%	91%	
ART	18	22	23	2.32	2.00	94%	95%	70%	2.39	2.45	2.13	89%	95%	87%	
NU	28	22	23	1.82	2.26	84%	68%	96%	1.90	1.77	2.17	74%	77%	91%	
ECON	26	25	21	2.16	1.90	73%	88%	76%	2.42	2.16	1.95	96%	92%	81%	
SED	3	9	16	2.00	1.88	87%	89%	75%	2.33	2.22	2.06	87%	89%	88%	
SOAN	15	34	15	2.00	1.67	87%	79%	53%	2.33	2.06	1.87	87%	79%	73%	
SPAN	4	8	15	2.38	2.07		88%	80%		1.63	2.33		63%	87%	
MUSI	12	10	14	2.20	1.86	83%	80%	57%	2.08	2.20	2.00	92%	80%	79%	
CMD5	3	7	10	1.86	1.60		71%	60%		2.00	1.70		86%	80%	
HLTH	8	13	10	1.54	1.50	100%	54%	30%	2.25	1.69	1.80	100%	69%	70%	
CHEM	13	17	8	2.18	2.00	94%	94%	75%	2.18	2.24	2.25	94%	88%	75%	
THEA	4	15	8	1.87	1.75		73%	75%		2.07	1.38		80%	50%	
AGSC	18	6	7	1.83	1.57	61%	50%	57%	2.17	1.83	1.71	83%	50%	71%	
RUSS	6	5	7	2.60	2.00	100%	100%	71%	2.67	2.40	2.57	83%	100%	100%	
CLAS	6	3	6	1.67	2.17	83%	67%	83%	2.17	2.00	2.00	83%	67%	67%	
CS	2	6	5	0.83	1.60		17%	40%		0.83	1.60		17%	60%	
PHYS	3		5	1.67	1.60	50%	67%	60%	2.00	1.33	1.40	75%	33%	60%	
STAT	4	3	4	2.33	2.25	75%	100%	100%	2.50	2.67	2.00	100%	100%	100%	
GEOG	2	3	3	2.67	1.67		100%	67%		2.67	1.33		100%	33%	
ITAL	1	4	3	2.00	2.33		100%	100%		2.00	2.33		100%	100%	
ENVS	3	3	2	2.33	1.50		100%	50%		2.67	2.00		100%	100%	
NASC	31	4	2	1.50	2.50		50%	100%		2.00	2.50		100%	100%	

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 | 1076 |
| • Median score (on a 0-4 scale): | 2 |
| • Mean score (on a 0-4 scale): | 1.79 |
| • 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.

	Number	Percent	Mean
Freshman	38	3.8%	1.08
Sophomore	153	15.5%	1.86
Junior	554	56.0%	1.89
Senior	244	24.7%	1.60

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

	Number	Percent	Mean
Elective	80	8.0%	1.63
LSP	663	65.9%	1.91
Major	197	20.0%	1.39
Minor	66	6.6%	1.91

Maj.	Count			Mean Score			% Competent			
	2008	2009	2010	2008	2009	2010	2008	2009	2010	
Arts and Letters	ART	34	47	40	1.79	2.02	1.98	55%	72%	73%
	CML	21	23	34	2.24	1.83	2.12	76%	61%	74%
	ENG	113	105	112	1.96	2.04	1.93	62%	71%	68%
	LING	9	8	8	2.44	2.63	1.88	67%	88%	50%
	MUS	37	42	29	1.84	1.88	2.24	62%	62%	79%
	THEA	7	18	14	1.14	2.00	1.86	27%	78%	64%
	AAL	221	243	237	1.93	2.00	2.00	61%	70%	70%
Business	ACCT	58	67	94	1.57	1.55	1.69	53%	52%	60%
	BSAD	133	113	117	1.46	1.50	1.64	46%	47%	54%
	BUS	191	180	211	1.49	1.52	1.66	48%	49%	56%
Hlth.Sci.and Ed.	CMDS	28	36	38	1.61	1.50	1.58	54%	47%	58%
	ES	47	64	71	1.53	1.59	1.59	47%	55%	49%
	HLTH	31	45	36	1.74	1.76	1.75	68%	60%	47%
	NU	38	34	30	1.45	1.38	1.60	42%	44%	57%
	HSE	144	179	175	1.57	1.58	1.62	51%	53%	52%
Social and Cultural Studies	COMM	53	75	70	1.60	1.93	1.91	53%	71%	66%
	ECON	13	11	10	1.92	1.55	2.00	69%	55%	60%
	HIST	60	46	57	1.80	2.13	1.81	60%	76%	53%
	JUST	36	38	40	1.56	1.42	1.33	50%	50%	48%
	PHRE	16	6	8	2.00	2.67	2.38	69%	83%	75%
	POL	38	45	32	1.97	2.16	1.72	63%	76%	53%
	SOAN	16	27	15	1.94	2.11	1.73	75%	81%	53%
	SCS	232	248	232	1.78	1.95	1.77	59%	70%	57%
Sciences and Mathematics	AGSC	22	17	14	1.27	1.88	1.79	36%	65%	50%
	BIOL	77	112	113	1.79	1.84	1.89	55%	62%	65%
	CHEM	27	31	25	1.70	1.65	1.44	56%	58%	40%
	CS	13	17	19	1.23	1.41	1.84	46%	53%	63%
	MATH	24	37	25	1.54	1.81	1.96	56%	62%	56%
	PHYS	8	9	15	1.75	2.00	1.80	75%	67%	60%
	PSYC	109	105	86	1.48	1.67	1.76	45%	54%	59%
	SAM	280	328	297	1.57	1.75	1.81	50%	59%	59%
	IDSM	8	8	7	3.13	1.88	2.00	100%	75%	71%
	All	1076	1186	1156	1.69	1.78	1.79	55%	56%	59%

Twenty two percent of submissions dealt in some way with gender issues, 32% with international issues, 23% with race, and 30% dealt with class.

Prefix	Count			Mean Score			% Competent		
	2008	2009	2010	2008	2009	2010	2008	2009	2010
JINS	645	553	617	1.91	2.03	1.96	64%	72%	67%
ENG	53	40	60	1.19	1.39	1.77	28%	44%	62%
PHRE	33	35	50	1.21	1.76	1.52	36%	54%	48%
COMM	27	30	28	1.30	1.88	1.57	37%	72%	50%
BSAD	29	26	29	1.00	1.26	1.45	31%	44%	48%
HIST	19	19	23	1.32	1.83	1.70	37%	65%	52%
BIOL	10	21	22	1.10	1.33	1.36	30%	48%	45%
MUSI	19	11	23	1.47	1.12	1.52	53%	35%	48%
JUST	15	8	18	1.60	1.36	1.89	60%	55%	61%
PSYC	17	12	18	1.35	1.06	1.44	35%	29%	44%
ART	11	13	18	2.09	1.88	2.39	64%	63%	83%
ED	9	10	15	1.33	1.08	1.73	33%	23%	60%
ES	9	13	15	0.89	1.44	1.33	22%	50%	47%
ECON	18	10	15	1.06	1.64	1.47	22%	36%	53%
SOAN	7	13	14	1.86	2.00	1.71	71%	79%	50%
POL	19	17	13	1.58	1.72	2.08	47%	56%	69%
SPAN	16	12	12	1.25	2.07	1.58	31%	67%	50%
CS	2	6	9	2.00	1.83	1.67	50%	67%	44%
HLTH	3	5	8	1.00	0.63	0.88	33%	0%	0%
IDSM	7	5	8	3.00	2.17	1.88	100%	67%	63%
NASC	1	4	7	3.00	1.25	0.86	100%	25%	29%
ACCT	3	12	8	0.66	0.83	1.25	0%	17%	38%
ENVS	5	3	6	1.60	1.25	1.67	40%	50%	33%
THEA	6	7	7	1.17	2.00	1.29	33%	71%	43%
GEOG	2	6	5	2.50	2.50	1.00	100%	83%	40%
SED	0	1	5		0.00	1.20		0%	40%
NU	9	14	5	0.44	1.19	2.20	0%	31%	80%
STAT	6	4	5	0.50	1.00	2.00	17%	17%	40%
EUR	4	3	4	2.25	2.00	3.00	75%	67%	100%
MATH	11	5	5	1.27	0.80	1.40	53%	20%	40%
AGSC	10	6	3	1.60	1.63	2.33	50%	63%	67%
Other	51	262	84	1.59	1.61	1.93	52%	29%	66%
All	1076	1186	1159	1.69	1.78	1.79	55%	56%	59%

same as last year, and much higher than scores for the previous few years (which were below 0.5)

The increase in double-read submissions also lead 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.

JINS courses continue to be 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. Our hope was for this to allow more students to have the best work submitted, and allow for broad assessment of the JINS program.

Building on recent success in increasing inter-rater reliability in interdisciplinary rating, we continued to use a focus on thesis analysis and discussion as part of the training process.

To measure inter-rater reliability, 558 submissions were read and scored by two readers. Mean scores overall stayed the same, but interreader reliability increased substantially, 91% of second readers assigning either a score within one rating of the first scorer. Only one submissions differed by 4 levels (for instance, a first reader score assigning a score of zero while the other scored the submission as a four).

A Pearson’s correlation between the two readers was found to be 0.642, a significant relationship, about the

2 nd Reader Difference	%
Same Score	49.1%
Off by +/-1	41.9%
Off by +/-+2	6.8%
Off by +/-+3	2.0%
Off by +/-+4	0.2%

Historical Analysis

The following prompt was reviewed for 853 submissions, approximately three-quarters of all 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.

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

Historical Analysis at a Glance

- Number of reviewed submissions: **853**
- Median score (on a 0-3 scale): **2.0**
- Mean score (on a 0-3 scale): **1.50**
- Highest scoring "school": **Social and Cultural Studies**
- Most frequent source (course): **HIST 105**
- Most frequent Source: (discipline): **History**
- Trend: **Stable Scores**

HISTORICAL SOURCES

Top Ten Courses

HIST 105: U.S. History II	40
HIST 104: U.S. History I	36
HIST 131: World Civ. before 500 AD	27
HIST 133: World Civ. since 1700	10
PHRE185: Exploring Religions	15
ENG 190: Writing as Critical Thinking	12
JINS 316: Portrayals of Women	11
JINS 369: Why We Fight	11
ART 222: Caves to Cathedrals	14

Prefix	Count			Mean Score			% Competent		
	2008	2009	2010	2008	2009	2010	2008	2009	2010
HIST	369	326	276	1.87	1.83	1.80	67%	64%	63%
JINS	159	122	96	1.57	1.738	1.66	56%	62%	59%
ENG	79	76	59	1.18	1.342	1.14	38%	43%	27%
ART	41	48	39	1.85	1.729	2.23	68%	60%	82%
BSAD	27	21	34	0.96	0.905	1.09	30%	24%	38%
PHRE	61	46	35	1.26	0.8696	1.43	43%	26%	46%
POL	31	34	26	1.84	2.088	1.92	58%	76%	77%
MUSI	32	39	24	1.41	1.513	1.21	44%	54%	33%
COMM	28	31	22	1.39	1.516	1.14	46%	48%	23%
ECON	26	21	21	1.73	1.619	1.48	58%	57%	48%
BIOL	11	14	16	1.18	1.643	0.69	45%	57%	19%
JUST	10	11	15	1.30	1.091	1.00	30%	27%	27%
NASC	11	10	14	1.82	2.2	1.21	64%	90%	29%
PSYC	13	15	14	0.46	0.667	0.71	0%	7%	21%
ED	9	13	8	1.22	1.154	1.25	22%	31%	50%
ES	11	10	8	0.7273	0.9	0.88	9%	20%	25%
HLTH	4	6	8	1.25	1.167	1.00	25%	33%	25%
SOAN	13	25	7	1.54	1.28	0.86	54%	48%	29%
ACCT	8	10	6	1.13	1.00	0.33	25%	20%	0%
CHIN		1	6		0	0.33			0%
FREN		4	6		2.75	1.83		100%	67%
THEA	9	8	6	1.78	2	2.17	78%	88%	83%
MS	5	5	5	1.60	0.8	0.8	40%	20%	0%
Other	125	157	102	1.52	1.31	1.29	53%	43%	43%
All	1082	1053	853	1.58	1.56	1.50	55%	53%	50%

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

Maj.	Count			Mean Score			% Competent			
	2008	2009	2010	2008	2009	2010	2008	2009	2010	
Arts and Letters	ART	34	45	27	1.79	1.78	1.96	71%	64%	70%
	CML	21	22	25	2.19	1.68	2.00	81%	64%	80%
	ENG	112	96	77	1.62	1.77	1.61	56%	60%	52%
	LING	9	7	4	1.67	1.86	2.00	56%	71%	75%
	MUS	38	39	16	1.55	1.74	1.44	55%	69%	44%
	THEA	7	16	10	1.71	1.69	1.60	57%	69%	50%
	AAL	221	225	159	1.69	1.76	1.72	61%	64%	59%
Business	ACCT	58	60	72	1.34	1.42	1.46	45%	45%	49%
	BSAD	138	107	81	1.49	1.30	1.22	52%	39%	41%
	Bus	196	167	153	1.45	1.34	1.33	50%	41%	44%
Hlth.Sci.and Ed.	CMDS	28	35	29	1.25	1.26	1.34	43%	40%	48%
	ES	45	42	51	1.16	1.10	1.16	33%	33%	29%
	HLTH	31	27	29	1.29	1.19	1.17	39%	37%	41%
	NU	37	34	23	1.24	1.12	1.30	43%	41%	39%
	HSE	141	138	132	1.23	1.16	1.23	39%	38%	38%
Social and Cultural Studies	COMM	52	74	55	1.63	1.66	1.38	52%	58%	44%
	ECON	13	10	8	1.62	1.50	1.75	54%	50%	63%
	HIST	60	42	44	2.53	2.57	2.68	92%	90%	93%
	JUST	35	35	33	1.40	1.43	1.33	43%	49%	39%
	PHRE	16	6	7	1.81	1.67	1.86	75%	67%	57%
	POL	38	45	26	2.16	2.13	2.04	79%	78%	77%
	SOAN	17	27	10	1.88	1.70	1.30	77%	63%	50%
	SCS	231	239	183	1.95	1.87	1.81	69%	67%	61%
Sciences and Mathematics	AGSC	23		10	1.22		1.30	44%		40%
	BIOL	79	106	88	1.46	1.67	1.34	52%	58%	43%
	CHEM	27	13	19	1.00	0.92	1.26	30%	31%	42%
	CS	14	15	12	1.29	1.33	1.50	43%	40%	58%
	MATH	25	33	19	1.52	1.27	1.26	48%	36%	47%
	PHYS	8	9	12	2.00	1.22	1.17	75%	22%	42%
	PSYC	109	100	60	1.54	1.37	1.44	52%	46%	48%
	SAM	285	276	220	1.44	1.45	1.35	49%	48%	45%
IDSM	8	8	6	2.50	1.75	1.83	88%	75%	67%	
All	1082	1053	853	1.58	1.56	1.50	55%	53%	50%	

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 9% of the total number.

Submissions in this category were more widely distributed across year than they were for Critical Thinking or Interdisciplinary: 23% of the Historical submissions were produced in the senior year, 44% in the junior year, 19% in the sophomore year and 17% in the first year.

Nearly half of the submitted works were produced in LSP classes, 34% were assignments in major courses, 11% were from elective courses and 10% were produced in classes taken to fulfill minor requirements. 34% dealt with international perspectives, 29% with race, 24% with issues of gender, and 31% with class issues. After last year's change to allow students to self-identify these issues as well as reviewers, these percents continue to be higher than previous years

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.

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

	Year	Count	Major		Minor		LSP		Elective		Out-of-Class	
		2010	Yes	Pct.	Yes	Pct.	Yes	Pct.	Yes	Pct.	Yes	Pct.
Arts and Letters	ART	34	17	50.0%	1	2.9%	4	11.8%	2	5.9%	10	29.4%
	CML	27	12	44.4%	3	11.1%	3	11.1%	2	7.4%	7	25.9%
	ENG	102	64	62.7%	6	5.9%	6	5.9%	5	4.9%	21	20.6%
	LING	7	2	28.6%	1	14.3%	2	28.6%			2	28.6%
	MUS	24	16	66.7%			3	12.5%			5	20.8%
	THEA	11	1	9.1%	1	9.1%	1	9.1%	2	18.2%	6	54.5%
	SAL	205	112	54.6%	12	5.9%	19	9.3%	11	5.4%	51	24.9%
Business	ACCT	83	36	43.4%	5	6.0%	18	21.7%	3	3.6%	21	25.3%
	BSAD	98	47	48.0%	4	4.1%	18	18.4%	7	7.1%	22	22.4%
	BUS	181	83	45.9%	9	5.0%	36	19.9%	10	5.5%	43	23.8%
Hlth. Sci. and Ed.	CMDS	35	19	54.3%	1	2.9%	3	8.6%	4	11.4%	8	22.9%
	ES	63	37	58.7%			5	7.9%	6	9.5%	15	23.8%
	HLTH	29	13	44.8%	1	3.4%	1	3.4%	1	3.4%	13	44.8%
	NU	25	17	68.0%			4	16.0%			4	16.0%
	HSE	152	86	56.6%	2	1.3%	13	8.6%	11	7.2%	40	26.3%
Social and Cultural Studies	COMM	62	37	59.7%	4	6.5%	5	8.1%	5	8.1%	11	17.7%
	ECON	9	3	33.3%	2	22.2%			1	11.1%	3	33.3%
	HIST	49	29	59.2%	3	6.1%	4	8.2%			13	26.5%
	JUST	37	18	48.6%	2	5.4%	6	16.2%	1	2.7%	10	27.0%
	PHRE	7	3	42.9%			1	14.3%	1	14.3%	2	28.6%
	POL	30	22	73.3%	1	3.3%	2	6.7%	1	3.3%	4	13.3%
	SOAN	12	6	50.0%	1	8.3%	1	8.3%	3	25.0%	1	8.3%
	SCS	206	118	57.3%	13	6.3%	19	9.2%	12	5.8%	44	21.4%
Sciences and Mathematics	AGSC	11	1	9.1%	1	9.1%	1	9.1%			8	72.7%
	BIOL	100	27	27.0%	7	7.0%	19	19.0%	20	20.0%	27	27.0%
	CHEM	20	10	50.0%	3	15.0%	2	10.0%	1	5.0%	4	20.0%
	CS	15	8	53.3%			1	6.7%	1	6.7%	5	33.3%
	MATH	20	3	15.0%			4	20.0%	3	15.0%	10	50.0%
	PHYS	15	9	60.0%			1	6.7%	2	13.3%	3	20.0%
	PSYC	80	34	42.5%	8	10.0%	11	13.8%	7	8.8%	20	25.0%
	SAM	261	92	35.2%	19	7.3%	39	14.9%	34	13.0%	77	29.5%
IDSM	8	3	37.5%			1	12.5%			4	50.0%	
All	1013	494	48.8%	55	5.4%	127	12.5%	78	7.7%	259	25.6%	

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, or 6) was a collaborative effort. “Collaborative” was replaced on the online system by “creative.” “Enjoyable” also appeared on the paper system. In any system, if none of these was a good representation of the student’s reasoning, a more detailed explanation was given.

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

Year	Count 2010	Pers. Best		Pers. Goals		Pers. Growth		Challenging		Collaborative		Professional		
		Yes	Pct.	Yes	Pct.	Yes	Pct.	Yes	Pct.	Yes	Pct.	Yes	Pct.	
Arts and Letters	ART	40	11	28%	14	35%	20	50%	15	38%	3	8%	10	25%
	CML	34	14	41%	9	26%	13	38%	15	44%	1	3%	4	12%
	ENG	112	45	40%	28	25%	55	49%	43	38%	3	3%	16	14%
	LING	8	3	38%	2	25%	3	38%	4	50%			1	13%
	MUS	29	15	52%	11	38%	13	45%	9	31%	4	14%	8	28%
	THEA	14	2	14%	2	14%	7	50%	2	14%	2	14%	5	36%
	AAL	237	90	38%	66	28%	111	47%	88	37%	13	5%	44	19%
Business	ACCT	94	22	23%	16	17%	26	28%	29	31%	13	14%	20	21%
	BSAD	117	33	28%	25	21%	30	26%	37	32%	27	23%	41	35%
	BUS	211	55	26%	41	19%	56	27%	66	31%	40	19%	61	29%
Hlth.Sci.and Ed.	CMDS	38	11	29%	10	26%	16	42%	14	37%	5	13%	20	53%
	ES	71	17	24%	20	28%	27	38%	19	27%	10	14%	25	35%
	HLTH	36	8	22%	7	19%	18	50%	5	14%	10	28%	17	47%
	NU	30	5	17%	3	10%	14	47%	10	33%	5	17%	13	43%
	HSE	175	41	23%	40	23%	75	43%	48	27%	30	17%	75	43%
Social and Cultural Studies	COMM	70	29	41%	11	16%	23	33%	20	29%	5	7%	21	30%
	ECON	10	2	20%	1	10%	4	40%	3	30%			1	10%
	HIST	57	23	40%	15	26%	18	32%	23	40%	3	5%	10	18%
	JUST	40	11	28%	14	35%	14	35%	13	33%	7	18%	8	20%
	PHRE	8	2	25%	3	38%	5	63%	1	13%			1	13%
	POL	32	14	44%	9	28%	15	47%	18	56%			7	22%
	SOAN	15	1	7%	2	13%	9	60%	5	33%	2	13%	5	33%
	SCS	232	82	35%	55	24%	88	38%	83	36%	17	7%	53	23%
Sciences and Mathematics	AGSC	14	4	29%	3	21%	5	36%	7	50%			5	36%
	BIOL	113	25	22%	16	14%	51	45%	37	33%	15	13%	24	21%
	CHEM	25	7	28%	3	12%	6	24%	8	32%	4	16%	2	8%
	CS	19	8	42%	5	26%	8	42%	9	47%	1	5%	6	32%
	MATH	25	8	32%	10	40%	11	44%	11	44%	3	12%	1	4%
	PHYS	15	5	33%	3	20%	2	13%	7	47%				
	PSYC	86	24	28%	19	22%	32	37%	29	34%	14	16%	30	35%
	SAM	297	81	27%	59	20%	115	39%	108	36%	37	12%	68	23%
IDS	7	5	71%	4	57%	3	43%	5	71%	1	14%	1	14%	
All	1159	349	30%	265	23%	448	39%	398	34%	138	12%	302	26%	

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.

Thirty-nine percent of the "most satisfying experiences" occurred in the senior year, 33% in the junior year, 11% in the sophomore year, and 5% in the first year. 12% 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 2010, 87.14% 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 assemble, 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 2010, 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 is highly representative of the process students describe:

When putting together this portfolio I compiled the papers and works that might work for each of the prompts. After going through each one, I decided which was most fitting for the prompt that I was also proud of. I worked on it over a course of time, spending approximately three to four hours total on the project.

Some students reported difficulty in finding papers because their computers had crashed or they had not remembered to save their work, but many also reported that choosing the best work for each prompt was quite simple.

Cover Letter at a Glance

- Number of submissions: **1010**
- 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

I went about compiling this portfolio in around two hours. I had all of my papers from past classes that were needed already on my computer, so uploading them was relatively quick and easy.

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.

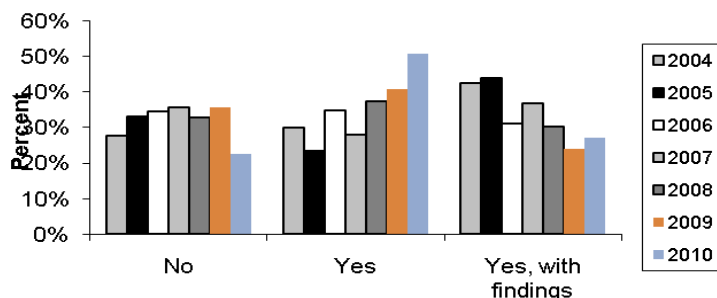
When students do share the results of self-reflection, many comment on improvement in their writing. For example, one student writes

Looking back, this project allowed me to see my own growth and recognize the student that I became and transitioned to during my time here. I am thankful for all the classes that I have taken while at Truman, because each and every one of them has shaped me into the student that I am today. I will be able to take all that I have learned from Truman and carry it with me to my future endeavors.

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 difference 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.

	Year	Count	Evidence of Self-reflection			
		2010	No	Yes	Findings	% Reflect
Arts and Letters	ART	34	8	12	11	48.9%
	CML	27	3	13	10	95.8%
	ENG	102	14	56	28	80.0%
	LING	7	2	3	2	62.5%
	MUS	24	8	9	3	28.6%
	THEA	11	1	3	5	44.4%
	SAL	205	36	96	59	63.5%
Business	ACCT	83	20	38	21	86.8%
	BSAD	98	22	49	21	61.9%
	BUS	181	42	87	42	71.3%
Hlth. Sci. and Ed.	CMDS	35	12	15	8	63.9%
	ES	63	15	31	14	70.3%
	HLTH	29	8	14	7	46.7%
	NU	25	6	14	3	50.0%
	HSE	152	41	74	32	59.2%
Social and Cultural Studies	COMM	62	7	42	13	72.4%
	ECON	9	3	3	1	36.4%
	HIST	49	8	24	16	85.1%
	JUST	37	12	14	9	60.5%
	PHRE	7	2	2	2	66.7%
	POL	30	6	13	9	46.8%
	SOAN	12	0	8	2	37.0%
	SCS	206	38	106	52	62.7%
Sciences and Mathematics	AGSC	11	2	6	3	52.9%
	BIOL	100	17	45	36	71.7%
	CHEM	20	10	7	3	32.3%
	CS	15	5	6	2	44.4%
	MATH	20	7	7	5	32.4%
	PHYS	15	4	7	3	111.1%
	PSYC	80	11	45	22	63.8%
	SAM	261	56	123	74	59.7%
IDSM	5	2	2	1	37.5%	
All	1010	215	488	260	62.6%	

Self Reflection in Cover Letters, 2004-2009



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

I have learned a vast amount about, not only the way in which I view the world and the way the world works in general, but I have also learned more about myself than I could have ever gained going anywhere else.

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 had made findings has decreased. It might be that as the cover letter has moved on line, 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.

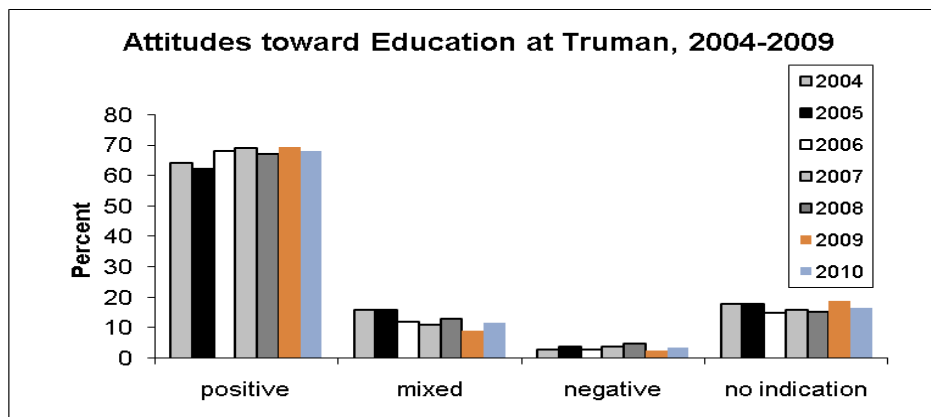
ATTITUDE TOWARD EDUCATION AT TRUMAN

Cover Letter Content Analysis, by First Major, cont.

Year	Count	Attitude toward Education at Truman					Attitude toward Education in the Major					
		Neg.	Mix.	Pos.	None	W% Pos	Neg.	Mix.	Pos.	None	W% Pos	
Arts and Letters	ART	34	2	4	20	8	84.6%	1	4	15	14	85.0%
	CML	27	4	2	17	4	78.3%	0	1	7	19	93.8%
	ENG	102	0	11	74	17	93.5%	0	8	26	68	88.2%
	LING	7	0	2	4	1	83.3%	0	1	0	6	50.0%
	MUS	24	0	2	13	9	93.3%	0	2	9	13	90.9%
	THEA	11	0	0	8	3	100.0%	0	0	3	8	100.0%
	SAL	205	6	21	136	42	89.9%	1	16	60	128	88.3%
Business	ACCT	83	2	8	63	10	91.8%	0	5	28	50	92.4%
	BSAD	98	5	20	60	13	82.4%	2	7	25	64	83.8%
	BUS	181	7	28	123	23	86.7%	2	12	53	114	88.1%
Hlth. Sci. and Ed.	CMDS	35	0	4	27	4	93.5%	0	0	12	23	100.0%
	ES	63	2	4	45	12	92.2%	1	1	30	31	95.3%
	HLTH	29	2	2	22	3	88.5%	0	1	10	18	95.5%
	NU	25	0	0	17	8	100.0%	0	1	10	14	95.5%
	HSE	152	4	10	111	27	92.8%	1	3	62	86	96.2%
Social and Cultural Studies	COMM	62	1	5	52	4	94.0%	1	0	23	38	95.8%
	ECON	9	1	0	3	5	75.0%	0	1	0	8	50.0%
	HIST	49	2	9	32	6	84.9%	3	3	9	34	70.0%
	JUST	37	5	4	23	5	78.1%	1	1	14	21	90.6%
	PHRE	7	1	1	4	1	75.0%	0	1	2	4	83.3%
	POL	30	3	3	20	4	82.7%	4	2	9	15	66.7%
	SOAN	12	0	2	6	4	87.5%	0	1	3	8	87.5%
	SCS	206	13	24	140	29	85.9%	9	9	60	128	82.7%
Sciences and Mathematics	AGSC	11	0	0	9	2	100.0%	0	0	5	6	100.0%
	BIOL	100	3	11	75	11	90.4%	1	8	23	68	84.4%
	CHEM	20	1	3	9	7	80.8%	0	1	2	17	83.3%
	CS	15	0	2	8	5	90.0%	0	4	2	9	66.7%
	MATH	20	0	8	6	6	71.4%	1	3	0	16	37.5%
	PHYS	15	0	2	7	6	88.9%	0	2	6	7	87.5%
	PSYC	80	2	9	60	9	90.8%	2	6	15	57	78.3%
	SAM	261	6	35	174	46	89.1%	4	24	53	180	80.2%
IDSM	5		0	4	1	100.0%			3	2	100.0%	
All	1010	36	118	688	168	88.7%	17	64	291	638	86.8%	

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.

Truman has been a great part of my life. I have loved my time here and would not trade it if I could. The classes I have taken have taught me to think about things from a multitude of viewpoints and to look for the deeper implications of every situation.

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.

Other students emphasized co-curricular activities .

The thing I liked most about Truman was the experience and people I met through my scholarship /institutional jobs.

I also feel very fortunate for the experiences I have been afforded by Truman . . . working at the Joseph Baldwin Academy every summer, the chance to study abroad, undergraduate research, and the ability to be involved with numerous organizations on campus.

Overall, my experiences at Truman have been positive ones. I am very active in Greek Life here and I have been able to meet many people both faculty and students alike and forge very meaningful friendships. I enjoyed meeting and working with administrators and professors to improve Greek Life on Truman's campus.

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 learned that my academic career at Truman has been highly interdisciplinary and that, oftentimes, the classes I most enjoyed were not necessarily part of my major. Most of my papers were for political science, English, and history, and the ones I most enjoyed writing incorporated different disciplines.

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.

ATTITUDES TOWARD ASSESSMENT AT TRUMAN

Cover Letter Content Analysis, by First Major

	Year	Count	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	34	3	8	17	6	75.0%	1	4	6	23	72.7%
	CML	27	3	2	16	6	81.0%	5	1	4	17	45.0%
	ENG	102	6	36	43	17	71.8%	11	17	9	65	47.3%
	LING	7	4	1	1	1	25.0%	3	3	0	1	25.0%
	MUS	24	1	10	9	4	70.0%	1	2	5	16	75.0%
	THEA	11	2	1	4	4	64.3%	1	2	0	8	33.3%
	SAL	205	19	58	90	38	71.3%	22	29	24	130	51.3%
Business	ACCT	83	13	21	37	12	66.9%	4	5	17	57	75.0%
	BSAD	98	19	29	40	10	61.9%	8	18	16	56	59.5%
	BUS	181	32	50	77	22	64.2%	12	23	33	113	65.4%
Hlth. Sci. and Ed.	CMD5	35	7	4	23	1	73.5%	4	5	7	19	59.4%
	ES	63	11	18	29	5	65.5%	4	6	12	41	68.2%
	HLTH	29	5	6	13	5	66.7%	0	6	9	14	80.0%
	NU	25	3	8	9	5	65.0%	0	0	3	22	100.0%
	HSE	152	26	36	74	16	67.6%	8	17	31	96	70.5%
Social and Cultural Studies	COMM	62	4	10	42	6	83.9%	8	6	12	36	57.7%
	ECON	9	2	2	2	3	50.0%	1	0	1	7	50.0%
	HIST	49	5	18	19	7	66.7%	5	7	6	31	52.8%
	JUST	37	9	8	16	4	60.6%	5	4	3	25	41.7%
	PHRE	7	2	0	3	2	60.0%	1	1	0	5	25.0%
	POL	30	6	7	14	3	64.8%	3	2	3	22	50.0%
	SOAN	12	1	4	2	5	57.1%	1	1	1	9	50.0%
	SCS	206	29	49	98	30	69.6%	24	21	26	135	51.4%
Sciences and Mathematics	AGSC	11	1	2	6	2	77.8%	0	1	3	7	87.5%
	BIOL	100	12	27	46	15	70.0%	8	9	17	66	63.2%
	CHEM	20	7	3	7	3	50.0%	2	2	3	13	57.1%
	CS	15	2	3	4	6	61.1%	1	3	0	11	37.5%
	MATH	20	3	8	5	4	56.3%	2	4	2	12	50.0%
	PHYS	15	2	4	5	4	63.6%	2	1	1	11	37.5%
	PSYC	80	14	19	39	8	67.4%	10	10	9	51	48.3%
	SAM	261	41	66	112	42	66.2%	25	30	35	171	55.6%
IDSM	5	2	1	2	0	50.0%	0		1	4	100.0%	
All	1010	149	260	453	148	67.6%	91	120	150	649	58.2%	

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.

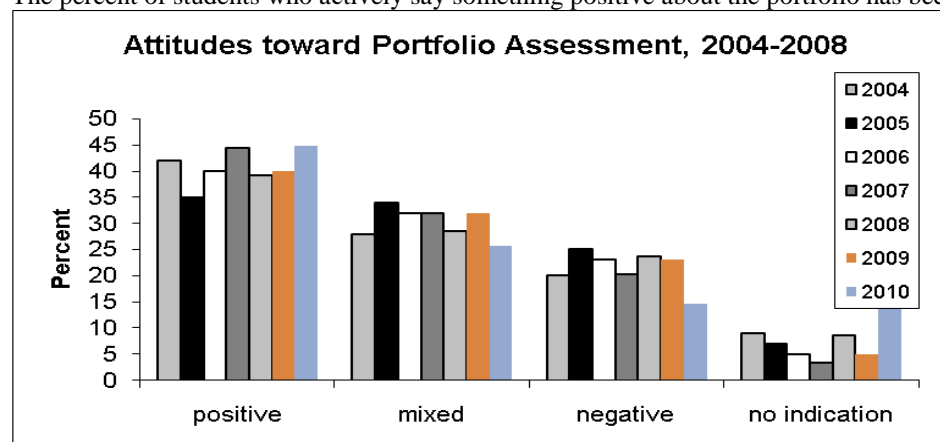
Those students who made positive comments often had brief remarks about how assessment is good for the university. Those with negative comments were often about how they were frustrated by assessments that had little impact on them personally. For example:

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.

The process of putting my portfolio probably took about an hour and a half. I went through each category and tried to pick out documents that I thought fit this area of emphasis. It took a while to go through all my documents but I'm very confident the ones I picked reflect each area. I really enjoyed looking through my past works, some bad some good. It allowed me to reflect on what I have done over the last four and a half years. Although I wasn't very excited about completing this project, I think it was a process that I could use to see how I have progressed a student and as a person.

[The Portfolio] 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 didn't 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 while 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.

This portfolio has given me the chance to reflect back on my experiences at Truman. When I first began my last year at this institution, I panicked because I felt as though I had not truly gained all there is to learn from my liberal arts education. I felt as though I may have cheated the system, done merely enough to get passing grades and move on. However, I found, through composing this portfolio, that I have gained so much more from my Truman experience.

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.

Creative Work and Reflection.

New in 2010 was the addition of a temporary prompt looking at creativity. Creativity is specifically mentioned several times in guiding documents as an important outcome for our students, but is not specifically a part of Truman's Liberal Studies Program. In the final report of the Commission on Undergraduate Curriculum issued in the summer of 2009, the commission recommended that a new university body investigate a working definition of creativity and make suggestions as to how a creative expression requirement could be implemented (p 14). That committee was not created; instead, the portfolio project was asked to investigate creativity as a medium-term special project. This prompt was not enforced as a graduation requirement (students could instead submit instead the now-obsolete prompts for Aesthetic Reasoning and Scientific Reasoning); of the 1100 portfolios received, 854 students completed this prompt.

Students graduating in 2010 were asked to submit their most creative endeavor at Truman in response to the following prompt:

Please describe or 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 creative experience you had or worked on while at Truman. If you don't have an artifact that would represent or demonstrate the experience, please describe the artifact and experience below.

Students were also asked to describe the work, especially if an artifact was not included, as well as the circumstances under which it was creative; and to describe why the work was, in fact, creative.

Faculty/Staff reviewers were asked to answer three questions:

- 1) Did the student engage in self-reflection? (0 = no, 1 = minimal, 2 = yes, with findings)
- 2) Did the student demonstrate an understanding of creativity?
- 3) Do you think the work demonstrates creativity?

The second and third question asked reviewers to, "Circle a number to rate these from a 1 (no demonstration) to 5 (clearly demonstrated)." This scale is not like others used by the portfolio project; this variation was deliberate, to highlight the fact that these measures are more subjective than others used by the portfolio.

Faculty were also asked to perform a simple content analysis as to why the student thought the work was creative. A list of commonly expected reasons were given, divided into two categories by whether or not these reasons were true creativity or reflecting some other aspect of critical thinking. The list of supplied reasons is included below.

Why does the student believe this submission was creative (check all that apply)?	
"True Creativity"	"Other explanations of Creativity"
<input type="checkbox"/> Created a piece of art (music, poetry, etc)	<input type="checkbox"/> Demonstrated mastery (practiced/learned a skill)
<input type="checkbox"/> Gave a creative performance	<input type="checkbox"/> Worked without supervision
<input type="checkbox"/> Made meaning in a creative way.	<input type="checkbox"/> Put a lot of effort into the project.
<input type="checkbox"/> Solved a problem in a creative way.	<input type="checkbox"/> Grew as an individual
<input type="checkbox"/> Made something new or novel	<input type="checkbox"/> Solved an interesting problem
<input type="checkbox"/> Applied knowledge in a creative way	<input type="checkbox"/> Took a project from start to finish
<input type="checkbox"/> Worked outside of a usual classroom setting.	<input type="checkbox"/> Found project satisfying
<input type="checkbox"/> Created a framework or methodology	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Other: _____	

While a full analysis has not been done on this data at this time, summary statistics of the two Likert scale questions show a wide dispersion of scores, as found by faculty/staff reviewers.

Demonstrated	Understanding of Creativity	Submission thought to demonstrate creativity
(no demonstration) 1	21.2%	21.4%
2	21.6%	18.4%
3	22.5%	22.4%
4	22.7%	22.2%
(clearly demonstrated) 5	12.0%	15.6%

Faculty who analyzed the reasons given found that roughly 21.9% did not give any “true” definition of creativity, while 36.7% gave more than one “true” definition. The remaining 41.4% gave one “true creativity” reason. This matches very well the percents who engaged in no reflection (20.0%), minimal reflection (47.3%), or reflection with findings (27.0%).

We also looked to see where submissions came from, and found that submissions from upper-level classes were more likely to demonstrate creativity in both understanding and demonstration. Non-course submissions also tended to score high in both categories.

In addition to the data collected as part of this prompt, the portfolio evaluators engaged in significant discussion about creativity, how it is/should/could be a part of the Truman experience, and talked about ways to increase creative thinking in our courses. While not a formal curriculum development, the engagement of over sixty faculty in this process is a good start to the process.

For the 2011 portfolio, the prompt has been tightened to encourage students to submit something that is more likely to meet a “true” definition of portfolio. This spring, the portfolio office plans to do further analysis of this data so help campus discussions of creativity.

Transformational Experiences Questionnaire

Also new in 2010 was the addition of a questionnaire that asks students to reflect, describe, and rate experiences that led them to a transformation. Two versions of this questionnaire were given, a pilot version given to students who submitted their portfolio in fall 2009 and winter 2010, and a revised version given to those who submitted their portfolio in spring/summer 2010. The change was the result of discussions held as part of the University Conference Day in February 2010; the revised version of the instrument reflected feedback obtained at that time, as well as responses from the pilot instrument and went live on February 24, 2010.

In both cases, students were given a definition of transformative learning from literature on the theory of Transformative Learning (Mezirow, 1978)

Transformative learning occurs when an educational experience that includes reflection results in a profound change in the way you think and/or behave relative to what you have learned.

In the earlier version of the instrument, students were then asked if they had such an experience. If yes, they were asked to describe up to three such experiences. A list of common sources of such experiences were given, including four commonly used “powerful” experiences (Study Abroad, Undergraduate Research, Service Learning, and Internships), and several others, including Leadership and student-led learning, as well as an “other” choice. A two-page summary report was distributed at that meeting and it and a summary of responses from the university conference proceedings are available.

The revised version instead began with the boxed definition and then asked if students had participated in each of the above-mentioned six transformational activities. In addition, students were asked if they had a

transformational experience outside of those areas, specifically asked if such experienced happened inside or outside a classroom setting.

The revised version did not show significantly different responses to common questions as the pilot study. One limitation of the revised instrument is that several majors, notably Computer Science, Agricultural Sciences, and Art only offer the capstone experiences that lead to portfolio submission in the fall semester. As such, few students from those majors are in the population that completed the revised version, and are oversampled in the pilot version from the fall.

Preliminary analysis of the revised instrument shows:

- 1) 80% of students report transformational experiences while at Truman.
- 2) Study Abroad continues to be reported as particularly transformational.
- 3) On-campus Leadership opportunities and course-embedded experiences show transformational reports similar to study abroad for some students.
- 4) Research experiences and Service learning experiences are less consistent in transformational opportunities.

The following levels of transformational activities were reported by the students:

Experience	% Reporting	Avg. Rating (0-3 scale)
Study Abroad	21%	2.7
Service Learning	23%	2.0
Research	26%	2.2
Internship	24%	2.5
Leadership	35%	2.5
Student-led	7%	2.3
Course*	28%	2.8
Other*	8%	2.8

Current limitations of the instrument include:

- 1) Students who skip the TEQ entirely are sometimes indistinguishable from those who report no transformational activities. This may be as many as 5% of the students who graduated in the spring.
- 2) For “Course” and “Other” only those students with transformational experiences give a report, so average ratings are artificially high.
- 3) Terms were not fully defined, so students may have different ideas of “research,” “Service-learning,” and other terms used in this study.

Preliminary analysis has found differences in responses by gender, major, and GPA/ACT score.

Eighty-two percent of women and seventy-five percent of men report participation in a transformational activity throughout their time at Truman. Two-thirds of women and one-half of men report participation in one of the “big four” experiences, study abroad, service learning, research, and internships.

For students who did report transformational activities, the percent reporting transformation are:

	Very Transformative	None / Little	N
Study Abroad	78%	2.5%	159
Service Learning	35%	25%	178
Research	45%	20%	203
Internship	65%	8%	184
Student-Led Learning	60%	22%	50
Leadership	60%	8.8%	268
Course	78%	N/A	218
Other T.E.	81%	N/A	60

Overall, students were quite pleased with their transformational experiences. Over two-thirds of responses included detailed descriptions of their experiences and why they are transformational. Service learning and research

experiences were less consistent in leading to reported transformation; this could be due to a wide range of activities within those umbrellas or a lack of clarity regarding the definition of those experiences. Student-led learning had a high number of students reporting both especially high and especially low responses from participating students.

A breakdown by a student's first major also shows a significant influence on student experiences. The three under-represented majors are marked with an *

Transformational Experience Questionnaire - Experiences by First Major																
	Maj.	Count		Response	Percent Yes			Difference from Average								Count
		2010	TEQ	Rate	Any	One	Multiple	StuAbr	UGRes	SvcLrn	Intern	Ldrshp	StuLed	Course	Other	Avg.
Arts and Letters	ART*	40	3	8%	100%	67%	33%	13%	-25%	-21%	-23%	-34%	61%	7%	-7%	1.33
	CML	34	20	59%	85%	20%	65%	55%	5%	-11%	-13%	-9%	4%	-6%	3%	1.90
	ENG	112	81	72%	77%	30%	47%	3%	-6%	-8%	-12%	1%	-1%	9%	3%	1.53
	LING	8	5	63%	100%	40%	60%	40%	-25%	-1%	57%	46%	-6%	34%	13%	3.20
	MUS	29	25	86%	84%	48%	36%	-8%	15%	-17%	-23%	2%	6%	2%	5%	1.44
	THEA	14	10	71%	80%	40%	40%	0%	-5%	-11%	-3%	-14%	14%	4%	3%	1.50
	AAL	237	144	61%	81%	33%	47%	10%	-2%	-10%	-12%	0%	3%	6%	3%	1.62
Business	ACCT	94	67	71%	81%	33%	48%	4%	-18%	-1%	3%	11%	-3%	-8%	-6%	1.46
	BSAD	117	79	68%	73%	30%	43%	-3%	-19%	3%	8%	4%	-1%	-4%	-5%	1.48
	BUS	211	146	69%	77%	32%	45%	0%	-19%	1%	6%	8%	-2%	-6%	-5%	1.47
Hlth. Sci. and Ed.	CMDS	38	28	74%	68%	29%	39%	-13%	7%	-4%	-23%	-1%	1%	-12%	3%	1.21
	ES	71	16	23%	69%	19%	50%	-8%	18%	10%	33%	-21%	0%	-14%	-7%	1.75
	HLTH	36	23	64%	87%	9%	78%	6%	18%	65%	20%	-3%	-2%	-5%	-3%	2.61
	NU	30	28	93%	89%	29%	61%	19%	-4%	57%	2%	-19%	-2%	-19%	-7%	1.89
	HSE	175	95	54%	79%	22%	57%	2%	8%	33%	4%	-10%	-1%	-13%	-3%	1.84
Social and Cultural Studies	COMM	70	51	73%	76%	22%	55%	1%	-20%	-8%	24%	4%	-2%	13%	1%	1.76
	ECON	10	9	90%	89%	44%	44%	-9%	-3%	34%	-12%	0%	-6%	-4%	-7%	1.56
	HIST	57	42	74%	67%	24%	43%	-11%	-6%	-12%	-7%	-7%	-6%	-3%	5%	1.17
	JUST	40	28	70%	75%	25%	50%	-17%	-15%	-11%	16%	-1%	5%	2%	0%	1.43
	PHRE	8	8	100%	88%	38%	50%	17%	-13%	-9%	-11%	-34%	7%	24%	18%	1.63
	POL	32	16	50%	75%	19%	56%	-8%	-13%	-3%	2%	-2%	-6%	11%	12%	1.56
	SOAN	15	12	80%	92%	25%	67%	21%	-9%	37%	2%	-9%	2%	15%	-7%	2.17
	SCS	232	166	72%	76%	25%	51%	-4%	-13%	-3%	7%	-3%	-2%	7%	2%	1.55
Sciences and Mathematics	AGSC	14	8	57%	25%		25%	-8%	0%	-21%	-23%	-21%	-6%	-14%	-7%	0.63
	BIOL	113	88	78%	82%	25%	57%	-2%	17%	-7%	-11%	11%	0%	9%	0%	1.80
	CHEM	25	17	68%	76%	35%	41%	-9%	27%	-10%	-18%	2%	0%	-21%	-1%	1.35
	CS*	19	9	47%	78%	11%	67%	-20%	8%	-10%	32%	22%	-6%	-4%	4%	1.89
	MATH	25	18	72%	89%	44%	44%	2%	-3%	-10%	-1%	0%	5%	1%	4%	1.61
	PHYS	15	12	80%	83%	25%	58%	-4%	33%	-21%	-7%	-9%	-6%	7%	9%	1.67
	PSYC	86	64	74%	86%	30%	56%	-8%	32%	0%	6%	-9%	0%	-6%	-1%	1.80
	SAM	297	216	73%	81%	27%	54%	-5%	20%	-7%	-4%	2%	0%	0%	0%	1.70
IDSM	7	6	86%	100%		100%	30%	-9%	29%	10%	16%	44%	7%	26%	3.17	
All	1156	773	67%	79%	28%	51%	0%	0%	0%	0%	0%	0%	0%	0%	1.64	

A more complete analysis will be performed in the spring semester.

All students completing their portfolio in 2011 will complete the revised version of the TEQ, so we expect more complete and useful data next year.

Evaluator Feedback

Because the Portfolio project has a secondary goal of faculty development and campus discussion, each reading week ends with a broad discussion of curriculum, assessment, and ways to improve the Truman experience. In addition, each evaluator during the May sessions was asked to complete an online survey in the weeks following their participation in the portfolio review process. Although not a formal decision-making body, the presence of so many faculty and staff from across campus make this a valuable opportunity for discussion and sharing ideas across departments and schools.

Evaluators had a variety of helpful comments to improving the new prompts for Creativity and Speaking, and those comments will be shared with the assessment and portfolio committees.

As the experience had changed slightly (with slightly longer days, reorganized breaks, and a slightly higher daily stipend), evaluators were also asked about their experiences personally and their interaction with other faculty. The sessions themselves were overwhelmingly rated positively, and almost all faculty members said that they looked forward to returning to read in the future.

Several faculty evaluators mention that the process will directly improve their teaching.

“I came away from reading portfolios with several thoughts of how to modify my courses to focus more on the goals of the institutions and to provide my students with products from my courses to include in their portfolios. It was a meaningful experience for me to also see the quality of work that is being produced and expected for students across the institution.”

One suggestion mentioned by several evaluators was to encourage more interaction during breaks:

“I wish folks didn't immediately start reading e-mail, surfing the internet, chatting Facebook, etc. I think it interferes with the interactions at the breaks!”

Future Plans

Our guiding principles remain the same as last year.

- 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 our curriculum evolves, what do we need to measure now so that we will recognize changes once they happen?

As discussed in last year's *Assessment Almanac*, a new system is being implemented that allows students to submit work as they make it, throughout their Truman career. This new system has been pilot tested this fall and will be fully implemented in 2011 so that those who graduate after Summer 2011 will use the new system. Already, first-year students have been asked to use the file management system to submit papers from their *Eng190- Writing as Critical Thinking* class. In spring 2011, similarly embedded submissions will be requested of all students enrolled in JINS classes.

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 and we start implementing new prompts and other innovations, the portfolio project is well-placed to continue to be a jewel of Truman's assessment program and will continue to be seen as a national leader.