

Butler University

Using Learning Objectives to Design and Assess a Core Curriculum

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1. Overview and Background of the Core Curriculum

2. Core Assessment Process

3. Assessing the Core Curriculum Using "The Institutional Portfolio"

Analytic Reasoning

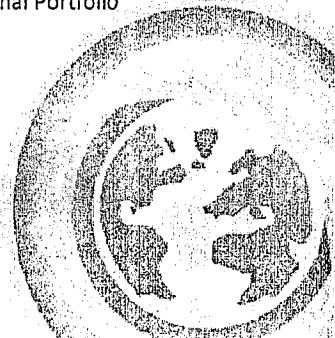
Texts and Ideas

First Year Seminar

Perspectives in the Creative Arts

Physical Well Being

4. Lessons Learned +



Overview of Butler's Core Curriculum

- The common Core elements:
 - * The First Year Seminar: Self, Community and World (6 credit hours)
 - * The Sophomore Requirement: Global and Historical Studies (6 credit hours)
- The general Core elements:
 - * Analytic Reasoning (3 credit hours)
 - * The Natural World (5 credit hours; includes lab component)
 - * Perspectives in the Creative Arts (3 credit hours)
 - * Physical Well-Being (1 credit hour)
 - * The Social World (3 credit hours)
 - * Texts and Ideas (3 credit hours)
- In addition to the common and general Core elements:
 - * Butler Cultural Requirement (8 events)
 - * Indianapolis Community Requirement (1 course)
 - * Speaking Across the Curriculum Requirement (1 course)
 - * Writing Across the Curriculum Requirement (1 course)



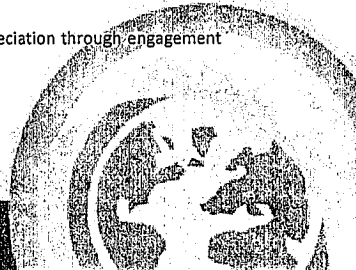
All Core areas have learning objectives: Two examples

First Year Seminar: *Self, Community and the World*

- To listen and read critically – texts, speech, media and other cultural production – in order to examine, challenge, and reshape themselves and the world in which they live.
- To express themselves clearly and persuasively in exposition and in argument, in both written and oral forms.
- To carry out research for the purpose of supplying evidence and support for claims made in exposition and in argument.

Texts & Ideas

- To engage in reading, writing and discussion about important ideas drawn from the study of important texts in a variety of areas - including, among others, literary texts, dramatic texts, sacred texts, historical texts, philosophical texts and scientific texts.
- To develop capacities for argument, interpretation and aesthetic appreciation through engagement with these texts and ideas.



Background

- * Core curriculum was approved by the faculty in AY2005-2006 and was implemented in AY 2010-2011
- * Teaching Core curriculum courses is a shared responsibility of all six colleges and all faculty
- * The Core governing document recommended providing "a structured [assessment] methodology that should be uniformly applied to all areas of the Core" but the Core document did not outline an assessment process
- * Given the structure of the Core areas, we must assess a variety of courses taught from a variety of disciplines within each area
 - Analytic Reasoning: Computer Science, Mathematics, Philosophy
 - * To develop capacities for quantitative and analytic reasoning.
 - * To understand the centrality of these capacities to the natural and social sciences.
 - * To recognize the applications of such capacities to matters of personal and public life.
- * Assessment expectations are embedded in the culture:
 - ~ as a University, we have University Learning Outcomes
 - ~ as a Core curriculum, we have student learning objectives for each area
 - ~ as a faculty, we have been submitting assessment reports annually for the last several years
- * However, assessment of previous Core curriculum was lacking

Opportunity

- * We could create and build a system that works for this Core at this time with this faculty
- * Assessment would be central to the new Core curriculum since both would start at the same time
- * We could start from scratch:
 - ~ rubrics ~discussion of what counts as evidence
 - ~ timing and scheduling of assessments ~determination of what is student learning in these areas



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Core Assessment Process

Spring 2010: Appointment of faculty leaders in Core areas who work with a small group of faculty in each area of the Core

Summer 2010: Development of Core assessment on a three-year cycle of assessment that allows for focus and is manageable for faculty and the Office of Institutional Research and Assessment

Fall 2010: Core Curriculum Committee and Faculty Senate affirm Core assessment process and cycle

Fall 2010 and Spring 2011:

- * Development of rubrics in Core areas first up in assessment cycle (Texts and Ideas, Analytic Reasoning, First Year Seminar, and Global and Historical Studies*)
- * Determination of evidence by faculty
- * Collection of evidence in courses
- * Office of Institutional Research and Assessment manages sampling and collecting data and evidence

Summer 2011: Assessment Roundtable **AssessFest!**

4 Core areas: Texts and Ideas, Analytic Reasoning, First Year Seminar, and Global and Historical Studies

3-4 faculty in each area

2 days

1 afternoon discussion with all 16 faculty

Fall 2011 and Spring 2012:

- * Faculty development work based on assessment results, including presentation at Fall Faculty Workshop
- * Proceed to second wave of Core assessment process



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AREA	FALL 2010	SPRING 2011	SUMMER 2011	FALL 2011	SPRING 2012	SUMMER 2012	FALL 2012	SPRING 2013	SUMMER 2013
First Year Seminar	collect materials	collect materials	assess	faculty development work based on assessment	collect materials	assess	collect materials	collect materials	assess
Global and Historical Studies	collect materials	collect materials	assess	faculty development work based on assessment	collect materials	assess	collect materials	collect materials	assess
Analytic Reasoning	develop rubric and determine evidence	collect materials	assess	faculty development work based on assessment	faculty development work based on assessment		collect materials	collect materials	
Texts and Ideas	develop rubric and determine evidence	collect materials	assess	faculty development work based on assessment	faculty development work based on assessment		collect materials	collect materials	
Physical Well Being		develop rubric and determine evidence		develop rubric and determine evidence	collect materials	assess	faculty development work based on assessment	collect materials	
Perspectives In the Creative Arts		develop rubric and determine evidence		develop rubric and determine evidence	collect materials	assess	faculty development work based on assessment	collect materials	
Natural World				develop rubric and determine evidence	develop rubric and determine evidence		collect materials	collect materials	assess
Social World				develop rubric and determine evidence	develop rubric and determine evidence		collect materials	collect materials	assess



Selecting An Assessment Method: The "Institutional Portfolio" (Seybert & O'Hara, 1997)

* A collection and review of "student learning artifacts" produced through the Core curriculum for each of the eight common and general Core elements:

- | | |
|-------------------------------|-----------------------------------|
| First Year Seminar | Perspectives In the Creative Arts |
| Global and Historical Studies | Physical Well-Being |
| Analytic Reasoning | Texts and Ideas |
| The Natural World | The Social World |

* The collection and review of student learning artifacts is invisible to students and minimally intrusive to faculty. It requires no sacrifice of class time and no external incentives for students to perform well.

* The assessment teams are multi-disciplinary and the faculty as a whole are responsible for the Core, rather than a single department.

* The assessment review is conducted by multi-disciplinary faculty teams using holistic scoring criteria (rubrics).

* Assessment results are shared with the Faculty Core Curriculum Committee and faculty teaching in the Core areas.

* Faculty act on assessment results.

* It is labor intensive and requires institutional resources (faculty overload pay, technical support).

* It is a dynamic process and can produce complex results.



Assessing Core Curriculum

Direct Method: The Institutional Portfolio

- 1) Sample Students
- 2) Obtain Learning Artifacts
- 3) Review Artifacts to Assess Student Learning

Indirect Method: IDEA Course Evaluations

- 1) Determine Essential or Important Student Learning Outcomes (SLOs)
- 2) Generate Grand Frequencies for SLOs among Core Area Courses



Direct Assessment Method

Step 1: Sample Enrolled Students

- Obtain random sample of 20% of students in Core courses
- Analytic Reasoning, Texts and Ideas, First Year Seminar

Behind the Scenes at OIRA

- Calculate total enrolled students in Core Area courses
- Randomly select 20% of enrolled students from whom to select artifacts via faculty



Random Sampling Example: Texts and Ideas

475 students enrolled, ~20% sample, produced group of 100 students

	Random Selection	Population
Mean Verbal SAT	561.03	563.12
Mean English ACT	26.51	26.46
Mean Reading ACT	26.93	26.96
Mean Cumulative GPA	3.30	3.25
Women/Men	68% - 32%	63% - 39%
Race/Ethnicity	87% - White 6% - Multicultural 7% - Did not specify	85% - White 9% - Multicultural 5% - Did not specify



Direct Assessment Method

Step 2: Obtain Artifacts

- Core Coordinators invite instructors to participate in assessment process
- Faculty identify artifact(s) that addressed SLOs
- Faculty receive list of randomly selected students
- Faculty forward to OIRA learning artifacts from randomly selected students

First Year Seminar – 78% faculty participation (47 of 60 courses)

Analytic Reasoning – 100% faculty participation (10 of 10 courses)

Texts and Ideas – 95% faculty participation (21 of 22 courses)

Behind the Scenes at OIRA

- Record artifacts received for follow-up and additional analyses
 - Remove all identifying information from artifacts
 - Prepare PDFs of learning artifacts



Direct Assessment Method

Step 3: Review Artifacts

- Core Faculty Coordinators solicit instructors as Assessment Reviewers
- Core Areas teams train to review learning artifacts using rubrics
- **AssessFest!**
 - ~ Core Area assessment teams interpret SLO rubrics as groups
 - ~ Some revise rubrics during norming process
 - ~ Assessment teams complete calibration training using practice artifacts
 - ~ Assessment teams split into pairs and assessed artifacts
 - ~ Two-person assessment review teams complete consensus analyses using rubrics for SLOs
 - ~ Groups gather for lunch and wrap-up discussion (process and outcomes)

Behind the Scenes in OIRA

- Prepare PDFs of learning artifacts organized by Core Areas
- Create back-up system for providing learning artifacts to reviewers



Analytic Reasoning

- Small, very diverse area of the Core
 - e.g., instructors from Math, Philosophy, Computer Science
- Random sample of students (50) in each section of AR courses in Spring 2011 semester
- Method 1
 - Instructor determined the nature of each item
 - Panel developed rubric for each item, then reviewed each student response
- Method 2
 - Student responses on IDEA forms
 - "How much progress do you think you have made?"

- ~ To develop capacities for quantitative and analytic reasoning.
- ~ To understand the centrality of these capacities to the natural and social sciences.
- ~ To recognize the applications of such capacities to matters of personal and public life.



Analytic Reasoning

Direct Assessment of Quantitative and Analytic Reasoning

Rubric assessed students' interpretations, representations, calculations, and applications/analyses.

Responses were scored on 4-point scale (4=Correct, 3=More correct than incorrect, 2=More incorrect than correct, 1=Incorrect). Scores of 3 and 4 demonstrated competency.

67% of students' assignments demonstrated competency in Quantitative and Analytic Reasoning.

In-Direct Assessment of Quantitative and Analytic Reasoning

Students reported progress in learning how to analyze and critically evaluate ideas, arguments, and points of view.

34% reportedly made Exceptional Progress
28% made Substantial Progress
20% made Moderate Progress



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To develop capacities for quantitative and analytic reasoning.

Analytic Reasoning

Direct Assessment of Applying Quantitative and Analytic Reasoning

Rubric assessed students' application of quantitative and analytic reasoning to the natural and social sciences.

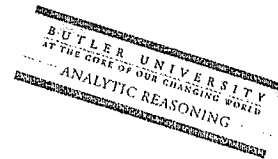
Responses were scored on 4-point scale (4=Correct, 3=More correct than incorrect, 2=More incorrect than correct, 1=Incorrect). Scores of 3 and 4 demonstrated competency.

63% of students' assignments demonstrated competency in Applying Quantitative and Analytic Reasoning.

In-Direct Assessment of Applying Quantitative and Analytic Reasoning

Students reported progress in learning to apply course materials to improve thinking, problem solving, and decision making.

39% reportedly made Exceptional Progress
37% made Substantial Progress
14% made Moderate Progress

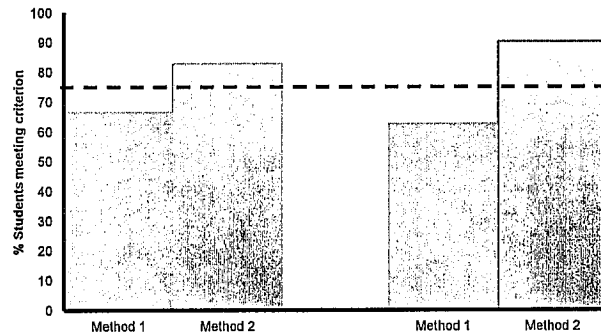


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To understand the centrality of these capacities to the natural and social sciences.

ANALYTIC REASONING

Spring 2011



SLO 1: Analysis

SLO 2: Application



Texts and Ideas

Direct Assessment of Writing

Rubric assessed 6 Primary Traits

Thesis	Use of Sources
Organization	Support/Reasoning
Writing Style	Conventions/Presentation



Holistic score summed results

- 30% of students papers were assessed as Proficient in Writing
- 67% had Some Proficiency
- 3% had Little or No Proficiency

In-Direct Assessment of Writing

Students reported progress in expressing themselves in writing.

- 43% reportedly made Exceptional Progress
- 30% made Substantial Progress
- 17% made Moderate Progress



To engage in reading, writing and discussion about important ideas drawn from the study of important texts in a variety of areas - including, among others, literary texts, dramatic texts, sacred texts, historical texts, philosophical texts and scientific texts.

Texts and Ideas

Direct Assessment of Critical Thinking

Rubric assessed 5 Primary Traits

Identify/Explain Ideas Recognize Contexts
Viewpoints/Assumptions Evaluate Evidence
Implications, Conclusions, Consequences



Holistic score summed these results

27% of students' papers were assessed as Proficient in Critical Thinking
66% had Some Proficiency
8% had Little or No Proficiency

In-Direct Assessment of Critical Thinking

Students reported progress in learning how to analyze and critically evaluate ideas, arguments, and points of view.

48% reportedly made Exceptional Progress
30% made Substantial Progress
15% made Moderate Progress

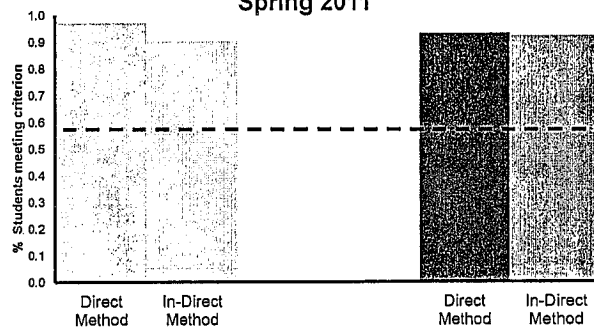


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To develop capacities for argument, interpretation and aesthetic appreciation through engagement with these texts and ideas.

TEXTS and IDEAS

Spring 2011



SLO 1: Writing

SLO 2: Critical Thinking

- ~ To engage in reading, writing and discussion about important ideas drawn from the study of important texts in a variety of areas - including, among others, literary texts, dramatic texts, sacred texts, historical texts, philosophical texts and scientific texts.



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To develop capacities for argument, interpretation and aesthetic appreciation through engagement with these texts and ideas.

Texts and Ideas

~ Students perceive greater proficiency than the evidence suggested.

~ While we met the assessment target (of 75% of students achieving at least some proficiency); no papers were rated as achieving high proficiency in writing *and* critical thinking.

~ Juniors had the lowest mean in both writing and critical thinking (but interpret cautiously); sophomores had the highest mean, followed by seniors and first years.

- ~ To engage in reading, writing and discussion about important ideas drawn from the study of important texts in a variety of areas - including, among others, literary texts, dramatic texts, sacred texts, historical texts, philosophical texts and scientific texts.
- ~ To develop capacities for argument, interpretation and aesthetic appreciation through engagement with these texts and ideas.



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First Year Seminar (FYS)

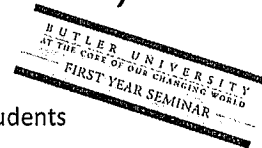
- Two semester sequence in the Core
 - In 2010-11, 57 sections, enrolling all First-Year students
- Direct Assessment Method
 - Student writing of an evidence-based academic essay rather than personal narrative or formal research paper
- In-Direct Assessment Method
 - Student responses on IDEA forms, "How much progress do you think you have made in Developing Skills in Expressing Oneself Orally and in Writing?"

~ To listen and read critically – texts, speech, media and other cultural production – in order to examine, challenge, and reshape themselves and the world in which they live.
~ To express themselves clearly and persuasively in exposition and in argument, in both written and oral forms.

~ To carry out research for the purpose of supplying evidence and support for claims made in exposition and in argument



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FYS



Direct Assessment of Writing

Rubric to Assess Academic Essays on 5 Primary Traits

Thesis/Focus Evidence/Development
 Organization Grammar/Syntax
 Conventions (Format and Documentation)

Holistic score summed these results

Fall Papers

11% of students' writing was assessed as Highly Proficient
 70% were Proficient
 19% had Some Proficiency

Spring Papers

10% of students' writing was assessed as Highly Proficient
 73% were Proficient
 16% were Some Proficiency
 2% were Little/No Proficiency



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To express themselves clearly and persuasively in exposition and in argument, in both written and oral forms.

FYS Writing Rubric Results

- Rubric Had 5 Primary Traits:
 - Thesis/Focus, Evidence/Develop, Organization, Grammar/Syntax, Conventions
- 4-Point Scale:
 - High Proficiency, Proficient, Some Proficiency, Little or No Proficiency

Primary Trait	Fall '10 Averages (1-4)	Spring '11 Averages (1-4)
Thesis/Focus	2.81	2.84
Evidence/Develop	2.78	2.69
Organization	2.81	2.56
Grammar	2.98	2.90
Conventions	3.21	3.12
Summary Score	14.59	14.11



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To express themselves clearly and persuasively in exposition and in argument, in both written and oral forms.

FYS

In-Direct Assessment of Writing

Among 57 sections of the First Year Seminar, students reported the following amount of progress made on ...

Fall 2010:

Developing Skills in Expressing Oneself Orally and In Writing

47.5%	33.9%	13.7%	3.7%	1.5%
Exceptional Progress	Substantial	Moderate	Slight	No Apparent

Spring 2011:

Developing Skills in Expressing Oneself Orally and In Writing

51.9%	28.7%	12.8%	5.2%	1.8%
Exceptional Progress	Substantial	Moderate	Slight	No Apparent



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To express themselves clearly and persuasively in exposition and in argument, in both written and oral forms.

FYS

~ Students' reported increased progress in "Developing Skills in Expressing Oneself In Writing" from Fall to Spring, whereas Faculty assessed similar levels of writing competency in both Fall and Spring.

~ Looking within the direct assessments, students' writing was assessed mostly highly on their Writing Conventions and Use of Grammar in both Fall and Spring semesters.

~ In the Fall, students' writing earned the lowest assessments in their Use of Evidence and in the spring this was Organization.



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To express themselves clearly and persuasively in exposition and in argument, in both written and oral forms.

Fall 2011, Spring 2012

- **Perspectives in the Creative Arts**
 - Determine Evidence
 - Collect Materials
- **Physical Well Being**
 - Determine Evidence
 - Collect Materials



Lessons Learned +

Process

- Need to ask for materials earlier in the semester
- Need to be more directive about what kinds of evidence is being collected
- Need to define genre types and be specific about requesting certain genres
- Need to send rubrics to faculty teaching in the areas and work toward consistent language
- Need to have different faculty evaluators at **AssessFest!** next year
- Need to send ideas from **AssessFest!** back to the faculty teaching in the areas

Pedagogy

- May need to advise students differently about when to enroll in some Core courses
- May need to ask different questions on exams and assignments to elicit from students what we want from them; need workshops on how to write good questions
- Need to remind students and faculty what the SLOs are for each area
- Need to examine why many students didn't demonstrate excitement in their writing assignments and exams
- Need to help students take risks in a critical, analytical way



Questions
Institutional Experiences and Comparisons
Responses

