

August 13, 2014

To: Dan Gales, UCC Committee Chair

From: Outcomes Assessment Committee

Re: Trend Analyses: AY2010-11, AY2011-12, AY2012-13

The Outcome Assessment Committee (OAC) recently reviewed and approved the attached General Education Trend Analyses (3-year trends). This report is now being forwarded to the GES and UCC for review. This fulfills the current charge of the OAC to provide “periodic trend analyses of assessment data to the UCC”.

The General Education Trend Analyses was prepared for the following General Education Learning Outcomes:

OAC Trends Analyses AY2010-11, AY2011-12, & AY2012-13			
Thoughtful		Knowledgeable	
Gen. Ed. Outcome	Competency	Gen. Ed. Outcome	Competency
1.a Thoughtful	Oral Communication	2.a Knowledgeable	Humanities
1.a Thoughtful	Written Communication	2.b Knowledgeable	Natural Sciences
1.b Thoughtful	Critical thinking	2.c Knowledgeable	Social Sciences
1.c Thoughtful	Information Literacy		
1.e Thoughtful	Multicultural		

Each of the individual reports (i.e. Learning Outcomes) is presented in a standard format and addresses the following areas:

- Outcomes
- Method
- Results
- Department Action Trends
- Observation of Trends in Methods
- Observation of Trends in Results
- Recommendations (if applicable)

Also attached to this memorandum is a statement clarifying actions taken in response to General Education data (i.e. trend analyses) and a table summarizing sample sizes for the selected General Education Outcomes as a percentage of student enrollment.

August 13, 2014

To: Dan Gales, UCC Committee Chair

From: Outcomes Assessment Committee

Re: Policy for Department Reporting of Gen Ed Assessment Data

The Outcomes Assessment Committee (OAC) requests feedback from the University Curriculum Committee (UCC) on the following policy for departments to report on actions taken in response to General Education data.

Proposed Policy: Departments will report any actions taken in response to general education assessment data based on three-year trends analyses as submitted from the OAC and accepted by the UCC and its General Education Subcommittee.

Rationale: This policy responds to three issues with the current method that asks departments to report on their actions annually: 1) The annual submission of actions contradicts the OAC's stance that actions should only be taken once trends can be established from at least three years of data collection in any Gen Ed area; 2) the timeline for reporting of data does not coincide effectively with the opportunity to meet and discuss the data with department members; 3) department sample sizes for any one area of Gen Ed are often too small to make valid judgments about student performance.

With the proposed changes, departments will be able to revise their practices based on trends analyses as reported from department-generated data as well as university-wide performance analyses.

OAC General Education Trend Analyses
AY10-11, AY11-12, AY12-13
Submitted by:
Lock Haven University
Outcome Assessment Committee

August 13, 2014

**Gen Ed: 1.a. Thoughtful - Communication - Oral Communication
Trend Analysis AY10-11, AY11-12, AY12-13
Prepared by: Lisa Riede, Ph.D., Associate Professor of Communication**

I. Outcomes:

Students will be effective in oral communication.

II. Method:

- A. In AY10-11, AY11-12, and AY12-13, presentations from 34 sections of general education communication courses (N=873), Speech Workshop presentations (N=272), and upper-level courses housed in nine different programs (N=382) were evaluated according to the university rubric for oral communication.
- B. The nine programs that aptly submitted upper-level OC results over this three year period included: Communication, Criminal Justice, Psychology, English, Biology, Chemistry, BACSIT, Health Sciences/AT, and Recreation Management.

III. Results:

- A. Across the three years, 1150 of 1527 (75%) students met the criteria for a median score of 2.5. (Note: scores of 4 are reserved for truly exceptional performance).
Students did not meet competency for each of six elements of the rubric as follows:

Three Year Trend: Students Scoring Competent or Higher				
Trait	AY10-11 N = 329 (comm only)	AY11-12 N = 463	AY12-13 N = 735	3 Year Summary N = 1527
Overall Students	77% (252/329)	70% (325/463)	78 % (573/735)	75% (1150/1527)
Audience	62% (204/329)	71% (297/417)	43 % (316/735)	55% (817/1481)
Organization	64% (211/329)	65% (284/439)	58 % (426/735)	61% (921/1503)
Content	62% (204/329)	60% (277/463)	44 % (323/735)	53% (804/1527)
Presentational Aids	62% (144/233)	64% (242/381)	44 % (300/682)	53% (686/1296)
Physical	62% (204/329)	54% (247/454)	41 % (301/735)	50% (752/1518)
Vocal	59% (194/329)	61% (277/453)	46 % (338/735)	60% (809/1341)

IV. Department Action Trends:

Over three years, only a few departments actually provided feedback concerning assessment results and potential actions to consider for the future. Overall, most departments did not submit actions due to inconsistencies in assessment template completion and submission formats as well as department submission deadlines feeling rushed, thus not having departmental actions to report.

V. **Observations of Trends in Methods:**

Over the past three assessment cycles the reporting Excel template had been revised, multiple versions of the rubric were used, and inter-rater reliability was in question.

A. Results evidence flaws in the rubric. LHUP OC rubric has been revised in September 2013 due in part to the following issues:

- a. Overall 70% of students met or exceeded competency each year, but only one of the trait scores of one year of data collection (1/18 scores) ever came close in meeting competency. In AY11-12, 71% ($N=297/417$) of the students were competent in the Audience trait, which seems somewhat suspicious since there were 463 assessed that year. 46 students did not have audiences to analyze, identify with, adapt to, or respond to their feedback.
- b. The trait statistics cannot represent accurate percentages of student who met a 2.5 criteria.
 - i. A student could not earn a 2.5 on any given trait. Counting student scores that were 3's or 4's within a particular trait continued to misrepresent student competency. Students were not expected to have all 3's and 4's. A student could have three 2's and still meet the expectation of a 2.5 overall assessment score. Having a "four" option is creating confusion and inaccurate trait averages.
 - ii. Some faculty overuse 4's, inflating all scores for a particular sample set. A four is reserved for "rare" circumstances. In every practical sense, the four rating score should be removed as the suggestions over the last few years have indicated.
 - iii. Outside of the Communication Department, 1's were rarely used.
- c. A 2.5 median goal within what seems to be a three point scale seemed a bit high.
- d. Using a clear 3 point rating system and changing the university OC rubric student median criteria to a 2.0 would make the methods more simplified and the results both more valid and reliable.

B. Individual course results indicate that some inter-rater reliability was in question.

- a. Some submissions reported mean scores as opposed to median scores.
- b. Some submissions that used OC Form B were missing student competency totals, boxes were blank and formulas were not working properly. It is not clear if the problem was with the summary forms being holistic or with data entry. Nevertheless, these assessment samples from form B were consistently elevated with 100% of the sample meeting competency and an unusually high use of 4 ratings.
- c. Count Data totals were flawed. Trait totals across six traits were not consistent with student sample totals. There were 1527 student samples, but only 1481 audience ratings, 1503 organization totals, 1296 presentational aids totals, 1518 physical control totals, and 1341 vocal control totals. Each trait on the rubric should receive a score. NA's should be rare.
- d. The OC point person has provided training for inter-rater reliability to faculty across the university, attendance at these training sessions were consistently

low. It is uncertain if any of the three years' evaluators had attended rubric training.

- e. Communication Program faculty met twice to work on inter-rater reliability: They assessed live student performances and student speeches on video. Training to sample is prudent to assure assessment is consistent, since you cannot have blind assessment of public performances and faculty rate their own students' performance.

VI. Observations of Trends in Results:

Overall competencies and individual trait scores across three years of assessment appear to be consistent. However, I do not feel that they are accurate representations of how our students are performing these traits of oral communication. It is hard to trust the results when the rubric use and assessment submission were so inconsistent.

VII. Recommendations:

- A. There is now one OC rubric approved in September 2013. It is a detailed rubric for clarity and consistency and now a new level of more effective assessment is possible.
- B. Using a clear 3 point rating system and changing the university OC rubric student median criteria to a 2.0 was intended to make the methods more simplified and the results both more valid and reliable. The new 3 point rating scale is clear:
 - a. 3 rating will continue to represent Outstanding: "flawless"
 - b. 2 rating will more accurately represent Competent: ">50% competent in meeting each element goal"
 - c. 1 rating will continue to represent Inconsistent: There will be more 1 scores to more accurately represent "≤50% competent."
- B. Faculty are becoming more aware and willing to participate. Faculty need to be encouraged to attend the OC rubric training when offered.
- C. Whether or not all departments should have to assess a sample of OC is questionable. Perhaps departments that teach OC courses and departments that consistently assess their own students using the OC rubric should be the departments to submit data.

**Gen Ed: 1.a. Thoughtful – Communication – Written Communication
Trend Analysis AY10-11, AY11-12, AY12-13
Prepared by: Richard Van Dyke**

I. Outcomes:

Students will communicate effectively in writing. Effectiveness includes awareness of the writing situation as well as successful employment of the writing process, research and documentation, logical argumentation, textual evidence, and use of language.

II. Method:

In AY12-13, the general education outcome was measured through use of the WE rubric:

WE rubric: applied to courses in Psychology, Health Sciences, Communications, English, Biology, Recreation Management, and Criminal Justice (n = 203).

In AY11-12, the general education outcome was measured through use of the WE rubric:

WE rubric: applied to courses in Psychology, Art, Business, Health Sciences, Communications, Elementary and Middle Level Education, English, Biology, Chemistry, and Criminal Justice (n=267).

In AY10-11, the general education outcome was measured through the use of the WE rubric:

WE rubric: applied to courses in English, Business Management, Health Sciences, Communications, Chemistry, Psychology, and Geology (n=153).

In AY10-11 and AY11-12, the outcome was measured additionally through the ETS Proficiency Profile and the Praxis I entry level exam for education majors.

III. Results:

Across the three years, students rated as competent (a rubric median score of 2 or higher) on the five elements of the rubric were as follows:

Three Year Trend: Students Scoring Competent or Higher				
Trait	AY10-11 N = 334	AY11-12 N = 258	AY12-13 N = 203	3-Year Summary N = 795
Topic	82% (274/334)	88% (226/256)	87% (188/215)	87% (698/805)
Purpose and Evidence	83% (276/334)	87% (225/258)	83% (178/214)	84% (679/806)
Logic and Organization	82% (275/334)	85% (217/255)	85% (181/214)	84% (673/803)
Style	78% (260/334)	80% (206/256)	84% (180/214)	80% (646/804)

Mechanics	79% (265/334)	80% (206/259)	82% (175/214)	80% (646/807)
-----------	------------------	------------------	------------------	------------------

A. Other Results:

In AY 11-12, as reported in the annual report for that year, the following scores were recorded for two other competency measures using standard assessment measures.

ETS Proficiency Profile Scores: Standardized testing of gains in writing competence between freshman and senior years for Lock Haven University education majors revealed a proficiency difference of 1.5 which rates as “above expected” gains among peer institutions.

Praxis I Scores: Students rated as “passing” on the writing portions of the statewide Praxis I exam for program entry level education majors is 70% or 10% below the statewide average of 80% (n=227). In AY 10-11, 69% of LHU education majors passed the writing portion of the Praxis I exam.

IV. Department Action Trends:

Overview

Without significant trends data, departments were unable to take many significant actions. Unusually low scores on specific areas prompted actions by the BACSIT, Chemistry, Communications, and English.

From AY12-13

No department actions reported.

From AY11-12

1. In response to department WE data, the Business Department (BACSIT) noted that style and correctness scores remained below 75% expectation and determined that students may require a sophomore level business writing course. Currently, Business Writing in English is a 3xx course.
2. The Communications Department noted high proficiency rates in its WE courses can be attributed to the numbers of WE courses required by the major. Lower numbers for organization and mechanics may signal a need for early identification of struggling writers followed by referral to the writing center. Department will continue to monitor these two criteria to determine need for future action.
3. In response to the WE data, the Biology Department planned to train faculty who teach WE classes to work on scoring writing assignments (i.e. norming). In addition, faculty indicated the need for additional discussions with the Writing Committee on applying the WE rubric to writing assignments.

From AY10-11

1. In response to department WE data, the Chemistry Department noted lower scores for Traits 1 and 2 and determined to provide sample student papers. Department also noted that students scored 1-2 points higher on these traits after revision.

2. The UWC reviewed WE data and determined observations on method and results in preparation for the report to the OAC. UWC further noted that in the future, data reporting will have to indicate WE-designated and non WE-designated courses in anticipation of uneven results given WE requirement of revision after feedback.
3. In response to English Department Freshman Composition rubric data, the English Department determined to revise the rubric, given faculty feedback and significantly high competence rates for the past two years.

V. **Observations of Trends in Methods:**

Overview:

1. Recent trends with unusually high rubric scores that increase annually may indicate some issues with training in rubric use. These issues will be considered when rubric will have to be revised for use in AY14-15 with the revised Written Communication competency for general education.
2. Sampling methodology and sample size will require stabilization as sample data continue to skew results. Impacting data is non-submission of data or disproportionate submission of data across departments.
3. Before sampling in AY14-15, appropriate assessment bodies will need to determine the relevance of sampling by class standing in order to determine senior level writing performance.

From AY12-13

1. Data from application of the WE rubric continues to skew unusually toward above competent performances with 41% scoring at the 4 or 5 range overall. These numbers might indicate the need for additional training with use of the rubric.
2. Sample breadth (7 departments vs. 11) and size (202 vs. 267) decreased from AY11-12, suggesting either a need for more systematic submission of data or closer monitoring of department submission of data.
3. Although included in data, one upper division course was not identified by department and so not mentioned in list of departments submitting data.

From AY11-12

1. When class standing information was provided, data from application of the WE rubric was skewed toward junior and senior year performances (Freshman n=0; Sophomore n=22; Junior n=70; Senior n=76). Since the general education outcome targets competence by graduation, this skewing does not necessarily warrant further action.
2. Data from application of the WE rubric indicated unusually large numbers of above competent performances (127/267 versus 106/267 competent). These numbers might indicate the need for additional training with use of the rubric.
3. Sample breadth (11 departments vs. 7) and size (267 vs. 153) significantly increased over AY10-11 suggesting improvement in sampling methods and more representative results.
4. Sampling size differs among criteria indicating a selection from among writing criteria among raters.

From AY10-11

The general education outcome was measured in four ways:

1. WE rubric applied to courses in English, Business Management, Health Sciences, Communications, Chemistry, Psychology, and Geology (n=153).
2. English Department rubric applied to freshman composition classes (n=181).
3. Praxis I scores for writing proficiency were obtained from the Praxis 1 exam (n=210).
4. ETS Proficiency Profile for writing taken by cohorts of entering freshmen and graduating seniors (n=146).

VI. Observation of Trends in Results:

Overview

1. Over the 3-year period of data, writing performance improved dramatically from AY10-11 as students now perform at an 80% competency rate or above on all five traits.
2. Except for AY12-13, data indicate that students perform less effectively on style and mechanics, both sentence level concerns.
3. In AY12-13, Purpose and Evidence scored lowest for the first time. Department actions for AY11-12 indicate that Chemistry discovered this deficiency among its sampling. This shift may coincide with a more even distribution in the sample between humanities disciplines on the one hand and scientific method emphases from natural and social science disciplines.

From AY12-13

1. Percentage of students rating competent overall as a result of median rubric score (85%) again exceeds significantly the university standard (70% of students rating competent).
2. Percentage of students rating competent on Style (84%) and Mechanics (82%)—both sentence level issues—demonstrated improvement over AY 11-12 with scores on all traits reaching 80% competence level for the second consecutive year.

From AY11-12

1. Percentage of students rating competent overall as a result of median rubric score (87%) exceeds significantly the university standard (70% of students rating competent).
2. Percentage of students rating competent on Style (80%) and Mechanics (80%)—both sentence level issues—rated above the university standard but below the overall competency rating for the rubric as a whole. This scoring represents an 11% increase for both traits over AY10-11.

From AY10-11

1. Percentage of students rating competent overall as a result of median rubric score (77%) exceeds the university standard (70% of students rating competent).
2. Percentage of students rating competent on Style (65%) and Mechanics (69.9%)—both sentence level issues—rated below the university standard.
3. Senior writing competence percentages rated above standard on all five traits with the highest rating for Organization/Logic (82%) and the lowest for Style (72%) and Mechanics (72%).

4. Junior writing competence percentages rated below standard on Style (50%); Organization/Logic (60%); and Mechanics (66%). Topic and Purpose/Evidence (both 70%) rated precisely at university standard.

**Gen Ed: 1.b. Thoughtful - Critical Thinking
Trend Analysis: AY10-11, AY11-12, AY12-13
Prepared by: Ed Bowman**

I. Outcomes:

Students will employ analytical skills to develop rational understanding, solve problems, and make decisions.

II. Method:

Data collection and departments contributing critical thinking assessment data are summarized in the tables below. As of AY12 – 2013, the OAC has depended exclusively on data provided by use of the critical thinking rubric.

Year	Method	N
AY10 – 2011	Critical thinking was measured using the critical thinking rubric and selected element from the information literacy and writing emphasis rubric. Additional data was obtained from the ETS Proficiency Profile for incoming freshman.	N = 433 (CT rubric) N = 435 (IL rubric) N = 153 (WE rubric) N = 146 ETS Proficiency Profile
AY11 – 2012	Critical thinking was measured using the critical thinking rubric, the Student Teacher Competency Form (mapped to the CT Rubric), and ETS Proficiency Profile.	N = 433 (CT rubric) N = 358 (Student Teacher Competency Form) N = ETS Proficiency Profile
AY12 – 2013	Critical thinking data was provided from assessments used in upper level courses (multi-disciplinary) and from selected general education courses in Philosophy (Ethics and Problems in Philosophy).	N = 522 (CT Rubric)

Year	Departments Contributing CT Assessment Data
AY10 – 2011	Biology
	Business Management
	Chemistry
	Communication
	English
	Geology
	Health Sciences
	Philosophy
Psychology	

Year	Departments Contributing CT Assessment Data
AY11 – 2012	Biology
	Chemistry
	Criminal Justice
	Elementary Education
	English
	Health Sciences
	Philosophy
	Psychology
AY12 – 2013	Chemistry
	Criminal Justice
	English
	Geology and Physics
	Health Sciences
	Philosophy
	Psychology
	Recreation Management

III. Results:

For consistency of reporting, the following table indicates the three year trend for critical thinking competencies based on use of the critical thinking rubric. AY12 – 2013 was the third academic year of collecting assessment data on critical thinking using the critical thinking rubric. A comparison of all three years of data (Fall 2010 through Spring 2013), indicates that student's exceed the 70% standard for critical thinking competencies in all of the rubric elements. In addition, the percentage of students demonstrating competency in each element of the rubric has increased over time (table).

Three Year Trend: Students Scoring Competent or Higher				
Skills/ Criteria	AY10-2011 N = 427	AY11-2012 N = 435	AY12-2013 N = 552	3-Year Summary N = 1,414
Identifies key elements of presentation	88% (376/427)	88% (385/435)	93 % (513/552)	90% (1274/1414)
Assesses or develops logic	86% (355/413)	82% (356/435)	89% (492/552)	85% (1203/1414)
Assesses quality and relevance of supporting evidence	86% (338/395)	83% (343/415)	86% (474/552)	84% (1155/1362)
Anticipates and thoughtfully responds to relevant objections and alternatives	84% (335/397)	79% (343/435)	88% (484/552)	82% (1162/1414)
Explores, assesses, and extends implications,	82% (355/433)	80% (248/309)	87% (481/552)	84% (1084/1294)

consequences, analogies, and insights				
--	--	--	--	--

The increase number of students demonstrating competency across all rubric elements could be due (in part) to the courses selected for assessment (i.e. a larger percentage of the assessment data obtained from students in upper level (i.e. 300/400) courses), increasing familiarity and application of the critical think rubric, and/or a general focus on critical thinking across the curriculum.

IV. Department Action Trends:

Generally, Department Actions suggest clarification or continued monitoring of assessment data related to critical thinking. For example, the departments reporting actions on critical thinking data indicated that students were meeting prescribed benchmarks for critical thinking and they would continue to monitor outcome data. In other instances or where department actions are not included with the assessment data, it is possible that departments did not have an opportunity to discuss data and develop actions (prior to submitting data to the OAC). The OAC recently clarified its policy with regard to department actions and this trend analysis should also help to inform ongoing department actions in terms of critical thinking.

V. Observations of Trends in Methods:

The typical method of data collection for critical thinking has been to use the Critical Thinking Rubric. Other attempts to collect critical thinking data involved data from the ETS Proficiency Profile, however that practice appears to have been discontinued. Data from the Critical Thinking Rubric has then been the most consistently used indicator of critical thinking competency.

Over the past three years observations on methods suggest concerns about representativeness and integrity of the data. For example, it was noted in AY10-11 and in AY12-13 that collection methods disproportionately sampled from “upper level” courses or sampled students “late in their college career”. As such, there is ongoing concern that methods do not reflect a representative sample of students which directly impacts discrimination of rubric scores across the criteria. That is, in each of the three years during which data was collected and reported, more that 70% of the students meet or exceed the university criteria across all elements of the Critical Thinking rubric. The efficacy of collecting data on general education competencies would, I think, involve both establishing a benchmark for student competency and producing discriminating results that indicate both student strengths and weaknesses. This is particularly important given the hierarchical or ordered nature of critical thinking competencies. Second, there are concerns noted about the integrity of the data or “unusually large numbers of above competent performance” (AY10-11). This issue does not appear to be as pronounced during the following two years of data collection (AY11-12 & AY 12-13).

Two observable strengths in observation of trends in methods is the consistent reporting of critical thinking data across several disciplines and departments, and the consistent data sample for critical thinking. For example, critical thinking data have been

consistently reported for social sciences, natural sciences, and applied programs during the past three years. In addition, the average sample size for critical thinking is 471.

VI. Observations of Trends in Results:

As observed in the table in the Results section, the three year trend for critical thinking competency indicates that 70% of the student meet or exceed the university benchmark for competency in each of the rubric elements or criteria for critical thinking. Also mentioned are concerns related to methods or over-representation of upper level classes and the potential for inflated scores (noted in AY10-11 only). One of my concerns is the lack of discriminatory data results particularly in the area of critical thinking where the competencies are ordered or hierarchical. Differences in the percentage of students achieving competency in each of the rubric elements or criteria do seem to indicate the hierarchical nature of the competency but it is unclear if these differences are significant. Nevertheless, it is important to collect data as a measure of overall student competency and to collect data that discriminates competency (elements or criteria) based on overall strengths and weaknesses (assuming that strengths and weaknesses do exist). The objective of assessment is to both confirm student benchmarks and to identify student strengths and weaknesses effectively closing the loop for effective pedagogy. Finally, I think it is noteworthy that assessment of critical thinking has been accomplished in an interdisciplinary fashion that reflects the nature of critical thinking as an inter-disciplinary or multi-disciplinary competency of interest.

VII. Recommendations:

The Critical Thinking rubric was created at the university level and has been the standard for assessing student competencies in critical thinking during the three year trend. Overall, assessment trends indicate that Lock Haven University students either meet or exceed university standards (70%) for all of the elements or criteria in the critical thinking rubric. It also appears that the scores distinguish the ordering of competencies in the critical thinking rubric.

I believe assessment of critical thinking is a strength at the university. There has been a consistent effort to collect data across disciplines and consistently in terms of sample size during the three year trend period. In addition, it is important to consider that critical thinking is represented in the new general education competency model and will now include elements of information literacy. Culturally, there appears to be recognition that critical thinking is a competency that is shared by all departments and therefore is a competency that warrants assessment (across all departments).

One of my recommendations however would be to further encourage and standardize the use of the critical thinking rubric for collecting, reporting, and analyzing assessment data. Considerable time is required to aggregate data that is not reported in a standard format. Also, it seems clear that our sampling methodology might need to further define not only sample sizes from contributing departments but also class levels (although this has largely been left to the discretion of the department/assessment coordinators). Finally, it is anticipated that recent clarification of the OAC policy regarding Department Actions

will increase the use of critical thinking data at the department level to inform curriculum and pedagogy (i.e. close the loop) should a department wish to do so.

**Gen Ed: 1.c. Thoughtful - Information Literacy
Trend Analysis AY10-11, AY11-12, AY12-13
Prepared by: Elsa Winch**

I. Outcomes:

Students will recognize the need for information and will effectively and ethically gather, evaluate, interpret, and attribute relevant information from appropriate sources to synthesize knowledge and support conclusions.

II. Method:

Data collection and departments contributing critical thinking assessment data are summarized in the tables below.

Year	Method	N
AY10 – 2011	The IL rubric was applied to assignments from selected introductory and upper-division courses in the departments of Biology (BIOL106, 107 and 409) and Psychology (PSYCH 409).	N = 435
AY11 – 2012	The IL rubric was applied to assignments from selected introductory and upper courses in the departments of Art (no course information), BACSIT (ACCT 435), Biology (BIOL 107, 317, and 405), Education (EDUC 493), English (ENGL 245) and Psychology (PSYCH 202, 409), and RECM (no course information).	N = 382
AY12 – 2013	The IL rubric was applied to assignments from selected introductory and upper-division courses in the departments of Biology (BIOL107, 409), Chemistry (CHEM 300/400 level), Criminal Justice (CRJS 305), English (ENG 240), Health Science (ATTR 202), Psychology (PSYCH 202, 409), and Recreation Management (REC 364, 430)	N = ~201 (varied)

III. Results:

For consistency of reporting, the following table shows indicates the three year trend for information literacy based on use of the information literacy rubric. A comparison of all three years of data (Fall 2010 through Spring 2013), provides evidence that students exceed the 70% standard for information literacy in three of the four skill/criteria areas.

Three Year Trend: Students Scoring Competent or Higher				
Skills/ Criteria	AY10-2011 N = 435	AY11-2012 N = 382	AY12-2013 N = ~201	3-Year Summary N = 1,018
Topic Research and Development	88% (382/435)	55% (211/382)	95% (192/201)	77% (785/1018)
Search Strategy	77% (336/435)	51% (194/382)	76% (152/200)	67% (682/1017)
Evaluation of Resources	93% (403/435)	57% (220/382)	93% (188/201)	80% (811/1018)
Synthesis & Presentation	80% (349/435)	53% (203/382)	71% (133/188)	69% (695/1005)

IV. Department Action Trends:

Generally, department actions suggest continued monitoring of assessment data, no action taken, or no reports on future action. It should also be noted that the lower competency percentages reflected in criteria two (Search Strategies) was cited for monitoring by at least one department. In other instances or where department actions are not included with the assessment data, it is possible that departments did not have an opportunity to discuss data and develop actions (prior to submitting data to the OAC). The OAC recently clarified its policy with regard to department actions and this trend analysis should help to inform ongoing department actions in terms of information literacy.

V. Observations of Trends in Methods:

The typical method of data collection for Information Literacy has been to use the Information Literacy rubric. The OAC had also articulated a consistent sampling distribution for information literacy. The following table summarizes the sample sizes as a percentage of student enrollments for the purpose of assessing Information Literacy.

			AY2010-11	AY2011-12	AY2012-13	Trends Analysis
Gen Ed: 1.c	Thoughtful	Information Literacy	435 (8%)	382 (8%)	201 (4%)	1018 (7%)
AY10-11 Enrollment: 5155 AY11-12 Enrollment: 5024 AY12-13 Enrollment: 5137						

VI. Observations of Trends in Results:

As observed in the table in the Results section, the three year trend for Information Literacy competency indicates that 70% of the student's sampled student met or exceed the university benchmark for competency in two of the four criteria categories. Notably, criteria two (Search Strategy) and criteria four (Synthesis and Presentation) indicate percentage scores below the benchmark for competency (67% & 69% respectively). One explanation for the lower percentage scores for criteria two and four might reflect the

course level from which assessment data was collected. For example, in AY2010-11, it was noted that the sample “was dominated by freshman-level students”. We might expect that freshman have not yet developed academic related search skills (i.e. identify or use general and discipline-specific databases) or the ability to synthesize information (i.e. integrate information into a cohesive explanation). Also, the lower percentage scores for criteria two and four could have resulted from sampling irregularities. For example, it was noted in AY2011-12, that a “large sample” of the data came from a single department and those scores could have impacted overall results. In fact, all of the criteria scores for AY2011-12 are below the competency benchmarks established by the university.

VII. Recommendations:

The Information Literacy rubric was created at the university level and has been the standard for assessing student competencies in information literacy during the three year trend. Information literacy was also assessed for AY2013-14 and that will be the last year that information literacy will be assessed independently.

Beginning in AY2014-15, the General Education Competency for information literacy will be included in courses qualifying for Written Communication and Critical Thinking. That is, specific outcomes related to Written Communication and Critical Thinking will be used to assess information literacy as a foundational “skill”. Assessment of information literacy should then be obtained from courses qualifying for Written Communication and Critical Thinking using newly developed rubrics for those general education competencies. One concern would be that in order to collect data on information literacy, faculty would actually need to complete a rubric for each of the general education competencies; Written Communication and Critical Thinking. Discrete assignments would have to include all of the information literacy criteria (1-5), which could only be assessed by using rubrics developed for Written Communication **and** Critical Thinking. In addition, given the trend related to searching and synthesizing information (criteria two and four), the OAC should be aware of identifying and isolating criteria contained in the written communication and critical thinking rubric that apply to the identification and use of information from a variety of sources, and that measure the student’s skill to integrate and synthesis information. Certainly, the OAC would want to monitor and report on previous deficiencies in ongoing (future) assessment summaries.

Gen Ed: 1.e. Thoughtful - Multicultural
Trend Analysis: AY2010-11, AY2011-12, AY 2012-13
Prepared by: Elizabeth Gruber

I. Outcomes:

Students will identify, analyze, apply, and appreciate components of their own and others' cultural identities.

II. Method:

For the past three years, the rubric for Multiculturalism was applied to the work of students in diverse disciplines.

III. Results:

The following table shows the percentage and number of students rated as competent or higher for each of the assessed criteria over the past three years. The value of "n" varies for each trait because the Multiculturalism rubric includes an N/A option that allows instructors doing the assessments to skip those criteria not relevant to their assignments.

Three Year Trend: Students Scoring Competent or Higher				
Trait	AY 2010-11 N = 259	AY 2011-12 N = 511	AY 2012-13 N = 94	Three Year Summary N = varies
Identification / Analysis of Own Cultures	90% (225/249)	88% (450/511)	91% (85/94)	89% (760/854)
Identification / Analysis of Another Culture	95% (212/224)	84% (167/200)	91% (85/94)	89% (464/518)
Analysis and appreciation of culture/ethnic heritage in cultural products	N/A	87% (314/360)	91% (85/94)	88% (399/454)
Analysis of Events from another cultural perspective	74% (35/47)	77% (116/ 151)	91% (85/94)	81% (236/292)

IV. Department Action Trends:

Many of the annual reports submitted for Multiculturalism did not include specific actions taken by departments (or the noted actions simply registered an ongoing commitment to monitoring proficiency in Multiculturalism). Given that sample sizes per department were usually rather small, and also because a single year of data is an insufficient basis on which to effect change, the lack of reported actions is unsurprising.

V. Observations of Trends in Methods:

A. Courses from many different disciplines meet the criteria for Multiculturalism, and we have collected data from various departments and programs, which provided a fairly comprehensive view of how this area of general education was being met.

- B. Some additional training might be warranted, since many departments that submitted data for Multiculturalism did not use the reporting templates created for this purpose. Accordingly, some of this data could not be integrated into the report.

VI. Observations of Trends in Results:

Review of three years' data on Multiculturalism indicates an exceedingly high degree of proficiency in this area, especially for the first three of four outcomes.

VII. Recommendations:

Recommendations for future actions or changes are unnecessary, since Multiculturalism is not featured in the General Education curriculum that goes into effect in Fall 2014.

Gen Ed: 2.a. Knowledgeable - Humanities
Trend Analysis: AY10-11, AY11-12, AY12-13
Prepared by: Ed Bowman

I. Outcomes:

Humanities: Students will identify, evaluate, and interpret artistic and literary movements and processes and assess their impact on society and the student’s own life.

II. Method:

In AY 2010-11, the OAC piloted the Humanities Rubric for use in collecting assessment data. Data collection for humanities is summarized in the following table.

Year	Method	N
AY10 – 2011	The Humanities Rubric was piloted, with professors applying the rubric to selected, introductory (100) level, general education Humanities courses. Participating departments included Art, Music and English.	N = varied (287 – 430)
AY11 – 2012	The Humanities Rubric was applied to student performances in selected, introductory (100) level, general education Humanities courses. Participating departments included Art, Music and English.	N = 357
AY12 – 2013	The Humanities Rubric was applied to student performances in selected general education Humanities courses. Participating departments included English and Philosophy.	N = 130

III. Results:

For consistency of reporting, the following table indicates the three year trend for humanities competencies (i.e. objectives) based on use of the Humanities Rubric. AY12 – 2013 was the third academic year of collecting assessment data on humanities using the Humanities Rubric. A comparison of all three years of data (Fall 2010 through Spring 2013), indicates that student’s exceed the 70% standard for humanities competencies in all of the rubric elements (i.e. objectives).

Three Year Trend Humanities				
Objective	AY10-2011 N = Varied (287 – 430)	AY11-2012 N = 357	AY12-2013 N = 130	3-Year Summary N = varies
1. Identifies and describes principles, methods, theories, or themes	79% (302/383)	82% (293/357)	65% (84/130)	78% (679/870)
2. Defines and applies vocabulary and basic concepts	70% (301/430)	86% (308/357)	71% (92/130)	76% (701/917)
3. Identifies or classifies key figures, events, or forms	71% (277/390)	82% (292/357)	67% (87/130)	75% (656/877)
4. Identifies or correlates key developments, events, or individuals with their contexts	82% (298/363)	80% (286/357)	94% (74/79)	82% (658/799)
5. Applies discipline-appropriate method, theory, or criteria	81% (233/287)	81% (288/357)	85% (111/130)	82% (632/774)
6. Engages with discipline-based values or principles found in works, writings or performances	82% (236/288)	74% (264/357)	88% (114/130)	79% (614/775)

IV. Department Action Trends:

Generally, Department Actions suggest continued monitoring and emphasis of humanities assessment data and related objectives. For example, in AY2010-11, the English Department noted less than satisfactory outcomes for objective number 3 and 6, and indicated future efforts to emphasize “historical context” and “application of literary theory” to improve outcomes. Similarly, the Music Department considered more appropriate strategies for assessing competencies for object 6 (values and principles). Finally, the Art Department considered broadening the sample to multiple sections and to apply the rubric to written assignments. In subsequent academic years (AY2011-12 & AY2012-13), departments continued to focus on specific objectives, increase the use of different assessment activities and/or broaden the use of the Humanities rubric to include upper division courses.

In instances or where department actions are not included with the assessment data, it is possible that departments did not have an opportunity to discuss data and develop actions (prior to submitting data to the OAC). The OAC recently clarified its policy with regard to department actions and this trend analysis should also help to inform ongoing department actions in terms of humanities.

V. Observations of Trends in Methods:

The typical method of data collection for Humanities has been to use the Humanities rubric. As noted, the OAC piloted use of the Humanities rubric in AY2010-11 and has encountered some issues related to sampling. For example, in AY2010-11, users noted that the rubric could not or was not used to measure competencies that were less “objective” (i.e. objectives 4-6). As such, the sample size for each of the rubric objectives tended to vary (see Three Year Trend table). Users commented that the rubric was user friendly so it appears that sampling discrepancies can be attributed to the assessment activity or reviewer reliability. In fact, it was noted that the lack of assessment data for rubric objectives 4-6 in AY2010-11 was due to the “nature of the material” on the test scored. Remarkably, issues related to sampling appeared to be resolved in AY2011-12 as a consistent sample (n=357) was obtained for each of the objectives. Finally, the sample size decreased significantly in AY2012-13 (n=130) which has compromise the reporting of trends. Academic year 2013-14 will be the last year in which assessment data for Humanities will be collected (in its current form). The new General Education Competency, Philosophical, Literary, and Aesthetic Inquiry is mostly closely aligned with the Humanities competency and courses satisfying the competency for Philosophical, Literary, and Aesthetic Inquiry will only have to meet two of the four outcomes.

VI. Observations of Trends in Results:

As observed in the table in the Results section, the three year trend for the Humanities competency indicates that 70% of the student “meet or exceed” the university benchmark for competency in each of the rubric objectives for humanities. Summarily, the results appear to indicate general proficiency in the area of humanities however; concerns about application of the rubric to specific assessment activities, sampling inconsistencies, and sample size lead to a cautionary interpretation. It is also worth noting that assessment data for Humanities has been met by two principle departments; English and the Visual and Performing Arts. Other departments were included in the OAC’s sampling rotation but assessment data was not received from those departments.

VII. Recommendations:

The Humanities rubric was created at the university level and has been the standard for assessing student competencies in humanities during the three year trend. Overall, assessment trends indicate that Lock Haven University students either meet or exceed university standards (70%) for all of the objectives related to the Humanities competency. There were however reported discrepancies in application of the rubric and/or sample sizes.

The new General Education Competency, Philosophical, Literary and Aesthetic Inquiry (PLA) will effectively replace the Humanities competency in AY2014-15. Notably, the outcomes for PLA can be satisfied by meeting two of the four outcome measures. This should address some of the application issues that were relevant with the current Humanities rubric (i.e. the rubric could not be applied due to the nature of the assessment activity). In addition, it might be possible to increase the number of disciplines that

contribute data to the PLA competency based on the breadth of the new PLA competency.

Gen Ed: 2.c. Knowledgeable - Natural Sciences
Trend Analysis: AY10-11, AY11-12, AY12-13
Prepared by: Shonah Hunter

I. Outcomes:

Natural Sciences: Students will identify, evaluate, and interpret political, social, psychological, and historical movements and processes, and assess their impact on the environment, contemporary society, and the student’s own life.

II. Method:

Trends were assessed regarding application of the General Education Natural Sciences rubric, the results of rubric assessments, and related department actions. Data includes academic years 10-11, 11-12, and 12-13. Over those three academic years, professors have applied the rubric to a variety of course assignments [artifacts] in selected introductory general education natural sciences courses (Lecture concepts N=991, Scientific Method N = 1030). Participating departments included Biological Sciences, Chemistry, Geology and Physics.

III. Results:

Across the three years, students rated as competent (a rubric median score of 2 or higher) on the two elements of the rubric were as follows:

	AY10-11	AY11-12*	AY12-13	3-Year Summary
Knowledge of lecture concepts	68% (214/314)	78% (158/203)	73% (348/474)	73% (720/991)
Application of the Scientific Method	80% (274/342)	75% (234/312)	89% (333/376)	82% (841/1030)
*AY11-12 summary median scores were unavailable for two of the departmental reports, so these values are average values across the three departments.				

IV. Department Action Trends:

Generally speaking, Department actions included reviewing the assignments used to assess the rubric components. Areas that had less than satisfactory results were emphasized for the following years.

V. Observations of Trends in Methods:

Across all three years there was inconsistent submission of data as not all programs submitted data for all three years and according to the sampling distribution constructed by the OAC. In the first two years, there was inconsistent application of the natural sciences rubric to the data. By the third year, this was corrected and there was more consistent use of the rubric and the reporting of Median Rubric Scores for all data provided. The discrepancy in selection of types of courses to be assessed was resolved by

the third year when only those courses designed for non-science majors were included in the assessment.

VI. Observations of Trends in Results:

The pooled results of all areas of natural sciences have resulted in an acceptable and fairly consistent level of competence.

VII. Recommendations:

With the new General Education Natural Sciences Inquiry competencies, a new rubric is being developed. However, it is very similar to the current one, so I anticipate seeing similar results. Departments should review their criteria for acceptable work as some disciplines report almost 100% of their students as being competent or better in the scientific methods. In courses designed for non-science majors, it seems unlikely that such a high percentage of students would be able to grasp and apply the scientific method at a satisfactory level.

**Gen Ed: 2.c. Knowledgeable-Social Sciences
Trend Analysis: AY10-11, AY11-12, AY12-13
Prepared by: Lynn Bruner**

I. Outcomes:

Social Sciences: Students will identify, evaluate, and interpret political, social, psychological, and historical movements and processes, and assess their impact on the environment, contemporary society, and the student’s own life.

II. Method:

Trends were assessed regarding application of the General Education Social Sciences rubric, the results of rubric assessments, and related department actions. Data includes academic years 10-11, 11-12, and 12-13. Over those three academic years, professors have applied the rubric to a variety of course assignments [artifacts] in selected introductory general education social sciences courses (*N* = 2372). Participating departments included History/Political Science/Foreign Language, Psychology, Social Work, and Sociology.

III. Results:

Across the three years, students rated as competent (a rubric median score of 2 or higher) on the four elements of the rubric were as follows:

	AY10-11 <i>N</i> = 661	AY11-12 <i>N</i> = 910	AY12-13 <i>N</i> = 801	3-Year Summary <i>N</i> = 2372
Knowledge of basic vocabulary and concepts	68.5% (453/661)	65.28% (564/864)	68.04% (545/801)	67.15% (1562/2326)
Knowledge of more advanced concepts	59.2% (391/661)	55.74% (505/906)	72.23% (476/659)	61.64% (1372/2226)
Application of theory and concepts	58.3% (292/501)	71.43% (650/910)	76.63% (505/659)	69.90% (1147/2070)
Application of methods	71.5% (113/158)	76.16% (425/558)	71.89% (243/338)	74.10% (781/1054)
SUMMARY MEDIAN SCORE	Not calculated	53.59% (179/334)	63.70% (379/595)	60.06% (558/929) *

*Note that Summary Median Score data was only available for AY11-12 and AY12-13, and was only available for a fraction of the observations submitted in either of those academic years. **Thus, in this Trend Analysis, the Overall Summary Median Scores should not be interpreted as representing actual levels of competence or mastery.** Please also see Section VII for additional comments on this issue.

IV. Department Action Trends:

Generally speaking, Department Actions were not reported when data was sent to me. This is not necessarily an omission on the part of Assessment Coordinators from the various departments. Rubric data is due to OAC area coordinators before departments

have an opportunity to meet and discuss assessment data and develop actions. In addition, confusion about data reporting processes (see V.1 below) contributed to this, as many rubric users were unaware that there was an area on the Excel templates on which department actions were to be reported to OAC General Education area coordinators; even if they were aware, the department actions do not show up on the rubric summary sheets, which were often the only information sent to OAC area coordinators. In my opinion, systemic changes need to be made in how data is collected and made available to OAC.

V. Observations of Trends in Methods:

Across all three years, there were problems with inconsistent application of the rubric. For instance, in the two years of application, data had to be dropped from end-of-year analyses because of idiosyncratic application of the rubric. As users got additional feedback and training on applying the rubric, consistency of use improved somewhat, but there continued to be difficulties, particularly with data reporting processes. In fact, ongoing confusion about data reporting, including confusion regarding the use of the existing Excel templates for the General Education rubrics, has made it difficult to create accurate annual reports on this rubric. In my opinion, this again represents a systemic issue. Data reporting processes need to be streamlined and simplified so that results are accurately and completely reported; then, upper-level issues such as inter-rater reliability can be more adequately addressed.

VI. Observations of Trends in Results:

Across all three years, rubric users were not able to report data for all four rubric areas. This is not necessarily a problem with the rubric or with the artifacts that are being assessed: not every artifact in a class is going to equally assess every area represented on the rubric. For instance, one exam may have more or less questions in which “Applies discipline-appropriate methods to problem, event, or process” could be assessed, and there may not be enough of those items to develop a reasonable subtest score. It may also be the case that with growing class sizes, classroom approaches in introductory general education classes that include evaluation of application of discipline-specific methods are difficult to achieve. Also, although application of theories and concepts may be a reasonable expectation of students in 100-level classes in social science, application of methods (e.g., research methods in psychology or sociology) may be more commonly seen in 200-level classes and above.

VII. Recommendations:

This rubric was based on an outdated outcome statement for Social Science, written before the advent of the current assessment culture in higher education. Because of this, the rubric did not really provide reliable and valid assessment of student learning outcomes in General Education classes in the social sciences; furthermore, it did not providing useful feedback for the various departments tasked with its use, on student learning within the majors. **Thus, it is important to once again state that I do not feel that the results reported above represent actual levels of student competence in Social Science General Education classes across these three years.**

However, once the General Education outcome statements for Social Science were revised and approved in FA13, rubric revision became possible. Thus, we can “close the loop” here: assessment information helped to inform changes at the systemic level, and now a new level of more effective assessment is possible. The Social Sciences rubric was revised in FA13 to make it commensurate with the new General Education Learning Objectives in Historical, Behavior, and Social Sciences [HBSS] Inquiry. A new HBSS rubric was created and piloted in the Psychology department in SP14. Both the Social Science rubric and the new HBSS rubric were applied to the same artifacts, thus giving an opportunity to compare performance. The pilot went well, and I am hopeful that the new rubric, based as it is on more assessable outcomes, will more accurately measure student competency in our General Education classes in HBSS. It is also important to note that, now that the General Education outcome statements have been revised, professors need to be attentive to those outcomes when they are planning assessment opportunities (i.e., exams, papers, and other assignments to which the rubric might be applied) in their classes.

Trend Analyses: General Education Outcomes Sample Sizes AY2010-11, 2011-12 & AY2012-13						
			AY2010-11	AY2011-12	AY2012-13	3-Year Summary
Gen Ed: 1.a	Thoughtful (Communication)	Written Communication	334 (6%)*	258(5%)	203 (4%)	795 (5%)
		Oral Communication	329(6%)	463(9%)	735 (14%)	1,527 (10%)
Gen Ed: 1.b	Thoughtful	Critical Thinking	427 (8%)*	435 (9%)	552 (11%)	1,414 (9%)
Gen Ed: 1.c	Thoughtful	Information Literacy	435 (8%)	382 (8%)	201 (4%)	1,018 (7%)
Gen Ed: 1.e	Thoughtful	Multicultural	259 (6%)	511 (10%)	94 (2%)	864 (6%)
Gen Ed: 2.a	Knowledgeable	Humanities	287-430 (8%)	357 (7%)	130 (3%)	717 (5%)
Gen Ed: 2.b	Knowledgeable	Natural Sciences**	314 (6%)	203 (4%)	474 (9%)	991 (6%)
			342 (7%)	312 (6%)	376 (7%)	1,030 (7%)
Gen Ed. 2.c.	Knowledgeable	Social Sciences	661 (13%)	910 (18%)	801 (16%)	2,372 (15%)
* Total represents data based on use of competency specific rubric (i.e. writing emphasis and critical thinking)						
** Sample Size indicated; 1) Lecture Concepts; and 2) Scientific Method						
AY10-11 Enrollment: 5155						
AY11-12 Enrollment: 5024						
AY12-13 Enrollment: 5137						
For a 95% confidence level ($p \leq .05$) and a confidence interval of + or – 5, you need a sample size of 357 for a population of 5,100 (assuming random sampling).						