Chapter 8: PORTFOLIO ASSESSMENT

Portfolio Assessment

Who takes it?
All students must develop and submit a portfolio as a requirement for graduation. In academic year 2010-2011, 1140 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. A new online system went online in August 2011, specifically designed to allow students to submit portfolio elements earlier in their college career.

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 portfolio project director administers portfolio collection 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 evaluates 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 for multiple years. In the 2010-2011 academic year, a portfolio included works demonstrating 1) *critical thinking and writing*, 2) *interdisciplinary thinking*, 3) *historical analysis*, 4) *creative work and reflection*. The portfolio also included a work or experience the student considered 5) *most personally satisfying*, and 6) *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, if at all, including a 7) *transformative learning experience questionnaire*.

From whom are the results available?
The director of the portfolio project can release datasets or additional analyses upon request.

Are the results available by school or department?
Yes.

To whom are results regularly distributed?
Overall results of portfolio assessment are available to the Truman community through this Assessment Almanac. More detailed data are available through the Portfolio Director. Specific findings are shared with faculty and administrators through planning workshops, reports to governance, and other forums. In the past, data and specific findings have been useful to the university administration and governance in preparing reports, planning documents, and curriculum review. Some departments use the information to reform their curriculum, improve programs, and engage in self-study. Faculty who participate in the portfolio review process report changing their assignments and the techniques based on the findings and process of the portfolio process.

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.

2011 Truman 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 current year 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 August 2011, portfolios from 1142 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 2010 as part of their senior seminar class, but do not graduate until December 2011, 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, majors can be separated from their departments by request. Students with more than one major are classified by their "First" major, as maintained by the Registrar; around 8% of students have two or more majors. A list of second majors for 2011 portfolio submissions is given to the left, along with the percent of total majors who are counted as second majors. A few students may have third majors (or more), but these are not tracked by the Portfolio Project.

A total of sixty-one faculty and staff members read and evaluated portfolios, representing all ranks of faculty as well as five continuing Graduate Teaching Assistants from English and professional staff from the library, counseling services, and student affairs, four academic schools, and seventeen academic departments. Ten participants were new readers. A student worker assisted with processing, technical support, and sorting, providing critical support to the success of this complicated process.

	First Major			
Major	*2008*	2009	2010	2011
ART (all)	*34*	47	37	43
CML (all)	*21*	23	29	26
ENG	*113*	105	107	104
LING	*9*	8	7	7
MUS (all)	*37*	42	24	18
THEA	*7*	18	11	19
AAL	***221***	***243***	***215***	***217***
ACCT	*58*	67	90	59
BSAD	*133*	113	110	101
BUS	***191***	***180***	***200***	***160***
CMDS	*28*	36	38	30
ES	*47*	64	69	79
HLTH	*31*	45	36	42
NU	*38*	34	30	43
HSE	***144***	***179***	***173***	***194***
COMM	*53*	75	68	71
ECON	*13*	11	10	16
HIST	*60*	46	55	50
JUST	*36*	38	40	26
PHRE	*16*	6	7	20
POL	*38*	45	31	32
PSYC	*109*	105	88	102
SOAN	*16*	27	13	18
SCS	**341**	**353**	**312**	**335**
AGSC	*22*	17	14	16
BIOL	*77*	112	111	126
CHEM	*27*	31	23	19
CS	*13*	17	17	19
MATH	*24*	37	23	30
PHYS	*8*	9	15	12
SAM	**171**	**223**	**203**	**222**
IDSM	*8*	8	6	9
All	*1076*	**1186**	**1109**	**1142**

Category groupings (left margin): Arts and Letters (ART–AAL); Business (ACCT–BUS); Health Sci. & Edu (CMDS–HSE); Social & Cultural Studies (COMM–SCS); Science and Mathematics (AGSC–SAM).

Major2	#	%
None	1055	
ACCT	4	6.3%
ART	2	4.4%
BIOL	1	0.8%
BSAD	12	10.6%
CML	13	33.3%
COMM	3	4.1%
CS	1	5.0%
ECON	6	27.3%
ENG	9	8.0%
HIST	3	5.7%
HLTH	1	2.3%
JUST	3	10.3%
LING	3	30.0%
MATH	7	18.9%
MUSI	2	10.0%
PHRE	3	13.0%
PHYS	1	7.7%
POL	4	11.1%
PSYC	9	8.1%
Total	1142	1142

Reading sessions were scheduled over three weeks during the May and August interims, from May 9 to 13, May 16-20, and August 11-16, 2011, in a Violette hall computer classroom. Roughly one-third of the readers participated during each week, with a handful participating in both a May week and the August split 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 submissions in these categories were read and scored. Over 60% of the submissions in Historical analysis were scored during the first week of reading. Our "rotating" submission, "Creative Work and Reflection" had its submissions scored each week.

2011 Truman Portfolio Findings

This report presents the findings of the 2011 Portfolio Project for all prompts and submissions. Groupings are based on the five-school administrative structure adopted in 2008. 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. Psychology moved into Social and Cultural Studies during the 2010-2011 year, and past Psychology results were placed in that school for convenience. Grouping of several years of past data into this structure has been included to allow comparisons over time. Older data could be reanalyzed according to the new schools upon request.

> **2011 Portfolio Contents**
> - Critical Thinking and Writing
> - Interdisciplinary Thinking
> - Historical Analysis
> - Creative Work and Reflection
> - Most Personally Satisfying Experience
> - Reflective Cover Letter

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. Starting last year, students were 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 scored 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 all continuing prompts. On the following pages, each prompt is examined in more detail, including a breakdown by major.
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	Mean score				% Demonstrating Competence			
	2008	**2009**	**2010**	**2011**	**2008**	**2009**	**2010**	**2011**
Interdisciplinary Thinking	1.69	1.78	1.79	1.85	54.6%	55.7%	59.4%	62.5%
Critical Thinking	1.90	1.85	1.83	1.92	69.3%	67.2%	66.8%	71.2%
Writing - Organization	2.09	1.99	1.95	1.95	80.0%	75.6%	75.3%	75.8%
Writing - Style	2.06	1.97	1.93	1.88	80.9%	75.2%	75.9%	71.2%
Writing - Mechanics	2.21	2.04	2.00	1.96	86.3%	80.8%	81.5%	77.2%
Historical Analysis	1.58	1.68	1.50	1.49	54.1%	53.4%	50.2%	49.0%

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 requirements and the relative lack of new faculty hires 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 1142 portfolios collected, 1137 submitted readable examples of critical thinking. 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 in 2003 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:	**1137**
• Median critical thinking (on a 0 – 3 scale):	**2**
• Percent demonstrating Competence:	**67%**
• Highest scoring school:	**Arts and letter**
• Most frequent source (course):	**ENG 190**
• Most frequent source (discipline):	**ENG**
• Trend:	**Very stable**

Critical Thinking Scoring Rubric

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

In 2011, 70.7% of seniors submitted material judged as demonstrating "competence" or "strong competence." Less than 3.5% submitted material judged as demonstrating no critical thinking. Typically, entries evaluated as "none" were creative writing samples (rather than analytical writing) or very short reports displaying neither analysis nor evaluation. Since 2007, the percentage of seniors with submissions judged as competent or showing strong competence has been stable, as have average scores.

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 failing to demonstrate graduation-level competence.

Results shown in this table reflect the first major, as determined by the registrar. As such, this report does not fully capture majors with a high number of second majors, such as PHRE,

Critical Thinking Scores by First Major

	Maj.	Mean Score				% Demonst. Competent			
		2008	2009	2010	2011	*2008*	2009	2010	2011
Arts and Letters	ART	*1.89*	1.85	2.08	2.07	*72%*	70%	82%	77%
	CML	*2.25*	1.88	1.96	1.88	*95%*	58%	81%	73%
	ENG	*2.12*	2.06	1.97	2.16	*78%*	77%	75%	85%
	LING	*2.44*	2.38	1.86	2.00	*89%*	100%	86%	86%
	MUS	*1.74*	1.95	1.79	2.11	*61%*	73%	63%	72%
	THEA	*1.86*	1.72	2.08	2.00	*71%*	72%	75%	74%
	AAL	*2.04*	*1.97*	*1.97*	*2.09*	*76%*	*73%*	*76%*	*80%*
Business	ACCT	*1.82*	1.63	1.66	1.64	*68%*	54%	56%	56%
	BSAD	*1.70*	1.63	1.74	1.64	*59%*	55%	66%	56%
	BUS	*1.74*	*1.63*	*1.70*	*1.64*	*62%*	*54%*	*61%*	*56%*
Hlth.Sci.and Ed.	CMDS	*2.07*	1.61	1.74	1.87	*75%*	58%	66%	67%
	ES	*1.60*	1.78	1.70	1.73	*46%*	65%	58%	65%
	HLTH	*1.67*	1.53	1.63	1.93	*60%*	53%	57%	76%
	NU	*1.82*	2.06	1.87	2.16	*66%*	82%	70%	79%
	HSE	*1.76*	*1.74*	*1.72*	*1.89*	*60%*	*64%*	*62%*	*71%*
Social and Cultural Studies	COMM	*2.07*	1.96	1.99	2.08	*72%*	68%	76%	82%
	ECON	*2.38*	2.00	1.80	2.00	*92%*	73%	80%	81%
	HIST	*2.03*	1.85	1.93	2.10	*75%*	70%	70%	78%
	JUST	*1.92*	1.97	1.95	1.92	*78%*	70%	67%	77%
	PHRE	*2.13*	1.83	2.29	2.45	*88%*	67%	86%	90%
	POL	*2.42*	2.20	1.84	2.13	*87%*	83%	66%	81%
	PSYC	*1.80*	1.64	1.73	1.67	*64%*	56%	61%	59%
	SOAN	*1.94*	2.08	2.00	1.83	*63%*	77%	85%	67%
	SCS	*2.01*	*1.89*	*1.89*	*1.96*	*73%*	*68%*	*69%*	*73%*
Science and Mathematics	AGSC	*1.83*	1.80	1.79	1.81	*70%*	73%	71%	63%
	BIOL	*2.05*	1.96	1.84	1.87	*81%*	76%	67%	70%
	CHEM	*1.31*	2.03	1.44	1.68	*42%*	74%	40%	58%
	CS	*1.23*	1.71	1.53	1.68	*64%*	59%	47%	58%
	MATH	*1.69*	1.83	1.83	1.80	*62%*	69%	67%	73%
	PHYS	*1.75*	2.22	2.27	2.08	*63%*	78%	93%	75%
	SAM	*1.78*	*1.93*	*1.79*	*1.84*	*69%*	*73%*	*64%*	*68%*
	IDSM	*2.75*	2.14	1.86	2.22	*100%*	71%	57%	78%
	All	*1.90*	*1.85*	*1.83*	*1.91*	*69%*	*67%*	*67%*	*71%*

In the interest of inter-rater reliability, 435 submissions were read by two readers. A significant Pearson correlation of 0.56 was found, showing that, while not perfect, readers do substantially agree on Critical Thinking and Analytical Writing Scores. These scores are quite similar to last year, the first year in recent memory when such double-reading was done for this prompt.

2nd Reader Difference	Critical Thinking	Writing - Organization	Writing - Style	Writing - Mechanics
Same Score	**55.9%**	**61.1%**	**55.5%**	**56.4%**
Off by +/- 1	**41.8%**	**37.0%**	**40.7%**	**41.8%**
Off by +/- 2	2.3%	1.8%	3.6%	1.8%
Off by +/- 3	0.0%	0.0%	0.2%	0.0%

	2011 #	2011 %	2010 %
Any Below	598	54.3%	
Race	184	16.8%	15.0%
Gender	222	20.3%	20.1%
Class	266	24.3%	25.7%
Int'l	227	20.7%	19.4%
Service	18	1.6%	
Capstone	64	5.8%	

Of the 1098 Critical Thinking submissions where this data was collected, 598 of them (54.3%) either self-identified or were identified by readers as dealing with issues of race, gender, class, or another of our identified topics of interest. The full table is displayed to the left. This is the second year we have allowed students to self-identify these categorizations. Service-learning and Capstone Identification were new identifiers this year, so no comparisons are possible.

Over 350 unique courses were used for this submission, with 53 submissions not identifiable as being from a course. Despite the suggestion within the prompt, Writing as Critical Thinking (ENG 190) was the single most common source of submissions with 57 submissions. Other courses responsible for 12 or more submissions were ED 389, ENG 209, ENG 266, COMM 350, BSAD 325 BSAD 460, JINS 333, NU 410, PHRE 186, and PHRE 189.

Students drew from a wide variety of sources for this submission in this category. The table below shows those prefixes responsible for four or more submissions per year over the past two years. English leads the way, partially owing to the large number of submissions from ENG 190: Writing as Critical Thinking. Omitting that course, ENG scores are comparable to those of other prefixes. The table to the right shows how removing ENG 190 from the ENG prefix affects the scoring of that prefix.

	#	% Comp	Mean
ENG 190	57	40.4%	1.34
Other ENG	168	64.4%	1.79
JINS	118	72.0%	1.92
All Others	764	68.7%	1.86

Critical Thinking Scores by Course Prefix

Prefix	Count				Mean Score				% Competent			
	2008	2009	2010	2011	2008	2009	2010	2011	2008	2009	2010	2011
ENG	208	227	220	224	1.85	1.69	1.686	1.84	66%	60%	58%	69%
JINS	171	149	118	132	1.87	1.82	1.915	1.83	71%	64%	72%	69%
PHRE	117	85	88	107	1.95	1.74	1.739	1.91	72%	60%	64%	68%
COMM	45	61	74	64	1.76	1.87	1.743	1.95	62%	66%	64%	75%
BSAD	72	43	60	52	1.68	1.84	1.95	1.73	58%	65%	78%	60%
HIST	64	44	54	52	2	1.89	1.87	1.94	70%	66%	70%	67%
PSYC	27	24	28	42	1.96	1.88	1.857	1.79	74%	67%	64%	62%
BIOL	27	46	44	39	1.93	2.07	2.182	2.03	74%	78%	82%	74%
ES	16	22	29	37	1.75	1.86	1.621	1.92	56%	77%	52%	70%
POL	38	56	46	36	2.47	2.2	1.978	2.03	95%	84%	72%	75%
ART	18	22	23	33	2.06	1.91	2.217	2.09	72%	68%	87%	76%
NU	28	22	23	33	1.93	2.09	1.87	2.36	68%	82%	74%	91%
ED	28	31	32	30	1.75	1.84	1.844	1.67	64%	74%	78%	67%
ECON	26	25	21	26	2.15	2.12	2	1.77	88%	76%	76%	65%
JUST	32	40	33	23	2.16	1.98	2.03	2.09	81%	65%	70%	83%
SOAN	15	34	12	18	2.13	2.12	2.067	1.94	67%	79%	80%	61%
CMDS	3	7	10	16	2.33	1.57	1.4	1.63	100%	57%	50%	56%
CHEM	13	17	8	14	1.38	2.18	2.125	2.07	38%	82%	75%	86%
ACCT	17	17	21	13	1.94	1.65	1.952	1.62	82%	59%	71%	46%
HLTH	8	13	9	12	1.75	1.31	1.333	2.17	63%	54%	33%	100%
AGSC	18	6	7	9	1.83	1.5	1.714	1.89	67%	67%	71%	67%
SPAN	4	8	15	8	2.5	1.88	1.75	2.00	100%	63%	58%	88%
CS	2	6	5	7	2	1.17	1.4	2.00	50%	33%	40%	71%
MUSI	1	10	11	6	3	1.8	1.455	2.17	100%	70%	45%	67%
RUSS	6	5	7	6	2.17	2	2.143	2.33	100%	80%	71%	83%
THEA	4	15	7	5	2.25	2	2	2.00	100%	87%	86%	80%
IDSM			4	4			2	2.50			75%	100%
PHYS	4	3	5	4	1.5	2	1.6	2.25	25%	67%	40%	100%
CLAS	6	3	6	3	1.83	2.33	2.333	2.00	67%	100%	67%	100%
SED	3	9	16	1	1.67	1.89	1.625	3.00	67%	78%	69%	100%
STAT	4	3	4	0	1.5	2.67	2		25%	100%	100%	

Other	*58*	*133*	*64*	*81*	*1.74*	*1.81*	*1.71*	*1.914*	*62%*	*66%*	*61%*	*74%*
All	*1083*	*1186*	*1104*	*1137*	*1.90*	*1.85*	*1.83*	*1.91*	*69%*	*67%*	*67%*	*71%*

Analytical Writing Assessment

In addition to reading "Critical Thinking and Writing" submissions 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 in 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.

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	0.62		
Style	0.56	0.65	
Mechanics	0.50	0.57	0.72

Pearson Correlations between Analytical Writing and Critical Thinking Scores

For space reasons, the major-level results are split into two tables: Organization below and Style and Mechanics on the next page.

Analytical Writing Results by First Major

		Raw Count				Organization							
		Count				Mean				% Comp			
	Year	2008	2009	2010	2011	2008	2009	2010	2011	2008	2009	2010	2011
Arts and Letters	ART	34	47	38	43	2.06	1.91	2.13	1.91	74%	79%	87%	70%
	CML	17	24	26	26	2.29	2.08	2.19	2.08	100%	79%	88%	85%
	ENG	111	103	106	104	2.14	2.17	1.99	2.02	84%	83%	76%	81%
	LING	9	8	7	7	2.33	1.88	1.71	1.71	100%	75%	71%	71%
	MUS	38	40	24	18	2.00	1.98	1.88	2.11	79%	78%	75%	83%
	THEA	7	18	12	19	1.86	2.00	2.33	2.00	71%	83%	100%	74%
	AAL	*216*	*240*	*213*	*217*	*2.11*	*2.06*	*2.04*	*2.00*	*83%*	*80%*	*81%*	*78%*
Business	ACCT	57	67	91	59	2.11	1.79	1.85	1.83	84%	67%	69%	69%
	BSAD	138	110	105	101	1.99	1.85	1.91	1.81	74%	71%	75%	68%
	BUS	*195*	*177*	*196*	*160*	*2.03*	*1.83*	*1.88*	*1.82*	*77%*	*69%*	*72%*	*69%*
Hlth.Sci.and Ed.	CMDS	28	36	38	30	2.21	1.89	1.84	2.23	79%	75%	74%	93%
	ES	48	63	69	79	1.98	1.98	2.07	1.90	71%	75%	84%	80%
	HLTH	30	45	35	42	1.97	1.76	1.83	1.86	70%	60%	69%	79%
	NU	38	34	30	43	2.16	1.97	2.03	2.12	90%	82%	77%	77%
	HSE	*144*	*178*	*172*	*194*	*2.07*	*1.90*	*1.97*	*1.99*	*77%*	*72%*	*77%*	*81%*
Social and Cultural Studies	COMM	53	75	67	71	2.19	2.16	1.99	1.99	87%	81%	73%	80%
	ECON	13	11	10	16	2.23	2.27	2.20	2.25	77%	82%	90%	94%
	HIST	60	47	57	50	2.07	1.96	2.04	2.16	78%	72%	88%	84%
	JUST	37	37	39	26	2.19	2.11	1.92	1.85	81%	78%	69%	65%
	PHRE	16	6	7	20	2.25	2.17	2.29	2.40	88%	83%	86%	90%
	POL	38	46	32	32	2.42	2.39	1.94	1.97	92%	91%	66%	75%
	PSYC	109	105	84	102	1.96	1.90	1.86	1.80	76%	70%	69%	68%
	SOAN	16	26	13	18	1.88	2.00	1.92	1.78	75%	73%	62%	61%
	SCS	*342*	*353*	*309*	*335*	*2.11*	*2.07*	*1.96*	*1.97*	*81%*	*77%*	*74%*	*76%*
Sciences and Mathematics	AGSC	23	15	14	16	1.91	2.00	1.86	1.63	78%	73%	79%	56%
	BIOL	78	112	112	126	2.08	2.09	2.00	1.92	87%	80%	78%	75%
	CHEM	26	31	25	19	1.73	2.10	1.64	1.89	62%	74%	52%	79%
	CS	14	17	17	19	1.86	1.88	1.76	1.58	79%	76%	71%	53%
	MATH	26	36	24	30	1.88	1.78	2.00	1.67	69%	61%	79%	73%
	PHYS	8	9	15	12	2.38	2.00	2.13	2.08	100%	78%	73%	75%
	SAM	*175*	*220*	*207*	*222*	*1.97*	*2.01*	*1.94*	*1.84*	*79%*	*75%*	*74%*	*72%*
	IDSM	8	7	7	9	2.38	2.00	1.86	2.22	100%	71%	57%	78%
	All	**1080**	**1175**	**1104**	**1137**	**2.07**	**1.99**	**1.96**	**1.87**	**80%**	**76%**	**75%**	**71%**

Analytical Writing Results by First Major, cont.

		Style								Mechanics							
		Mean				% Comp				Mean				% Comp			
	Year	2008	2009	2010	2011	2008	2009	2010	2011	2008	2009	2010	2011	2008	2009	2010	2011
Arts and Letters	ART	2.21	2.09	2.11	1.84	88%	81%	87%	63%	2.29	2.15	2.16	1.93	85%	83%	95%	74%
	CML	2.25	2.00	2.12	2.12	100%	71%	85%	88%	2.69	1.79	2.35	2.19	100%	67%	88%	85%
	ENG	2.16	2.17	2.08	2.06	87%	85%	84%	79%	2.34	2.19	2.08	2.16	90%	86%	89%	86%
	LING	2.44	2.13	2.00	1.57	100%	88%	86%	57%	2.89	2.25	2.14	2.00	100%	100%	100%	86%
	MUS	2.03	2.25	2.04	2.06	84%	90%	75%	78%	2.21	2.18	2.04	2.11	95%	85%	88%	94%
	THEA	1.71	1.78	2.08	1.79	57%	67%	100%	63%	2.14	1.94	1.92	2.00	86%	78%	75%	74%
	AAL	*2.15*	*2.12*	*2.08*	*1.98*	*87%*	*83%*	*85%*	*75%*	*2.35*	*2.13*	*2.12*	*2.10*	*91%*	*83%*	*89%*	*83%*
Business	ACCT	2.02	1.82	1.90	1.69	81%	67%	76%	63%	2.09	2.01	1.97	1.83	86%	78%	82%	73%
	BSAD	1.87	1.75	1.83	1.56	70%	65%	70%	54%	2.06	1.84	1.81	1.72	80%	72%	72%	63%
	BUS	*1.91*	*1.77*	*1.86*	*1.61*	*73%*	*66%*	*73%*	*58%*	*2.07*	*1.90*	*1.88*	*1.76*	*82%*	*74%*	*77%*	*67%*
Hlth. Sci. and Ed.	CMDS	2.29	1.78	1.84	2.10	82%	69%	76%	83%	2.32	1.94	2.11	2.07	89%	78%	89%	83%
	ES	1.90	1.95	1.91	1.78	75%	73%	78%	72%	2.19	2.00	2.03	1.86	96%	81%	84%	81%
	HLTH	2.17	1.71	1.60	1.86	93%	62%	51%	74%	2.13	1.78	1.91	1.88	87%	73%	71%	74%
	NU	2.03	1.79	2.17	2.28	87%	68%	87%	91%	2.00	1.71	2.13	2.16	76%	74%	87%	81%
	HSE	*2.07*	*1.83*	*1.88*	*1.96*	*83%*	*69%*	*74%*	*78%*	*2.15*	*1.88*	*2.04*	*1.96*	*87%*	*77%*	*83%*	*80%*
Social and Cultural Studies	COMM	2.04	2.01	1.97	2.07	81%	72%	75%	82%	2.21	2.05	1.91	2.13	87%	77%	78%	85%
	ECON	2.31	2.36	1.80	1.69	85%	91%	70%	50%	2.46	2.27	1.90	2.00	92%	82%	70%	75%
	HIST	2.15	2.02	2.07	2.10	85%	79%	81%	80%	2.17	2.09	2.07	2.18	82%	83%	84%	82%
	JUST	2.11	2.03	2.05	1.69	76%	76%	85%	69%	2.35	2.03	2.10	1.77	87%	76%	79%	69%
	PHRE	2.19	2.17	2.57	2.30	88%	83%	86%	95%	2.44	2.17	2.57	2.35	100%	100%	100%	90%
	POL	2.26	2.26	1.78	1.75	92%	91%	59%	56%	2.50	2.26	1.91	1.81	90%	87%	78%	69%
	PSYC	1.97	1.85	1.80	1.75	75%	70%	70%	66%	2.15	2.05	1.92	1.81	86%	86%	80%	71%
	SOAN	2.13	1.92	2.00	1.72	88%	73%	77%	61%	2.13	2.04	2.08	1.78	75%	77%	92%	72%
	SCS	*2.09*	*2.01*	*1.94*	*1.90*	*81%*	*76%*	*74%*	*71%*	*2.25*	*2.09*	*1.99*	*1.97*	*86%*	*82%*	*81%*	*76%*
Sciences and Mathematics	AGSC	1.87	2.00	1.79	1.63	74%	73%	71%	56%	2.13	2.07	2.00	1.50	83%	73%	93%	44%
	BIOL	2.14	2.11	1.98	1.88	83%	82%	81%	74%	2.27	2.18	2.04	1.94	86%	88%	83%	79%
	CHEM	1.88	2.00	1.56	1.74	73%	87%	64%	53%	2.04	2.10	1.80	2.00	81%	90%	64%	84%
	CS	2.00	1.76	1.71	1.63	86%	65%	65%	58%	2.14	2.00	1.88	1.74	79%	71%	65%	63%
	MATH	1.81	1.81	1.96	1.67	65%	72%	79%	67%	1.96	1.92	2.13	1.87	77%	78%	88%	80%
	PHYS	2.38	1.89	2.13	2.08	88%	67%	73%	75%	2.38	2.00	2.00	1.83	100%	78%	80%	58%
	SAM	*2.02*	*2.00*	*1.90*	*1.81*	*78%*	*79%*	*76%*	*68%*	*2.17*	*2.10*	*2.00*	*1.88*	*83%*	*84%*	*80%*	*75%*
	IDSM	2.63	2.43	1.71	2.11	100%	100%	43%	78%	2.75	2.43	2.14	2.22	100%	100%	71%	78%
	All	*2.06*	*1.97*	*1.94*	*1.87*	*81%*	*75%*	*76%*	*71%*	*2.21*	*2.04*	*2.01*	*1.95*	*86%*	*81%*	*82%*	*77%*

When scores are broken down into schools, patterns emerge. Across all three measures, students whose majors fall in the School of Business perform significantly worse than the other schools. In recent years, submissions from the School of Health Science and Education have caught up, and are within the margin of error of the other schools, while submissions from Science and Mathematics have decreased.

Prefix	Count			Organization Mean			Organization % Comp.			Style Mean			Style % Comp.			Mechanics Mean			Mechanics % Comp.			Prefix
	2009	2010	2011	2009	2010	2011	2009	2010	2011	2009	2010	2011	2009	2010	2011	2009	2010	2011	2009	2010	2011	
ENG	227	236	224	1.83	1.83	1.83	68%	67%	71%	1.92	1.9	1.80	74%	75%	68%	1.99	2.03	1.94	79%	84%	76%	ENG
JINS	149	126	132	1.93	1.96	1.80	75%	75%	69%	1.86	2.04	1.80	72%	83%	68%	1.97	2.13	1.83	81%	89%	81%	JINS
PHRE	85	91	107	1.82	1.88	1.89	68%	77%	70%	1.92	1.81	1.88	71%	75%	68%	2.05	1.91	2.05	82%	79%	80%	PHRE
COMM	61	76	64	2.11	1.84	1.91	82%	67%	77%	1.95	1.82	1.95	72%	67%	77%	2.05	1.82	1.97	82%	70%	100%	COMM
BSAD	43	67	52	1.95	2.12	1.98	77%	85%	77%	1.79	2.03	1.67	70%	85%	60%	1.93	1.97	1.81	81%	78%	99%	BSAD
HIST	44	54	52	2.07	2.04	2.13	80%	87%	83%	2.02	2.11	2.04	80%	87%	77%	2.09	2.07	2.10	82%	85%	77%	HIST
PSYC	24	29	42	2.25	2.21	1.83	83%	93%	64%	2.17	1.9	1.79	75%	72%	67%	2.17	1.93	1.93	88%	79%	91%	PSYC
BIOL	46	46	39	2.2	2.13	2.03	78%	83%	74%	2.17	2.2	1.90	85%	89%	74%	2.22	2.24	2.03	89%	91%	82%	BIOL
ES	22	29	37	2.09	2.17	2.03	77%	90%	84%	2.05	1.93	2.00	77%	79%	86%	2.14	1.97	1.92	91%	83%	84%	ES
POL	56	48	36	2.34	2.02	1.94	89%	73%	78%	2.25	1.98	1.89	89%	69%	64%	2.18	1.98	1.92	84%	73%	82%	POL
ART	22	23	33	2.23	2.13	2.00	95%	87%	76%	2.32	2	1.82	95%	70%	64%	2.45	2.13	2.00	95%	87%	83%	ART
NU	22	23	33	1.95	2.09	2.36	82%	78%	94%	1.82	2.26	2.36	68%	96%	91%	1.77	2.17	2.33	77%	91%	88%	NU
ED	31	33	30	1.87	1.7	1.87	74%	67%	77%	2.03	1.73	1.73	77%	70%	70%	2.16	1.88	1.90	87%	85%	83%	ED
ECON	25	21	26	2.32	2.05	1.96	92%	81%	77%	2.16	1.9	1.73	88%	76%	62%	2.16	1.95	1.81	92%	81%	99%	ECON
JUST	40	33	23	2.15	1.94	1.96	80%	70%	78%	2.08	2.03	1.70	75%	88%	70%	2.08	2.12	1.83	75%	82%	88%	JUST
SOAN	34	15	18	2.09	1.67	1.89	76%	53%	67%	2	1.67	1.61	79%	53%	50%	2.06	1.87	1.72	79%	73%	87%	SOAN
CMDS	7	10	16	2	1.5	2.25	86%	60%	100%	1.86	1.6	2.13	71%	60%	88%	2	1.7	2.00	86%	80%	79%	CMDS
CHEM	17	8	14	2.24	2.5	2.07	88%	100%	86%	2.18	2	2.29	94%	75%	93%	2.24	2.25	2.21	88%	75%	93%	CHEM
ACCT	17	23	13	2.29	2.22	1.92	82%	83%	69%	2	2.09	1.92	82%	78%	77%	2.24	2.22	2.00	82%	91%	89%	ACCT
HLTH	13	10	12	1.54	1.8	2.08	46%	60%	92%	1.54	1.5	1.75	54%	30%	75%	1.69	1.8	1.67	69%	70%	77%	HLTH
ENVS	3	2	11	2	1.5	1.64	67%	50%	64%	2.33	1.5	1.82	100%	50%	82%	2.67	2	2.00	100%	100%	91%	ENVS
AGSC	6	7	9	2	1.86	1.56	67%	86%	56%	1.83	1.57	1.56	50%	57%	56%	1.83	1.71	1.56	50%	71%	56%	AGSC
SPAN	8	15	8	2.38	2	2.38	100%	80%	100%	2.38	2.07	2.25	88%	80%	88%	1.63	2.33	2.13	63%	87%	88%	SPAN
CS	6	5	7	1	1.8	1.57	33%	60%	57%	0.83	1.6	1.71	17%	40%	71%	0.83	1.6	1.57	17%	60%	77%	CS
MUSI	10	14	6	2.2	1.86	2.17	80%	79%	83%	2.2	1.86	2.00	80%	57%	67%	2.2	2	2.33	80%	79%	70%	MUSI
RUSS	5	7	6	2.4	2.14	2.33	100%	71%	83%	2.6	2	2.67	100%	71%	100%	2.4	2.57	2.50	100%	100%	100%	RUSS
THEA	15	8	5	2	2	2.00	80%	88%	80%	1.87	1.75	1.60	73%	75%	60%	2.07	1.38	1.80	80%	50%	50%	THEA

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	**1137**
• Median score (on a 0-4 scale):	**2**
• Mean score (on a 0-4 scale):	**1.85**
• Highest scoring School:	**Arts and Letters**
• 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

Interdisciplinary Thinking Scores by First Major

	Maj.	Count				Mean Score				% Competent			
		2008	2009	2010	2011	2008	2009	2010	2011	2008	2009	2010	2011
Arts and Letters	ART	34	47	37	43	1.79	2.02	1.97	2.05	55%	72%	70%	70%
	CML	21	23	29	26	2.24	1.83	1.97	2.19	76%	61%	69%	73%
	ENG	113	105	107	104	1.96	2.04	1.94	1.98	62%	71%	68%	68%
	LING	9	8	7	7	2.44	2.63	1.71	2.86	67%	88%	43%	100%
	MUS	37	42	24	18	1.84	1.88	2.33	2.56	62%	62%	83%	83%
	THEA	7	18	11	19	1.14	2.00	1.91	2.32	27%	78%	64%	89%
	AAL	*221*	*243*	*215*	*217*	*1.93*	*2.00*	*1.99*	*2.12*	*61%*	*70%*	*69%*	*73%*
Business	ACCT	58	67	90	59	1.57	1.55	1.73	1.76	53%	52%	61%	64%
	BSAD	133	113	110	101	1.46	1.50	1.63	1.50	46%	47%	53%	49%
	BUS	*191*	*180*	*200*	*160*	*1.49*	*1.52*	*1.68*	*1.60*	*48%*	*49%*	*57%*	*54%*
Hlth.Sci.and Ed.	CMDS	28	36	38	30	1.61	1.50	1.58	1.57	54%	47%	58%	57%
	ES	47	64	69	79	1.53	1.59	1.57	1.56	47%	55%	49%	54%
	HLTH	31	45	36	42	1.74	1.76	1.75	1.90	68%	60%	47%	62%
	NU	38	34	30	43	1.45	1.38	1.60	2.00	42%	44%	57%	67%
	HSE	*144*	*179*	*173*	*194*	*1.57*	*1.58*	*1.61*	*1.73*	*51%*	*53%*	*52%*	*59%*
Social and Cultural Studies	COMM	53	75	68	71	1.60	1.93	1.90	1.58	53%	71%	67%	54%
	ECON	13	11	10	16	1.92	1.55	2.00	2.13	69%	55%	67%	75%
	HIST	60	46	55	50	1.80	2.13	1.87	2.00	60%	76%	65%	68%
	JUST	36	38	40	26	1.56	1.42	1.33	1.62	50%	50%	60%	46%
	PHRE	16	6	7	20	2.00	2.67	2.29	2.45	69%	83%	56%	85%
	POL	38	45	31	32	1.97	2.16	1.77	1.94	63%	76%	48%	59%
	PSYC	109	105	88	102	1.48	1.67	1.83	1.64	45%	54%	61%	51%
	SOAN	16	27	13	18	1.94	2.11	1.85	1.78	75%	81%	71%	67%
	SCS	*341*	*353*	*312*	*335*	*1.68*	*1.87*	*1.80*	*1.79*	*55%*	*65%*	*62%*	*59%*
Sciences and Mathematics	AGSC	22	17	14	16	1.27	1.88	1.79	1.81	36%	65%	50%	69%
	BIOL	77	112	111	126	1.79	1.84	1.87	2.02	55%	62%	64%	68%
	CHEM	27	31	23	19	1.70	1.65	1.48	1.63	56%	58%	39%	63%
	CS	13	17	17	19	1.23	1.41	1.76	1.47	46%	53%	59%	53%
	MATH	24	37	23	30	1.54	1.81	1.96	1.87	56%	62%	57%	63%
	PHYS	8	9	15	12	1.75	2.00	1.80	2.17	75%	67%	60%	67%
	SAM	*171*	*223*	*203*	*222*	*1.63*	*1.78*	*1.82*	*1.91*	*53%*	*61%*	*59%*	*66%*
	IDSM	8	8	6	9	3.13	1.88	1.67	3.11	100%	75%	61%	89%
	All	*1076*	*1186*	*1109*	*1137*	*1.69*	*1.78*	*1.78*	*1.85*	*55%*	*56%*	*60%*	*63%*

When data are sorted by school (and omitting IDS majors who outperform all other groups), submissions from Arts and Letters majors score better than other schools, while the school of business scores significantly lower than all

	2011 #	2011 %	2010 %
Any Below	657	59.9%	
Race	254	23.2%	23%
Gender	268	24.5%	22%
Class	315	28.7%	30%
Int'l	297	27.1%	32%
Service	14	1.3%	

other schools. Majors from all schools have a median of 2 (IDS majors have a median of 3).

Capstone	34	3.1%	

Almost sixty percent of submissions were either self-identified or scorer-identified as dealing with one of the indicators on the left. Scores in comparable areas are similar to last year, the first that allowed for self-identification of these indicators.

IDS Scores by Course Prefix

Prefix	Count				Mean Score				% Competent			
	2008	*2009*	*2010*	*2011*	*2008*	*2009*	*2010*	*2011*	*2008*	*2009*	*2010*	*2011*
IDSM	7	5	8	8	3.00	2.17	1.88	3.00	100%	67%	63%	88%
EUR	4	3	4	3	2.25	2.00	3.00	2.67	75%	67%	100%	100%
MATH	11	5	4	2	1.27	0.80	1.50	2.50	53%	20%	50%	100%
PHRE	33	35	47	49	1.21	1.76	1.49	2.10	36%	54%	47%	71%
HIST	19	19	23	18	1.32	1.83	1.70	2.06	37%	65%	52%	78%
JINS	**645**	**553**	**589**	**664**	**1.91**	**2.03**	**1.97**	**2.03**	**64%**	**72%**	**67%**	**70%**
ART	11	13	16	16	2.09	1.88	2.38	2.00	64%	63%	81%	63%
SPAN	16	12	12	13	1.25	2.07	1.58	2.00	31%	67%	50%	62%
ENVS	5	3	6	7	1.60	1.25	1.67	2.00	40%	50%	33%	57%
POL	19	17	12	12	1.58	1.72	2.00	1.92	47%	56%	67%	67%
GEOG	2	6	5	5	2.50	2.50	1.00	1.80	100%	83%	40%	40%
ENG	53	40	56	67	1.19	1.39	1.75	1.76	28%	44%	61%	60%
JUST	15	8	18	14	1.60	1.36	1.89	1.71	60%	55%	61%	57%
THEA	6	7	6	3	1.17	2.00	1.50	1.67	33%	71%	50%	67%
NU	9	14	5	16	0.44	1.19	2.20	1.63	0%	31%	80%	56%
SOAN	7	13	13	15	1.86	2.00	1.77	1.53	71%	79%	54%	53%
ACCT	3	12	6	2	0.66	0.83	1.67	1.50	0%	17%	50%	50%
Other	51	262	80	48	1.59	1.61	1.25	1.44	52%	29%	44%	42%
HLTH	3	5	8	7	1.00	0.63	0.88	1.43	33%	0%	0%	57%
COMM	27	30	28	27	1.30	1.88	1.57	1.41	37%	72%	50%	44%
BIOL	10	21	22	28	1.10	1.33	1.36	1.36	30%	48%	45%	32%
ECON	18	10	15	12	1.06	1.64	1.47	1.33	22%	36%	53%	50%
AGSC	10	6	3	6	1.60	1.63	2.33	1.33	50%	63%	67%	50%
NASC	1	4	7	3	3.00	1.25	0.86	1.33	100%	25%	29%	33%
PSYC	17	12	17	18	1.35	1.06	1.47	1.22	35%	29%	47%	39%
BSAD	29	26	28	33	1.00	1.26	1.39	1.12	31%	44%	46%	30%
ES	9	13	15	12	0.89	1.44	1.33	1.08	22%	50%	47%	33%
MUSI	19	11	22	7	1.47	1.12	1.59	1.00	53%	35%	55%	29%
ED	9	10	15	13	1.33	1.08	1.67	0.92	33%	23%	53%	23%
CS	2	6	9	5	2.00	1.83	1.67	0.80	50%	67%	44%	20%
STAT	6	4	5	4	0.50	1.00	2.00	0.00	17%	17%	40%	0%
SED	0	1	5	0		0.00	1.20			0%	40%	
All	**1076**	**1186**	**1109**	**1137**	**1.69**	**1.78**	**1.78**	**1.85**	**55%**	**56%**	**60%**	**63%**

JINS courses continue to be successful at demonstrating competent scores in interdisciplinary thinking. While several other disciplines and courses were also notably successful (ART, HIST, SPAN and PHRE), the JINS course seems to be fulfilling its purpose of giving students demonstrable 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 inter-disciplinary 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.

To measure inter-rater reliability, 334 submissions (30%) were read and scored by two readers. Mean scores overall stayed about the same (1.67 v 1.74) , but interreader reliability was high, with 91% of second readers assigning either a score within one rating of the first scorer. No 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) while five submissions differed by three levels. A Pearson's correlation between the two readers was found to be *r* = **0.62**, which remains high since the change in training was implemented in 2009.

2nd Reader Difference	%
Same Score	**47.1%**
Off by +/-1	**43.6%**
Off by +/-+2	7.8%
Off by +/-+3	1.5%
Off by +/-+4	0.0%

The increase in double-read submissions also lead to the discovery of seven new papers that earn the distinction of being "double-fours," interdisciplinary paper s that have been read by two readers and found to be excellent by both. Three of these papers were from non-JINS submissions (ENG, COMM, PHRE), making them particularly distinctive, as well as one from the IDSM 175 class and five from JINS courses (two from JINS 323).

Time Validation of the Interdisciplinary Rubric Rating

It is occasionally good to examine portfolios from several years ago to examine score "drift," whether or not identical scores retain their meaning across different eras. This year, Interdisciplinary submissions from 2001 and 2006 were scored by readers on the day after rating current 2011 submissions. To minimize confusion, the first May 2011 reading session read IDS submissions from 2001, while the second May 2011 reading session read submissions from 2006.

In 2001, portfolio submissions were collected by hand, and are maintained in storage in Greenwood School. Of the fifteen boxes in which these portfolios are stored alphabetically, three were randomly selected. The three boxes chosen represented the last names starting with G/H, N/O/P, and V/W, with several additional portfolios in each box from other letters. From these boxes, 72 submissions were chosen from valid submissions using a stratified method to obtain portfolios with a variety of scores.

AbsDiff	Count	Pct.
0	18	25%
0.5	30	41%
1	13	18%
1.5	7	10%
2	1	4%
3.5	1	1.4%

Overall Scores from the original reading were highly correlated with the 2011 re-scoring (Pearson's r = 0.629, Spearman's Rho = 0.549, p-value < 0.0005), and no significant difference was demonstrated (mean difference = 0.06).

In 2006, portfolio submissions were collected via CD, so all submissions are maintained in a secure network drive. In some ways, 2006 is an outlier, showing the highest overall scores to date, with nearly twice the number of 4s as any other year before or since.

A sample of 108 students were selected from the pool of submissions, stratified so that 12 from each assigned composite score (the average of two readers - increments of .5 from 0 to 4)were chosen.

This sample of papers was clustered into 12 sets of 9 papers (one of each score). A team of two or three readers were assigned a cluster of papers to read. Each assigned a score independently, and then either averaged together or discussed to reach a single score. Several papers were not readable due to technical problems, bringing our usable sample size down to 104.

AbsDiff	Count	Pct.
0	27	26.0%
0.5	33	31.7%
1	29	27.9%
1.5	10	9.6%
2	4	3.8%
2.5	1	1.0%

Results from 2006 show no drift. The average score of all re-scored 2006 papers was 1.99 for the 2006 reading and 1.97 for the 2011 reading. A Pearson correlation between the 2006 and 2011 scores was 0.74, even higher than our single year double-reader reliability. Of the 105 papers rescored, the absolute differences between the 2006 and 2011 ratings is given in the table to the right. We can conclude that no significant drift has occurred since 2006.

	Mean Score	% Demonst. Competence
1999	N/A	21% (37%)
2000	1.13	26% (40%)
2001	1.06	24% (37%)
2002	1.46	37% (53%)
2003	1.52	47% (61%)
2004	1.52	48%
2005	1.52	48%
2006	2.00	50%
2007	1.74	57%
2008	1.69	55%
2009	1.78	56%
2010	1.78	60%
2011	1.85	63%

The chart to the left shows the trend in scores since 1999. Percentages in parenthesis include as "demonstrating competence" those portfolios that scored an average of 1.5, meaning that one reviewed found sufficient merit, while the other did not. Starting in 2004, most papers were read by only a single reviewer. The portfolio became a graduation requirement with the 1999 catalog, meaning that by 2004, most students were required to submit a portfolio.

Overall, the re-grade project has found no evidence of score drift has been found. Given the change in scores over the past decade, we can not conclude that this change is due to a change in scoring procedures. While this one-time test was not perfect and confounding variables remain, including changes in technology and portfolio collection procedures, one may conclude that a real change in Interdisciplinary Thinking has been achieved.

Historical Analysis

The following prompt was reviewed for a sample of 709 submissions, approximately 62% 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.

Historical Analysis at a Glance	
• Number of reviewed submissions:	**709 (of 1065 subm)**
• Median score (on a 0-3 scale):	**2.0**
• Mean score (on a 0-3 scale):	**1.490**
• Highest scoring "school":	**Arts and Letters**
• Most frequent source (course):	**HIST 105**
• Most frequent Source: (discipline):	**History**
• Trend	**Decreasing Slightly**

HISTORICAL SOURCES Top Courses among all submissions	
HIST 105: U.S. History II	75
HIST 104: U.S. History I	38
HIST 132: World Civ. 500 AD - 1700	24
HIST 131: World Civ. before 500 AD	22
MUSI 207: Perspectives in Music: Jazz	20
ART 223: Caves to Cathedrals	18
HIST 140: Latin America – Nat'l Period	16
ENG 190: Writing as Critical Thinking	16
ART 325: Modern Art	16
HIST 133: World Civ. since 1700	15
PSYC 429: History and Systems of Psyc.	14

Some Descriptors of Competence in Historical Analysis

3 Strong Competence

Strong demonstration of historical analysis includes one or more of these features. The submission may:
- ❖ Evaluate historical resources.
- ❖ Actively engage historical context and chronology.
- ❖ Use good analytical thinking in making an argument.
- ❖ Show clear awareness of causation in examining changes over time.

2 Competence

Submissions that demonstrate competent historical analysis may:
- ❖ Employ historical resources.
- ❖ Show some awareness of historical context and chronology.
- ❖ Be uneven in supporting arguments.
- ❖ Demonstrate some awareness of causation in examining changes over time.

1 Minimal Competence

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

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

Historical Analysis Scores by First Major

	Maj.	Count 2008	2009	2010	2011	Mean Score 2008	2009	2010	2011	% Competent 2008	2009	2010	2011
Arts and Letters	ART	34	45	27	26	1.79	1.78	1.96	1.81	71%	64%	70%	69%
	CML	21	22	22	17	2.19	1.68	2.09	1.88	81%	64%	86%	59%
	ENG	112	96	77	68	1.62	1.77	1.61	1.54	56%	60%	52%	54%
	LING	9	7	4	5	1.67	1.86	2.00	2.00	56%	71%	75%	60%
	MUS	38	39	16	8	1.55	1.74	1.44	2.25	55%	69%	44%	100%
	THEA	7	16	10	12	1.71	1.69	1.60	1.58	57%	69%	50%	50%
	AAL	**221**	**225**	**156**	**136**	**1.69**	**1.76**	**1.73**	**1.70**	**61%**	**64%**	**60%**	**60%**
Business	ACCT	58	60	72	30	1.34	1.42	1.46	1.33	45%	45%	49%	47%
	BSAD	138	107	81	65	1.49	1.30	1.22	1.12	52%	39%	41%	35%
	BUS	**196**	**167**	**153**	**95**	**1.45**	**1.34**	**1.33**	**1.19**	**50%**	**41%**	**44%**	**39%**
Hlth. Sci. and Ed.	CMDS	28	35	29	17	1.25	1.26	1.34	1.35	43%	40%	48%	53%
	ES	45	42	52	48	1.16	1.10	1.17	1.23	33%	33%	31%	33%
	HLTH	31	27	29	24	1.29	1.19	1.17	1.21	39%	37%	41%	33%
	NU	37	34	23	26	1.24	1.12	1.30	1.23	43%	41%	39%	31%
	HSE	**141**	**138**	**133**	**115**	**1.23**	**1.16**	**1.23**	**1.24**	**39%**	**38%**	**38%**	**36%**
Social and Cultural Studies	COMM	52	74	55	47	1.63	1.66	1.38	1.38	52%	58%	44%	40%
	ECON	13	10	8	9	1.62	1.50	1.75	1.22	54%	50%	63%	22%
	HIST	60	42	44	32	2.53	2.57	2.68	2.78	92%	90%	93%	100%
	JUST	35	35	33	20	1.40	1.43	1.33	1.25	43%	49%	39%	25%
	PHRE	16	6	7	11	1.81	1.67	1.86	2.18	75%	67%	57%	82%
	POL	38	45	26	19	2.16	2.13	2.04	1.68	79%	78%	77%	63%
	PSYC	109	100	63	71	1.54	1.37	1.44	1.28	52%	78%	48%	45%
	SOAN	17	27	10	10	1.88	1.70	1.30	2.10	77%	63%	50%	90%
	SCS	**340**	**339**	**246**	**219**	**1.82**	**1.73**	**1.72**	**1.63**	**64%**	**70%**	**58%**	**55%**
Sciences and Mathematics	AGSC	23		10	10	1.22		1.30	1.20	44%		40%	30%
	BIOL	79	106	88	76	1.46	1.67	1.34	1.46	52%	58%	43%	49%
	CHEM	27	13	19	13	1.00	0.92	1.26	1.38	30%	31%	42%	46%
	CS	14	15	12	15	1.29	1.33	1.50	1.60	43%	40%	58%	60%
	MATH	25	33	19	18	1.52	1.27	1.26	1.50	48%	36%	47%	44%
	PHYS	8	9	12	6	2.00	1.22	1.17	1.17	75%	22%	42%	33%
	SAM	**176**	**176**	**160**	**138**	**1.38**	**1.49**	**1.32**	**1.44**	**47%**	**49%**	**44%**	**47%**
	IDSM	8	8	6	6	2.50	1.75	1.83	2.17	88%	75%	67%	67%
	All	**1082**	**1053**	**854**	**709**	**1.58**	**1.56**	**1.50**	**1.49**	**55%**	**56%**	**50%**	**49%**

Examining the results by major yields few surprises. History majors were, by far, the best at the category, with PHRE, MUSI, IDSM and LING also performing very highly. 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.

It is also clear that some courses make better sources than others. It has been recommended that the Portfolio office work with some areas to improve scores from particular common courses to make those who teach those courses more aware that they frequently are choices for Historical Submissions to to make sure that those faculty are aware of the standards and goals of the prompt and its rubric.

Historical Scores by Course Prefix

Prefix	Count				Mean Score				% Competent			
	2008	2009	2010	2011	2008	2009	2010	2011	2008	2009	2010	2011
NASC	11	10	14	5	1.82	2.20	1.29	2.80	64%	90%	36%	100%
FREN		4	6	7		2.75	1.83	2.29		100%	67%	86%
SOAN	13	25	7	7	1.54	1.28	0.86	2.00	54%	48%	29%	71%
ART	41	48	41	36	1.85	1.73	2.15	1.78	68%	60%	78%	61%
HIST	369	326	278	198	1.87	1.83	1.79	1.76	67%	64%	63%	61%
POL	31	34	26	18	1.84	2.09	1.92	1.61	58%	76%	77%	61%
MUSI	32	39	24	26	1.41	1.51	1.21	1.58	44%	54%	33%	62%
JINS	159	122	96	85	1.57	1.74	1.65	1.56	56%	62%	58%	51%
JUST	10	11	15	9	1.30	1.09	1.00	1.56	30%	27%	27%	56%
COMM	28	31	22	12	1.39	1.52	1.14	1.42	46%	48%	23%	50%
Other	125	157	97	102	1.52	1.31	1.37	1.39	53%	43%	46%	44%
ACCT	8	10	6	8	1.13	1.00	0.33	1.38	25%	20%	0%	38%
PHRE	61	46	35	29	1.26	0.87	1.43	1.34	43%	26%	46%	48%
CHIN		1	6	3		0.00	0.33	1.33			0%	33%
BSAD	27	21	35	21	0.96	0.90	1.06	1.24	30%	24%	37%	38%
ENG	79	76	59	59	1.18	1.34	1.14	1.22	38%	43%	27%	37%
ECON	26	21	21	20	1.73	1.62	1.48	1.20	58%	57%	48%	30%
THEA	9	8	6	8	1.78	2.00	2.17	1.00	78%	88%	83%	38%
ES	11	10	8	7	0.73	0.90	0.88	0.86	9%	20%	25%	14%
MS	5	5	5	6	1.60	0.80	0.80	0.83	40%	20%	0%	17%
BIOL	11	14	16	9	1.18	1.64	0.69	0.78	45%	57%	19%	22%
ED	9	13	8	4	1.22	1.15	1.25	0.75	22%	31%	50%	25%
PSYC	13	15	14	20	0.46	0.67	0.71	0.70	0%	7%	21%	15%
HLTH	4	6	8	10	1.25	1.17	1.00	0.60	25%	33%	25%	0%
All	1082	1053	854	709	1.58	1.56	1.50	1.49	55%	53%	50%	49%

Estimated Effect of Sampling on Scores

For the past two years, Historical Analysis submissions have been scored by a sample of 60% - 70% rather than a census of all submissions. This high rate means that the overall scores are likely quite accurate (estimated margin of error is around +/- 3% for proportion of students who demonstrate competence and under +/- .03 for mean score). However, the margin of error for individual programs and prefixes may be quite higher, especially for small majors. Care should be taken to avoid making major decisions at the program or course level based on a single year's score. Upon request, additional submissions can be scored to allow particular programs more complete information.

Most Personally 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. For space reasons, a comparison with 2010 responses is only given for "Major" and "Out-of-Class" responses. Even that simple comparison shows some interesting changes with more students generally reporting out-of-class experiences as their most satisfying, particularly in LING, MUS, CMDS, PSYC, and CS. This may be do to more recognition for Transformative Experiences, such as Internships and Research, which may previously been counted as in-class, but now are recognized more specifically as out-of-class experiences.

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

	Year	Count 2011	Major Yes	Major 2011%	Major 2010%	Minor Yes	Minor 2011%	LSP Yes	LSP 2011%	Elective Yes	Elective 2011%	Out-of-Class Yes	Out-of-Class 2011%	Out-of-Class 2010%
Arts and Letters	ART	43	20	46.5%	50.0%	0		6	14.0%	6	14.0%	11	25.6%	29.4%
	CML	26	9	34.6%	44.4%	1	3.8%	4	15.4%	0		12	46.2%	25.9%
	ENG	104	65	62.5%	62.7%	3	2.9%	4	3.8%	5	4.8%	27	26.0%	20.6%
	LING	7	0		28.6%	1	14.3%	0		0		6	85.7%	28.6%
	MUS	18	5	27.8%	66.7%	1	5.6%	1	5.6%	1	5.6%	10	55.6%	20.8%
	THEA	19	2	10.5%	9.1%	1	5.3%	0		0		16	84.2%	54.5%
	AAL	**217**	**101**	**46.5%**	**54.6%**	**7**	**3.2%**	**15**	**6.9%**	**12**	**5.5%**	**82**	**37.8%**	**24.9%**
Business	ACCT	59	22	37.3%	43.4%	4	6.8%	12	20.3%	3	5.1%	18	30.5%	25.3%
	BSAD	101	43	42.6%	48.0%	4	4.0%	13	12.9%	5	5.0%	36	35.6%	22.4%
	BUS	**160**	**65**	**40.6%**	**45.9%**	**8**	**5.0%**	**25**	**15.6%**	**8**	**5.0%**	**54**	**33.8%**	**23.8%**
Hlth.Sci.and Ed.	CMDS	30	11	36.7%	54.3%	1	3.3%	5	16.7%	1	3.3%	12	40.0%	22.9%
	ES	79	29	36.7%	58.7%	3	3.8%	8	10.1%	3	3.8%	36	45.6%	23.8%
	HLTH	42	10	23.8%	44.8%	1	2.4%	2	4.8%	1	2.4%	28	66.7%	44.8%
	NU	43	19	44.2%	68.0%	0		7	16.3%	4	9.3%	13	30.2%	16.0%
	HSE	**194**	**69**	**35.6%**	**56.6%**	**5**	**2.6%**	**21**	**10.8%**	**9**	**4.6%**	**90**	**46.4%**	**26.3%**
Social and Cultural Studies	COMM	71	33	46.5%	59.7%	5	7.0%	4	5.6%	6	8.5%	23	32.4%	17.7%
	ECON	16	8	50.0%	33.3%	1	6.3%	2	12.5%	0		5	31.3%	33.3%
	HIST	50	31	62.0%	59.2%	3	6.0%	4	8.0%	0		12	24.0%	26.5%
	JUST	26	10	38.5%	48.6%	3	11.5%	0		1	3.8%	12	46.2%	27.0%
	PHRE	20	13	65.0%	42.9%	1	5.0%	1	5.0%	0		5	25.0%	28.6%
	POL	32	20	62.5%	73.3%	1	3.1%	1	3.1%	2	6.3%	8	25.0%	13.3%
	PSYC		29	28.4%	42.5%	7	6.9%	19	18.6%	8	7.8%	39	38.2%	25.0%
	SOAN	18	4	22.2%	50.0%	2	11.1%	3	16.7%	3	16.7%	6	33.3%	8.3%
	SCS	**335**	**148**	**44.2%**	**57.3%**	**23**	**6.9%**	**34**	**10.1%**	**20**	**6.0%**	**110**	**32.8%**	**21.4%**
Sciences and Mathematics	AGSC	16	6	37.5%	9.1%	0		3	18.8%	2	12.5%	5	31.3%	72.7%
	BIOL	126	32	25.4%	27.0%	5	4.0%	23	18.3%	10	7.9%	56	44.4%	27.0%
	CHEM	19	8	42.1%	50.0%	0		4	21.1%	1	5.3%	6	31.6%	20.0%
	CS	19	5	26.3%	53.3%	1	5.3%	6	31.6%	0		7	36.8%	33.3%
	MATH	30	5	16.7%	15.0%	0		3	10.0%	1	3.3%	21	70.0%	50.0%
	PHYS	12	4	33.3%	60.0%	0		0		1	8.3%	7	58.3%	20.0%
	SAM	**222**	**60**	**27.0%**	**35.2%**	**6**	**2.7%**	**39**	**17.6%**	**15**	**6.8%**	**102**	**45.9%**	**29.5%**
	IDSM	9	4	44.4%	37.5%	0		2	22.2%			3	33.3%	50.0%
	All	**1137**	**447**	**39.3%**	**48.8%**	**49**	**4.3%**	**136**	**12.0%**	**64**	**5.6%**	**441**	**38.8%**	**25.6%**

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 may also be the case that many students are most proud of some artifact of their academic experience. In some cases, the actual artifact was different than the description, or merely symbolic, like a program from a play, or photo of a sorority event.

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. If none of these was a good representation of the student's reasoning, a more detailed explanation was given by the reviewer. Two words frequently appearing in the open-ended response were "Enjoyable" and "Creative." Responses sum to more than 100% because more than one response may be chosen.

	Year	Count 2011	Pers. Best Yes	Pct.	Pers. Goals Yes	Pct.	Pers. Growth Yes	Pct.	Challenging Yes	Pct.	Collaborative Yes	Pct.	Professional Yes	Pct.
Arts and Letters	ART	43	13	30%	17	40%	17	40%	9	21%	2	5%	5	12%
	CML	26	9	35%	7	27%	11	42%	9	35%	1	4%	2	8%
	ENG	104	32	31%	29	28%	44	42%	44	42%	5	5%	13	13%
	LING	7	4	57%	3	43%	2	29%	4	57%	1	14%	1	14%
	MUS	18	8	44%	5	28%	6	33%	7	39%	1	6%	6	33%
	THEA	19	6	32%	9	47%	11	58%	9	47%	1	5%	3	16%
	AAL	**217**	**72**	**33%**	**70**	**32%**	**91**	**42%**	**82**	**38%**	**11**	**5%**	**30**	**14%**
Business	ACCT	59	10	17%	12	20%	24	41%	18	31%	8	14%	14	24%
	BSAD	101	23	23%	17	17%	39	39%	31	31%	19	19%	28	28%
	BUS	**160**	**33**	**21%**	**29**	**18%**	**63**	**39%**	**49**	**31%**	**27**	**17%**	**42**	**26%**
Hlth.Sci.and Ed.	CMDS	30	6	20%	5	17%	15	50%	10	33%	2	7%	11	37%
	ES	79	16	20%	17	22%	30	38%	25	32%	10	13%	30	38%
	HLTH	42	4	10%	6	14%	20	48%	8	19%	4	10%	17	40%
	NU	43	8	19%	10	23%	25	58%	13	30%	2	5%	9	21%
	HSE	**194**	**34**	**18%**	**38**	**20%**	**90**	**46%**	**56**	**29%**	**18**	**9%**	**67**	**35%**
Social and Cultural Studies	COMM	71	17	24%	19	27%	31	44%	30	42%	7	10%	21	30%
	ECON	16	6	38%	2	13%	4	25%	6	38%	1	6%	2	13%
	HIST	50	20	40%	5	10%	16	32%	20	40%	1	2%	9	18%
	JUST	26	6	23%	3	12%	9	35%	7	27%	2	8%	1	4%
	PHRE	20	8	40%	5	25%	8	40%	4	20%	2	10%	1	5%
	POL	32	7	22%	6	19%	13	41%	16	50%	1	3%	4	13%
	PSYC	102	26	25%	25	25%	43	42%	34	33%	15	15%	28	27%
	SOAN	18	7	39%	5	28%	4	22%	8	44%	2	11%	3	17%
	SCS	335	97	29%	70	21%	128	38%	125	37%	31	9%	69	21%
Sciences and Mathematics	AGSC	16	3	19%	2	13%	0		6	38%	2	13%	4	25%
	BIOL	126	27	21%	33	26%	58	46%	49	39%	21	17%	26	21%
	CHEM	19	3	16%	3	16%	7	37%	5	26%	4	21%	5	26%
	CS	19	6	32%	6	32%	7	37%	9	47%	1	5%	4	21%
	MATH	30	11	37%	8	27%	13	43%	15	50%	3	10%	6	20%
	PHYS	12	2	17%	4	33%	6	50%	1	8%	4	33%	5	42%
	SAM	222	52	23%	56	25%	91	41%	85	38%	35	16%	50	23%
	IDSM	9	4	44%	0		5	56%	3	33%	1	11%	2	22%
	All	**1137**	**292**	**26%**	**263**	**23%**	**468**	**41%**	**400**	**35%**	**123**	**11%**	**260**	**23%**

Reflective Cover Letters

Finally, the portfolio asks students to compose a cover letter addressed to the Liberal Arts and Science Portfolio Project Team. In 2011, 1124 (over 98%) of portfolios included 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 grudgingly accepted. While the academic works submitted in other categories provide direct insight into student achievement, the cover letters provide a

Cover Letter at a Glance	
• Number of submissions:	**1124**
• Median time to complete portfolio:	**3.5 hours**
• Attitudes to Truman Education	**Very Positive**
• Attitudes to portfolio	**Positive**
• Common themes	**Growth in writing skill**
	Praise to faculty
	Varied opinions on LSP

more personal view of student attitudes and opinions. The content of cover letters varies widely, and many students do not talk about all topics. Therefore, when data are reported for this category, any student not reporting an opinion is listed as "no indication." This is true even when a student gives no indication because they submitted no cover letter.

During the weeks of portfolio assessment and evaluation, the student letters are generally reserved for the last day. While reading student letters, faculty readers are instructed to reserve one or more student letters to share with the group, and thus the week of portfolio evaluations ends with an airing of student concerns, criticisms, recommendations, and/or praise.

Students are asked in their cover letters to reflect on and write about several specific items:
- *The process used and time spent in compiling their portfolio.*
- *What they learned about themselves through the process.*
- *Their attitudes toward portfolio assessment (and assessment at Truman in general).*
- *Their attitudes about their education at Truman.*
- *Their ideas, reactions, and suggestions regarding the undergraduate experience at Truman.*
- *Their immediate plans upon leaving Truman.*

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

Because of an expressed concern that portfolio assessment could be too intrusive in student and faculty lives, the prompt for the cover letters asks seniors to report the time involved in compiling and submitting their portfolio. In 2011, 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.

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 percentage has been increasing for several years.

Submissions are rated as having No Evidence of Reflection, Evidence Found, or "Evidence with Findings." The column marked "% Refl" add the two positive responses together.

Across majors, the proportion who engage in reflection is fairly consistent. No particular school jumps out as particularly reflective, although several majors do score significantly lower.

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

Throughout the completion of the portfolio project, I have affirmed the growth I have had since I was a freshman. Lately, as I have been preparing to graduate, I have been thinking more and more about the times at the beginning. As I was re-reading all of my old assignments, I reflected on the mindset I had during those times. My papers a few years ago were about half the length of an average paper now. Seeing my growth, not only in page length, but also in quality of work is something that shocked me while compiling my portfolio.

Another student writes:

This process has demonstrated my immense growth as a writer and student. Although I have only attended Truman for two years, there is a noticeable difference in the quality of writing and work from when I arrived, to now. Even though the portfolio is somewhat painstaking at a busy time of year, the process highlighted my growth throughout college. Therefore, while this process was not necessarily enjoyable, it was informative.

		Count	Evidence of Self-reflection			
	Year	2011	No	Yes	Findings	% Refl
Arts and Letters	ART	43	3	26	14	93.0%
	CML	40	9	20	11	77.5%
	ENG	85	15	41	29	82.4%
	LING	6		5	1	100%
	MUS	17	1	6	10	94.1%
	THEA	18	2	7	9	88.9%
	AAL	**209**	**30**	**105**	**74**	**85.6%**
Business	ACCT	62	14	38	10	77.4%
	BSAD	97	21	49	27	78.4%
	BUS	**159**	**35**	**87**	**37**	**78.0%**
Hlth.Sci.and Ed.	CMDS	31	4	16	11	87.1%
	ES	80	18	42	20	77.5%
	HLTH	38	6	20	12	84.2%
	NU	42	7	21	14	83.3%
	HSE	**191**	**35**	**99**	**57**	**81.7%**
Social and Cultural Studies	COMM	68	13	31	24	80.9%
	ECON	56	7	34	15	87.5%
	HIST	40	8	20	12	80.0%
	JUST	26	4	14	8	84.6%
	PHRE	18	3	9	6	83.3%
	POL	31	8	15	8	74.2%
	PSYC	90	12	43	35	86.7%
	SOAN	18	3	10	5	83.3%
	SCS	**347**	**58**	**176**	**113**	**83.3%**
Sciences and Mathematics	AGSC	15	2	9	4	86.7%
	BIOL	119	24	54	41	79.8%
	CHEM	19	9	6	4	52.6%
	CS	19	9	4	6	52.6%
	MATH	28	5	16	7	82.1%
	PHYS	11	3	5	3	72.7%
	SAM	**211**	**52**	**94**	**65**	**75.4%**
	IDSM	7		2	5	100%
	All	**1124**	**210**	**563**	**351**	**81.3%**

Self Reflection in Cover Letters, 2009-2011
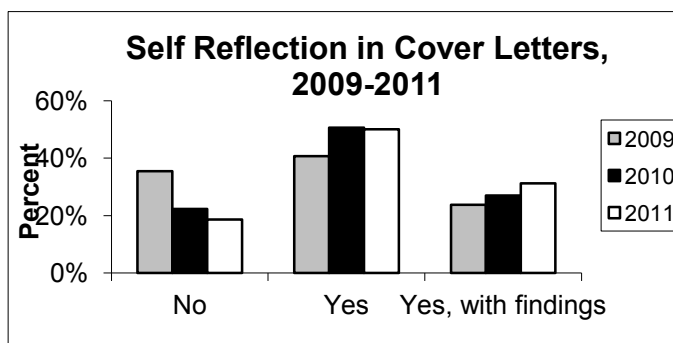
Some move beyond that into thinking, outlook, and attitude.

Throughout the process of compiling my portfolio, it has brought to light the amount of education and skills that I have obtained over the past four years here at Truman State. Seeing in concrete form the work I have accomplished as a student was truly empowering for me, especially as I continue on with my education…

ATTITUDE TOWARD EDUCATION AT TRUMAN

Cover Letter Content Analysis, by First Major

		Count 2011	Attitude toward Education at Truman					Attitude toward Education in the Major				
	Year		Neg.	Mix.	Pos.	None	W% Pos	Neg.	Mix.	Pos.	None	W% Pos
Arts and Letters	ART	43	0	5	38	0	94.2%	0	4	25	14	93.1%
	CML	40	1	3	34	2	93.4%	1	0	14	25	93.3%
	ENG	85	2	6	71	6	93.7%	1	2	31	51	94.1%
	LING	6	0	1	4	1	90.0%	0	0	2	4	100.0%
	MUS	17	0	3	13	1	90.6%	0	0	10	7	100.0%
	THEA	18	0	3	13	2	90.6%	0	2	10	6	91.7%
	AAL	**209**	**3**	**21**	**173**	**12**	**93.1%**	**2**	**8**	**92**	**107**	**94.1%**
Business	ACCT	62	0	6	51	5	94.7%	0	1	19	42	97.5%
	BSAD	97	7	11	64	15	84.8%	1	3	22	71	90.4%
	BUS	**159**	**7**	**17**	**115**	**20**	**88.8%**	**1**	**4**	**41**	**113**	**93.5%**
Hlth.Sci.and Ed.	CMDS	31	1	3	23	4	90.7%	0	0	18	13	100.0%
	ES	80	1	15	57	7	88.4%	0	0	39	41	100.0%
	HLTH	38	1	3	32	2	93.1%	0	0	22	16	100.0%
	NU	42	0	6	33	3	92.3%	1	6	26	9	87.9%
	HSE	**191**	**29**	**54**	**73**	**35**	**64.1%**	**15**	**17**	**20**	**139**	**54.8%**
Social and Cultural Studies	COMM	68	1	6	56	5	93.7%	0	4	16	48	90.0%
	ECON	56	2	4	43	7	91.8%	1	4	19	32	87.5%
	HIST	40	0	6	27	7	90.9%	0	1	17	22	97.2%
	JUST	26	1	7	16	2	81.3%	1	2	10	13	84.6%
	PHRE	18	0	2	15	1	94.1%	0	0	7	11	100.0%
	POL	31	0	4	23	4	92.6%	0	1	15	15	96.9%
	PSYC	90	2	11	69	8	90.9%	3	3	32	52	88.2%
	SOAN	18	1	0	15	2	93.8%	0	0	6	12	100.0%
	SCS	**347**	**7**	**40**	**264**	**36**	**91.3%**	**5**	**15**	**122**	**205**	**91.2%**
Sciences and Mathematics	AGSC	15	1	2	10	2	84.6%	0	1	8	6	94.4%
	BIOL	119	2	14	87	16	91.3%	4	7	40	68	85.3%
	CHEM	19	0	2	13	4	93.3%	0	1	7	11	93.8%
	CS	19	1	2	11	5	85.7%	1	4	3	11	62.5%
	MATH	28	0	5	20	3	90.0%	1	0	6	21	85.7%
	PHYS	11	0	0	9	2	100.0%	0	0	7	4	100.0%
	SAM	**211**	**4**	**25**	**150**	**32**	**90.8%**	**6**	**13**	**71**	**121**	**86.1%**
	IDSM	7	1	0	6	0	85.7%	0	0	1	6	100.0%
	All	**1124**	*51*	*157*	*781*	*135*	*86.9%*	*29*	*57*	*347*	*691*	*86.7%*

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 and high in almost all areas.

There is no way to summarize the past four years, but if there was a way to graciously and adequately thank Truman faculty and staff, I would do so repeatedly. It's been wonderful.

My choice to come to Truman was well founded and one that I will never regret. I have been taught to think outside the box and apply my knowledge in all situations. The faculty and staff take great personal interest in the students, something I have experienced from several professors. I have been asked to work hard and to give my all which has prepared me to further my education in the graduate setting. I have been given opportunities to be a leader on campus, preparing me for a lifetime of working with others. Truman has given me the best foundation to build upon that I could have hoped for in an undergraduate university.

Throughout this process, I have been able to see the change and improvement in my writing style over the last four years. I saved many pieces from my first year at Truman, but none made it into the portfolio because they were not as high-quality as my later essays. Reading through my past work has shown me that I am now better able to link ideas together from a variety of sources and disciplines. I have seen that I am a very capable writer, no matter if the assignment calls for English or Spanish. During my time at Truman, I have learned to write a structured, organized, and interesting paper.

The few mixed and negative submissions vary, but some use the cover letter to give very specific of very general complaints about Truman, a particular professor, or the lack of name recognition Truman has.

Completing this portfolio helped me realize how much I do not like Truman and the only reason why it will be special in my memories will due to the close friends I made during my time here. Among the things that made my "educational experience" miserable was the conservative atmosphere and the lack of diversity. In general students and faculty boast that Truman is well known in the state and in the country and it is not at all. I have visited numerous towns near and far from Kirksville in Missouri and few even know about Kirksville let alone the university. In my graduate schools visits (6) no one has ever heard of Truman. Thus my conclusion after finishing this portfolio is that all of my hard work not only in my classes but also with extracurricular activities is useless because at the end of the day another student with an undergraduate degree from a real known university will get my job regardless of the academic excellence that Truman claims to pursue.

The cover letter prompt does not specifically mention the major, so under 40% of submissions mention the major specifically. Of those that do, however, comments about the major are also overwhelmingly positive, with over 80% of those that comment rated as positive, with under 7% negative. Positive comments vary by major, of course, but often focus on faculty interaction, preparation for future career or study, or the community of students they have worked with.

I can't thank the nursing department enough for everything they have taught and given me. Every single professor in the department is fantastic at what they do and I am eternally grateful for them.

Cover Letter Content Analysis, by First Major, cont.

		Count	Attitude toward Portfolio					Attitude toward Assessment (Other than Portfolio)					
	Year	2011	Neg.	Mix.	Pos.	None	W% Pos	Neg.	Mix.	Pos.	None	W% Pos	
Arts and Letters	ART	43	3	11	26	3	78.8%	0	10	7	26	70.6%	Arts and Letters
	CML	40	4	10	25	1	76.9%	1	6	9	24	75.0%	
	ENG	85	11	25	43	6	70.3%	7	12	15	51	61.8%	
	LING	6	0	2	4	0	83.3%	0	2	0	4	50.0%	
	MUS	17	2	3	10	2	76.7%	1	5	5	6	68.2%	
	THEA	18	4	7	7	0	58.3%	2	4	2	10	50.0%	
	AAL	**209**	**24**	**58**	**115**	**12**	**73.1%**	**11**	**39**	**38**	**121**	**65.3%**	
Business	ACCT	62	8	20	30	4	69.0%	5	6	13	38	66.7%	Business
	BSAD	97	14	30	44	9	67.0%	7	21	18	51	62.0%	
	BUS	**159**	**22**	**50**	**74**	**13**	**67.8%**	**12**	**27**	**31**	**89**	**63.6%**	
Hlth.Sci.and Ed.	CMDS	31	2	11	17	1	75.0%	8	3	6	14	44.1%	Hlth.Sci.and Ed.
	ES	80	12	18	45	5	72.0%	4	6	17	53	74.1%	
	HLTH	38	3	7	21	7	79.0%	1	10	10	17	71.4%	
	NU	42	5	13	22	2	71.3%	1	2	10	29	84.6%	
	HSE	**191**	**9**	**15**	**128**	**39**	**89.1%**	**5**	**11**	**76**	**99**	**88.6%**	
Social and Cultural Studies	COMM	68	7	19	37	5	73.8%	4	9	9	46	61.4%	Social and Cultural Studies
	ECON	56	7	16	28	5	70.6%	3	6	13	34	72.7%	
	HIST	40	6	11	19	4	68.1%	5	4	5	26	50.0%	
	JUST	26	5	6	14	1	68.0%	6	6	3	11	40.0%	
	PHRE	18	2	4	10	2	75%	2	3	1	12	41.7%	
	POL	31	6	6	15	4	66.7%	4	3	7	17	60.7%	
	PSYC	90	15	23	49	3	69.5%	9	5	20	56	66.2%	
	SOAN	18	2	5	8	3	70.0%	2	2	5	9	66.7%	
	SCS	**347**	**50**	**90**	**180**	**27**	**70.3%**	**35**	**38**	**63**	**211**	**60.3%**	
Sciences and Mathematics	AGSC	15	2	3	9	1	75.0%	0	2	6	7	87.5%	Sciences and Mathematics
	BIOL	119	20	27	60	12	68.7%	12	13	22	72	60.6%	
	CHEM	19	10	5	3	1	30.6%	2	5	1	11	43.8%	
	CS	19	7	7	5	0	44.7%	3	1	3	12	50.0%	
	MATH	28	3	7	16	2	75.0%	2	6	3	17	54.5%	
	PHYS	11	0	4	2	5	66.7%	0	3	0	8	50.0%	
	SAM	**211**	**42**	**53**	**95**	**21**	**63.9%**	**19**	**30**	**35**	**127**	**59.5%**	
	IDSM	7	1	0	5	1	83.3%	1	1	2	3	62.5%	
	All	**1124**	*148*	*266*	*597*	*113*	*72.2%*	*83*	*146*	*245*	*650*	*67.1%*	

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

ATTITUDE TOWARD THE PORTFOLIO PROCESS

The percent of students who actively say something positive about the portfolio was much higher this year. Although some process improvements were made, including more visits to senior capstone classes and more communication with students, this jump was larger than expected. Hopefully, this trend will continue, rather than being a single "blip" in the data.

Attitudes toward Portfolio Assessment, 2008-2012

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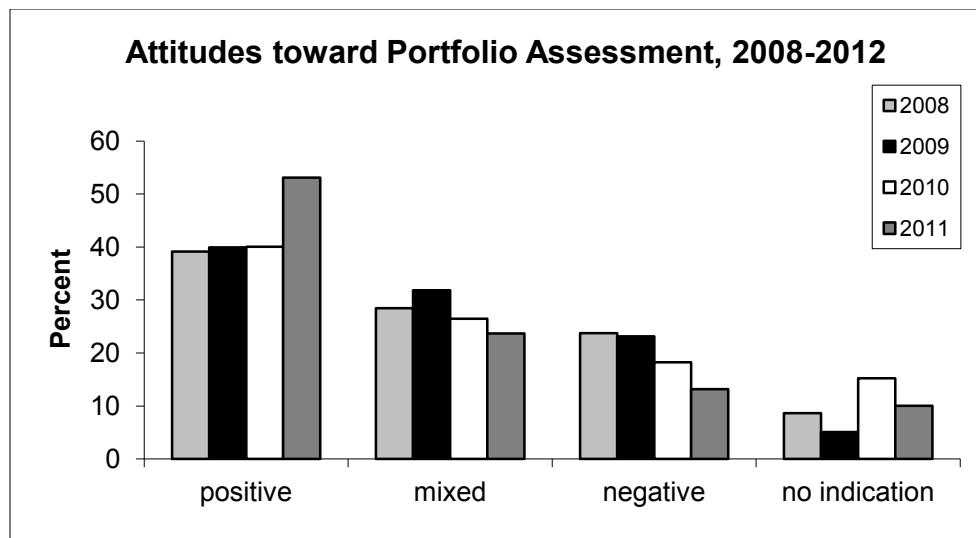
Positive comments about the portfolio often point out how the process has given them a chance to see their own growth, usually in thinking or in writing.

As I sit here putting together my portfolio I find this experience to be very rewarding. I have written numerous papers over my four years at Truman and have enjoyed looking through all of these papers and seeing how far I have advanced in my knowledge base. From these papers I have looked through I have realized how many other disciplines I have a good knowledge base in besides nursing; for example, psychology, biology, history, etc. To complete my portfolio I worked on it little by little, using spare time to pick through papers to use.

For me, the portfolio process reminded me of the great range of courses that I have taken at Truman and the great range of courses offered as well. Looking back at some of my submission, I think they are actually better than I initially gave myself credit for when I wrote them, which is nice feeling.

Many mixed comments comment on how the requested prompts are not relevant to the main interests, and their worry about how the portfolio reflects on themselves personally. Others mentioned that their own lack of disorganization and file keeping (our new system should help with this).

I initially thought the portfolio process was a waste of time/not relevant to my major (Biology), but after completing the item submission process, I am happy for having done it. As I previously mentioned, it was nice to be given a reason to go back and look at my past work and bring back memories…At least in the current incarnation of the portfolio assessment, I think too much emphasis is placed on essays and writings and those majors who do a lot of work in that format. As a Biology major and having had to take numerous other courses in the general sciences, I have had to create numerous lab notebooks that I think are more reflective of my time at Truman than a paper concerning some form of historical analysis. While I recognize that digitizing a lab notebook would be difficult if not impossible, I get the impression that a lot of my work in my major courses is being passed up in favor of my work in my LSP courses.

Putting this portfolio together was nothing short of a tedious process. It was a constant back and forth search for works that best represented me as a student here at Truman. Whether I chose wisely or not is something that even I am not sure about. Nonetheless, I did it to the best of my ability and hope that my achievements and development are displayed through my submissions.

The process used was not very good because I did not have the majority of my best work available to submit for the portfolio as it is on my private computer and I did not have access to it while I made this portfolio. The total amount of time spent on the portfolio is minimal. I have learned that I should organize my

work better so that it is readily available if I want to go back to something I have done that I am proud of. The portfolio practices here are Truman are a great idea I think. Overall, my experiences and education while at Truman have been very rewarding.

Negative comments often mention the amount of work it took at a busy time and that the portfolio isn't helpful to them directly.

I don't really care for the portfolio project because it seemed to take up precious time that I don't have.

I actually enjoyed putting together my work sample, though I feel that other than this nostalgic pleasure, the portfolio has absolutely no benefit to me whatsoever. I am glad that Truman faculty and staff take their students' learning experience seriously, but I feel that this particular way of harvesting information about their students' experience will not produce a quality response, because most graduating seniors are so busy with finalizing their semester by this point, that they have no interest in the portfolio and view it as another assignment on their already overflowing plate. Motivation is a serious issue I see with this portfolio project. We have to complete it to graduate. However, completion does not mean quality results. Many students "bulls**t" this assignment because they are upset about the fact that it has no bearing on their grades, and will not be reviewed until long after the fact of their graduation. It seems that there is a tendency to blow it off and this cannot be helpful for the faculty and staff who review these portfolios.

ATTITUDES TOWARD ASSESSMENT AT TRUMAN

Students are invited to discuss their attitudes toward assessment at Truman overall, although just over one-half of students actually discuss assessment besides the portfolio itself. Positive comments about assessment outnumbered negative ones, continuing an improving trend in this area. Many underscored their knowledge that it is useful for the school, but not for them.

In terms of other assessment practices at Truman, I believe they are done in a manner which is least invasive as possible. Though standardized testing is a pain, I believe it is, sadly, something that must be done and hopefully it provides important feedback.

Creative Work and Reflection.

The portfolio project has spent two years examining creativity among Truman students. In 2010, a more general study was done, and was used to make a more specific prompt for 2011. After this year, this prompt will retire, but could return in the future.

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, in fact, created; instead, the portfolio project was asked to investigate creativity as a medium-term special project. This prompt was not consistently enforced as a graduation requirement; of the 1140 portfolios received, 808 students (70%) completed this prompt.

Results from 2010 portfolios led the portfolio team to conclude that common definitions of creativity included both a general idea of problem solving as well as a more artistic view of Production. Because a campus-wide committee had been created to investigate higher order thinking, the portfolio decided to focus on a more specific definition related to a "creative endeavor," not problem solving or independent work.

Students graduating in Fall 2010, and Spring and Summer 2011 were asked to submit their most creative endeavor at Truman in response to the following prompt:

Please provide an example of the best creative work you have done while at Truman, inside or outside of the classroom. Work may be for credit or pay, for a co-curricular activity or "just for fun". Although many definitions of creativity exist, this prompt is asking for original thinking in the production of a work of art or a creative endeavor. Your work should go beyond problem solving or simply working independently on a project. This type of creativity includes work in fields such as the visual/performing arts and creative writing, but may also be found elsewhere.

Students were also asked to describe the work, especially if an artifact was not included, as well as the circumstances under which it was created; 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. Reviewers were also asked to answer a question asking if the submission made the reviewer think about creativity in a different way.

Summary statistics of the two Likert scale questions show a wide dispersion of scores, as found by faculty/staff reviewers. Despite a tighter definition, there was no change in the Likert scale averages, although there was more concentration at the middle with fewer at either end.

	Demonstrated an understanding of Creativity		Submission is thought to demonstrate creativity	
Year	2010	2011	2010	2011
(no demonstration) 1	21.2%	14.6%	21.4%	16.1%
2	21.6%	23.3%	18.4%	22.6%
3	22.5%	30.8%	22.4%	30.2%
4	22.7%	19.4%	22.2%	15.3%
(clearly demonstrated) 5	12.0%	11.8%	15.6%	15.6%
Average	3.17	3.09	3.08	3.08

Faculty who analyzed the reasons given found that roughly 17% did not give any "true" definition of creativity, while 30% gave more than one "true" definition. The remaining 52% gave one "true creativity" reason. On a rating of the level of reflection, it was judged that student engaged in no reflection (10%), minimal reflection (48%), or reflection with findings (42%).

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.

No consensus was reached, but the value of creativity to our curriculum was affirmed. The Higher-Order Thinking Committee's use of the term "Divergent Thinking" instead of the similar term used by this project, "Creative Problem Solving," may help with helping to distinguish among different kinds of creativity.

Transformative Learning Experiences Questionnaire (TEQ)

Although Truman uses various instruments and systems to measure students' participation in key experiential learning opportunities such as, Study Abroad, Undergraduate Research Experiences, Service Learning, and Internships, we do not have a single instrument that asks about all of them. The portfolio project has been asked to administer a short survey to students about these and other transformative experiences. 2010-2011 was the first year all students were asked to complete this survey as part of the portfolio project (N=1134, over 99% of portfolios).

> **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.

Transformative Learning Questionnaire

Before you submit your portfolio, we would appreciate if you would take a few minutes to reflect upon your experiences here at Truman.

Back to Main Page

We know that Truman students are involved in a variety of activities that help shape their attitudes and perspectives in new ways. This survey asks you about a few of those activities. These questions only take a few minutes to complete. Thank you for your assistance.

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. The educational experiences above are often associated with transformative learning.

Please mark which, if any, of the following experiences in which you have participated while at Truman.
These experiences may have been done for pay, for credit, or neither, and may have occurred during the semester, the summer, or an interim.

☑ **Study Abroad**

How transformative was this experience?

○ Not at all   ○ A Little   ○ Somewhat   ○ Transformative

Please describe this experience.

Please describe how this experience was transformational for you.

☐ **Service Learning**

☐ **Undergraduate Research**

Students may complete the TEQ at any time, but are also asked to review it again when they indicate that their portfolio is complete. The screenshot on the previous page shows what students see when they start the TEQ. After reading the definition of Transformative Learning, they are asked to mark which experiences from the following list they have completed:
1) Study Abroad
2) Service Learning
3) Undergraduate Research
4) Internship
5) Leadership
6) Student-Led Learning

The big four are listed first (in random order), followed by Leadership and Student-Led Learning.

When they check that they have done one of these activities, the white box appears as shown and asks them about that experience.

The Transformative Learning Experience Questionnaire was given to students as part of the portfolio, in identical form to what was given to spring graduates in 2010.
In this instrument, Students were given a definition of transformative learning based on literature on the theory of Transformative Learning (Mezirow, 1978)

The revised version instead began with the boxed definition and then asked if students had participated in each of six commonly mentioned transformative activities. In addition, students were asked if they had a transformative experience outside of those areas, then specifically asked if such experienced happened inside or outside a classroom setting.

Almost all students (n = 1134, >99%) completed the survey this year as it was fully implemented.

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

Experience	% Reporting Activity		Avg. Rating (0-3 scale)	
	2010	2011	2010	2011
Study Abroad	21%	22%	2.7	2.8
Service Learning	23%	21%	2.0	2.1
Research	26%	29%	2.2	2.2
Internship	24%	29%	2.5	2.6
Leadership	35%	35%	2.5	2.6
Student-led	7%	6%	2.3	2.4
Course*	28%	27%	2.8	2.8
Other*	8%	7%	2.8	2.7
Any (Big 4)	**61%**	**65%**		
Any	**79%**	**82%**		

Current limitations of the instrument include:
1)   For "Course" and "Other" only those students with transformative experiences give a report, so average ratings are artificially high.
2)   Terms were not fully defined, so students may have different ideas of "research," "Service-learning," and other terms used in this study.

Significant differences has been found by gender, marginally for Internships (no adjustment for multiple comparison error), and strongly significant for Study Abroad, Service Learning, and Leadership, as well as the overall likelihood that a student will participate in any Transformative Learning Experience, and even more strongly for the "Big 4."

Experience	% Reporting Activity		
	Women	Men	significant
Study Abroad	28%	12%	α <.001
Service Learning	28%	11%	α <.001
Research	30%	27%	
Internship	31%	26%	α <.05
Leadership	41%	25%	α <.001
Student-led	5%	6%	
Course*	27%	26%	
Other*	7%	6%	
Any (Big 4)	**71%**	**56%**	α <.001
Any	**86%**	**76%**	α <.001

By School, significant differences were found in Service Learning, Research, Internships, Course, and Overall Participation levels, with students in the school of business showing the lowest level of Big4 transformative experiences, as shown below.

Experience	% Reporting Transformative Learning Experience							
	AAL	B	HSE	IDS	SCS	SaM	Overall	significant
Study Abroad	26%	22%	18%	38%	22%	20%	22%	
Service Learning	13%	9%	47%	13%	23%	12%	21%	α <.001
Research	18%	8%	38%	63%	32%	40%	29%	α <.001
Internship	20%	28%	46%	25%	32%	19%	30%	α <.001
Leadership	33%	30%	40%	38%	35%	33%	33%	
Student-led	6%	2%	7%	13%	7%	4%	6%	α <.10
Course*	31%	22%	20%	38%	33%	23%	27%	α <.05
Other*	7%	6%	4%	0%	8%	6%	6%	
Any (Big 4)	**56%**	**50%**	**81%**	**88%**	**70%**	**62%**	**65%**	α <.001
Any	**77%**	**70%**	**88%**	**100%**	**86%**	**80%**	**82%**	α <.001

Eighty-two percent of women and seventy-five percent of men report participation in a transformative 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 transformative activities, the percent reporting very high or low transformation are:

	Very Transformative	None / Little	N
Study Abroad	**85%**	2%	253
Service Learning	35%	**24%**	264
Research	45%	3.5%	345
Internship	69%	6%	336
Leadership	69%	6%	407
Student-Led Learning	50%	**13%**	68
Course*	82%	1.5%	329
Other T.E.*	88%	0%	86

Overall, students were quite pleased with their transformative experiences. Over two-thirds of responses included detailed descriptions of their experiences and why they are transformative. Similar to last year's results, 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 number of students reporting both especially high and especially low responses from participating students.

A connected question was the number of transformative learning experiences a student participated in overall, given the Strategic goal that all students will have at least one transformative learning experience. About two-thirds of students report having at least one of the "Big 4" and almost 82% reporting having some transformative experience.

	Overall	%
7	4	0.4%
6	11	1.0%
5	34	3.0%
4	95	8.4%
3	176	15.5%
2	283	25.0%
1	323	28.5%
0	207	18.3%
	1133	

	Big4	%
4	12	1.1%
3	71	6.3%
2	232	20.5%
1	424	37.4%
0	394	34.8%
	1133	

Similarly, one might wonder about the percent of students who report that the experience was actually transformational (with a top score of 3 on the rating). Students are split almost in even thirds among those who report none, one or more than one experience worthy of that top rating. Limiting analyses to the "Big 4" experiences limits those who report any truly transformative learning experience to under half.

Overall	% reporting "3"	Count
2 or more	37.0%	419
1	31.0%	351
0	32.0%	363
		1133

Big 4	% reporting "3"	Count
2 or more	12.0%	138
1	34.5%	398
0	51.7%	597
		1133

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.

After completing the Creativity prompt, the evaluators had lengthy discussions about the nature of creativity and its place in our curriculum. Although no consensus was reached, positive feedback was given to the work done by the Higher-order thinking skill task force of Undergraduate Council, which was working beyond its original charge of examining Critical Thinking.

The portfolio moved to a new room, VH 1220, a computer lab where the desks were arranged in rows, rather than a circle of computers as our previous room (BH 351, which has been converted to a regular classroom). In general, faculty preferred the previous room's face-to-face interaction, but liked the smaller nature of the room for its sound properties. During the May sessions, the room was quite cold, which did hamper operations, but that should be fixed for the future.

Overall, faculty and staff readers report a very positive experience, and mention the benefits to them personally as well as how their participation benefits the university.

Future Plans

The guiding principles for the portfolio project are

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 perceived as 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 has been implemented for Fall 2011 that allows students to submit work as they make it, throughout their Truman career. In Fall 2011, all students were asked to create an account and begin to upload files. The new system also allows Course-embedded submissions, such as submissions from Eng190- Writing as Critical Thinking, JINS courses, and capstone artifacts, whether or not they will be used as part of the formal portfolio review. In addition, the system has been put into a secure file space to allow easy connection to the Assessment Database and the Banner Student Management system. In 2012 these connections will be built as the system demonstrates stability. Another feature that is now possible is the ability of the portfolio system to maintain major-specific portfolio submissions and reflections. In 2012, a pilot study will be done with the Department of Society and Environment and their SOAN majors. By summer 2012, it is hoped that all majors can be invited to participate in major-specific submissions as they desire.

The implementation of the new rotating prompt, Intercultural Thinking, will also give a look at a component of the LSP that has not been quantitatively studied in its dozen years as a requirement. We also suspect that it will give fruitful discussion among the faculty/staff evaluation teams.

As the Undergraduate Council continues its review of LSP components, the portfolio is ready to revise LSP-driven prompts or to implement necessary new prompts.

The success of the small side project looking at 2001 and 2006 Interdisciplinary submissions should continue, to help us see how our ratings are evolving over time. In a related measure, a long-term plan for data maintenance and eliminating the storage of old portfolios continues to slowly move forward. A sample of old portfolios will be digitized and archived, allowing for the elimination of a room full of boxes.

The report of the UGC Higher Order Thinking Skills Committee and its follow-up, the Pathways: Critical Thinking Taskforce, which is preparing for our upcoming accreditation evaluation using the Higher Learning Commission's new Pathway system, has given the University a new frame and new rubrics to discuss and evaluate Critical Thinking. As such, the portfolio sessions are likely to pilot test one or two new rubrics in the coming summer.

Summary
Student performance remains stable. The new elements have achieved stability, and a brand new system is coming online. Our students generally demonstrate competence at Interdisciplinary Thinking and Critical Thinking, and strong competence in Analytical Writing. 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 in portfolio assessment, as well as using a portfolio as a valuable faculty development tool.