Results from the HLC Assessment Academy

2012 to Present

Introduction

This report presents the state of the University Learning Outcomes Assessment process done as part of the HLC Academy. The report provides findings of the reviews done since the project began in Fall 2012 and makes suggestions on how to improve the process. It should be noted there are discussions occurring across campus to demonstrate how we know Wright State students are learning and these discussions, changes made from the discussions, and progress made in collecting data to support the changes should be documented.

HLC Academy Time line:

Fall 2012 – Meetings and setting up the process for examining Wright State Core Outcomes. No data collection. The University Level Outcomes are:

Wright State graduates will be able to:

1. communicate effectively
2. demonstrate mathematical literacy
3. evaluate arguments and evidence critically
4. apply the methods of inquiry of the natural sciences, social sciences, and the arts and humanities
5. demonstrate global and multicultural competence
6. demonstrate understanding of contemporary social and ethical issues
7. participate in democratic society as informed and civically engaged citizens

It was decided to examine these outcomes in the General Education courses all undergraduate students are required to take first and then to set up a process for checking again at the end of the programs.

Spring 2013- Embed the core outcomes into the semester conversion using the learning outcome elements and objectives.

Fall 2013 – Created an informational assessment PowerPoint with Voice Over on YouTube. Continued to refine the process for collecting data electronically and creating a sustainable collection process over time. Collected data on University Learning Outcome 1.

Spring 2014 – Collected data on University Learning Outcomes 2.

Fall 2014 – Collected data on University Learning Outcome 3. A new process to score the rubrics using Qualtrics was attempted. The process failed and the assessment was completed using paper.

Spring 2015 – Created a curriculum map to align courses, outcomes, and elements. Isolated courses with most student populations over time to increase collection data. Investigated ways to sustain collection electronically. Begin new collection process.
Process for Outcomes 1, 2, and 3

The review process implemented in Fall 2013, Spring 2014, and Fall 2014:

1. Inform faculty teaching the core courses to include the Element outcomes aligned to the ULO in the syllabus.
2. Ask faculty to identify the assignment where the objective was taught.
3. Create a rubric for measuring the elements from the AAUCP rubrics.
4. Ask faculty to provide student artifacts for the assignments where the objectives are measured.
5. Redact the artifacts and number them to assure anonymity.
6. Ask for faculty to volunteer to review the artifacts at a Saturday session. Faculty are paid a small stipend for the 4 hours of work.
7. In the Saturday session:
   a. Conduct a calibration to assure faculty are using the same scale.
   b. Handout papers to faculty in a random order.
   c. Have faculty read the paper, mark the paper rubric with the paper number, and score the rubric.
   d. Collect the rubrics, the papers, and put the scores into a spreadsheet.
   e. Report findings as required by the HLC Academy.
   f. In the 3rd session, Qualtrics data collection was attempted and failed.

There are 4 ULOs to review yet. These include:

4. apply the methods of inquiry of the natural sciences, social sciences, and the arts and humanities
5. demonstrate global and multicultural competence
6. demonstrate understanding of contemporary social and ethical issues
7. participate in democratic society as informed and civically engaged citizens

Results

The information below shows the overall rubric scoring done during the Saturday Sessions.
ULO 1 Results - Communicate Effectively

ULO 2 Results - Demonstrate Mathematical Literacy
Conclusions

The data does not demonstrate a consistent measurement of learning. The inconsistencies in the collection process may have impacted scores. No course grades or faculty grades for these assignments and courses were collected, so it is impossible to know if the score are indicative of the grades given to students.

Some of the scoring faculty did not feel the assignments matched the rubrics (see notes in the Appendix). It appears the rubric was not shared with the teaching faculty before requesting the papers.

These charts also demonstrate a few of the issues of the highly manually intensive process for collecting and scoring data. Some of the issues are:

1. No way to determine if the faculty submitted artifacts are representative of all student work.
2. Inconsistent number of reviewed documents.
3. Value of faculty coming in on a Saturday to spend 4 hours scoring documents – do they get tired after reviewing a number of papers?
4. The scores were not across one course, but many. The number of artifacts for each course are low (N in some cases = <5) and the number of reviewed artifacts might not be representative of all the potential artifacts.
5. There does not appear to be any feedback provided to the faculty to improve their syllabi.

**Recommendation for Outcomes 4, 5, 6, and 7**

For 4, 5, and 6, a new process will be implemented to gather more consistent data and provide an electronic way to examine core outcomes across time. A team, under the Curriculum and Instruction office, is working on a process and hopes to trial it with outcome 4 in Spring 2015.

**Process for Outcomes 4, 5, and 6**

The review process implemented in Spring 2015 will pilot a more sustainable way to measure outcomes:

1. Examine existing syllabus to find course outcomes aligning with the ULO and look at course enrollment to find the courses with the most enrollment across time.
2. Create a chart where measurements, especially multi measurements, can be taken.
3. Ask faculty to identify the course outcome and the assignment were the objective is assessed for the highest 2 running courses in each element.
4. Build master list where faculty can pull the core objectives for specific courses.
5. Create a rubric for measuring the elements and share the rubric with faculty.
6. Ask faculty to provide all student artifacts for the assignments in a specific term were the objectives are measured.
7. Redact the artifacts and number them to assure anonymity.
8. Load the artifacts online along with an electronic version of the rubric.
9. Ask for faculty to volunteer to review the artifacts during a two week period. (Faculty are paid a small stipend for the work.)
10. Have faculty do an electronic calibration using a paper with a known result before assigning papers.
11. Assign papers in the electronic system and give faculty a two week window to complete the rubrics.
12. Collect data.
13. Report out results to faculty teaching the courses measured.
14. Ask for a report about changes if the data indicates the need to revise the syllabus.

During the Spring and Summer of 2015:

1. Identify which core courses should be used for measurement for core elements and have outcomes in those courses mapped to the core each semester. These will become required course objectives and placed in a master list.
2. Develop a repository to faculty to provide artifacts.
3. Redact the artifacts and set up review process (see steps 8 - 12 above)
4. Use faculty from the department/program to score the rubrics.
5. Work with faculty to identify ULOs in upper level courses to close the loop. (They will use the same process for scoring.)

The benefits of this process:

1. Consistent data across time for all core objectives.
2. Easier process to include specific courses where objectives will always be measured.
3. Data collection process will not require Saturday scoring but will allow faculty a window to complete their reviews.
4. Ability to pull aggregate grade data and determine if there is consistency across rubric scoring and course grading.

The two biggest obstacles for sustaining this process of assessment are:

1. Faculty participation.

Faculty participation might not be an issue if the process was very simple. If they always sent a specific assignment to one location or uploaded it to one location, it might make the process more seamless, especially over time.

If Wright State used an outside vendor, it is possible the artifacts could be uploaded by faculty or students in a quick step, scored by other faculty (or the same faculty), and then data could be monitored each term and over time. Identifying 1 or 2 key courses for each outcome would allow data to be collected for each core objective each term. An external data system would also allow faculty to align their outcomes with national standards and the core objectives could be added to national standards.

**For Outcome 7**, Wright State should consider using data collected from co-curricular activities to assess participation in democratic society as informed and civically engaged citizens. The process would be to determine how many students engage in these activities through the various activities offered and then survey the students to determine their disposition on their personal learning.
# Appendices – Rubrics Used

## ULO 1 - WRITTEN COMMUNICATION VALUE RUBRIC

<table>
<thead>
<tr>
<th>Context of and Purpose for Writing</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
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</thead>
<tbody>
<tr>
<td><strong>Includes considerations of audience, purpose, and the circumstances surrounding the writing task(s).</strong></td>
<td>Demonstrates a thorough understanding of context, audience, and purpose that is responsive to the assigned task(s) and focuses all elements of the work.</td>
<td>Demonstrates adequate consideration of context, audience, and purpose and a clear focus on the assigned task(s) (e.g., the task aligns with audience, purpose, and context).</td>
<td>Demonstrates awareness of context, audience, purpose, and to the assigned task(s) (e.g., begins to show awareness of audience's perceptions and assumptions).</td>
<td>Demonstrates minimal attention to context, audience, purpose, and to the assigned task(s) (e.g., expectation of instructor or self as audience).</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Content Development</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
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<tbody>
<tr>
<td>Uses appropriate, relevant, and compelling content to illustrate mastery of the subject, conveying the writer's understanding, and shaping the whole work.</td>
<td>Uses appropriate, relevant, and compelling content to explore ideas within the context of the discipline and shape the whole work.</td>
<td>Uses appropriate and relevant content to develop and explore ideas through most of the work.</td>
<td>Uses appropriate and relevant content to develop simple ideas in some parts of the work.</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Genre and Disciplinary Conventions</th>
<th>4</th>
<th>3</th>
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<tbody>
<tr>
<td><strong>Formal and informal rules inherent in the expectations for writing in particular forms and/or academic fields.</strong></td>
<td>Demonstrates detailed attention to and successful execution of a wide range of conventions particular to a specific discipline and/or writing task(s), including organization, content, presentation, formatting, and stylistic choices.</td>
<td>Demonstrates consistent use of important conventions particular to a specific discipline and/or writing task(s), including organization, content, presentation, and stylistic choices.</td>
<td>Follows expectations appropriate to a specific discipline and/or writing task(s) for basic organization, content, and presentation.</td>
<td>Attempts to use a consistent system for basic organization and presentation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sources and Evidence</th>
<th>4</th>
<th>3</th>
<th>2</th>
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</thead>
<tbody>
<tr>
<td>Demonstrates skillful use of high-quality, credible, relevant sources to develop ideas that are appropriate for the discipline and genre of the writing.</td>
<td>Demonstrates consistent use of credible, relevant sources to support ideas that are situated within the discipline and genre of the writing.</td>
<td>Demonstrates an attempt to use credible and/or relevant sources to support ideas that are appropriate for the discipline and genre of the writing.</td>
<td>Demonstrates an attempt to use sources to support ideas in the writing.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Control of Syntax and Mechanics</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uses graceful language that skillfully communicates meaning to readers with clarity and fluency, and is virtually error-free.</td>
<td>Uses straightforward language that generally conveys meaning to readers. The language in the portfolio has few errors.</td>
<td>Uses language that generally conveys meaning to readers with clarity, although writing may include some errors.</td>
<td>Uses language that sometimes impedes meaning because of errors in usage.</td>
<td></td>
</tr>
</tbody>
</table>
## ULO 2 QUANTITATIVE LITERACY VALUE RUBRIC

<table>
<thead>
<tr>
<th>Interpretation</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to explain information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, words)</td>
<td>Provides accurate explanations of information presented in mathematical forms. Makes appropriate inferences based on that information. For instance, accurately explains the trend data shown in a graph and makes reasonable predictions regarding what the data suggest about future events.</td>
<td>Provides accurate explanations of information presented in mathematical forms. For instance, accurately explains the trend data shown in a graph.</td>
<td>Provides somewhat accurate explanations of information presented in mathematical forms, but occasionally makes minor errors related to computations or units. For instance, accurately explains trend data shown in a graph, but may miscalculate the slope of the trend line.</td>
<td>Attempts to explain information presented in mathematical forms, but draws incorrect conclusions about what the information means. For example, attempts to explain the trend data shown in a graph, but will frequently misinterpret the nature of that trend, perhaps by confusing positive and negative trends.</td>
</tr>
<tr>
<td>Representation</td>
<td>Skillfully converts relevant information into an insightful mathematical portrayal in a way that contributes to a further or deeper understanding.</td>
<td>Competently converts relevant information into an appropriate and desired mathematical portrayal.</td>
<td>Completes conversion of information but resulting mathematical portrayal is only partially appropriate or accurate.</td>
<td>Completes conversion of information but resulting mathematical portrayal is inappropriate or inaccurate.</td>
</tr>
<tr>
<td>Ability to convert relevant information into various mathematical forms (e.g., equations, graphs, diagrams, tables, words)</td>
<td>Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem. Calculations are also presented elegantly (clearly, concisely, etc.)</td>
<td>Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem.</td>
<td>Calculations attempted are either unsuccessful or represent only a portion of the calculations required to comprehensively solve the problem.</td>
<td>Calculations are attempted but are both unsuccessful and are not comprehensive.</td>
</tr>
<tr>
<td>Calculation</td>
<td>Uses the quantitative analysis of data as the basis for deep and thoughtfull judgments, drawing insightful, carefully qualified conclusions from this work.</td>
<td>Uses the quantitative analysis of data as the basis for competent judgments, drawing reasonable and appropriately qualified conclusions from this work.</td>
<td>Uses the quantitative analysis of data as the basis for workmanlike (without inspiration or nuance, ordinary) judgments, drawing plausible conclusions from this work.</td>
<td>Uses the quantitative analysis of data as the basis for tentative, basic judgments, although is hesitant or uncertain about drawing conclusions from this work.</td>
</tr>
<tr>
<td>Application / Analysis</td>
<td>Ability to make judgments and draw appropriate conclusions based on the quantitative analysis of data, while recognizing the limits of this analysis</td>
<td>Uses quantitative information in connection with the argument or purpose of the work, presents it in an effective format, and explicates it with consistently high quality.</td>
<td>Uses quantitative information in connection with the argument or purpose of the work, though data may be presented in a less than completely effective format or some parts of the explication may be uneven.</td>
<td>Presents an argument for which quantitative evidence is pertinent, but does not provide adequate explicit numerical support. (May use quasi-quantitative words such as &quot;many,&quot; &quot;few,&quot; &quot;increasing,&quot; &quot;small,&quot; and the like in place of actual quantities.)</td>
</tr>
<tr>
<td>Communication</td>
<td>Expressing quantitative evidence in support of the argument or purpose of the work (in terms of what evidence is used and how it is formatted, presented, and contextualized)</td>
<td>Uses quantitative information in connection with the argument or purpose of the work, though data may be presented in a less than completely effective format or some parts of the explication may be uneven.</td>
<td>Uses quantitative information, but does not effectively connect it to the argument or purpose of the work.</td>
<td>Provides somewhat accurate explanations of information presented in mathematical forms, but occasionally makes minor errors related to computations or units. For instance, accurately explains trend data shown in a graph, but may miscalculate the slope of the trend line.</td>
</tr>
<tr>
<td><strong>Assumptions</strong></td>
<td><strong>Ability to make and evaluate important assumptions in estimation, modeling, and data analysis</strong></td>
<td><strong>Explicitly describes assumptions and provides compelling rationale for why each assumption is appropriate. Shows awareness that confidence in final conclusions is limited by the accuracy of the assumptions.</strong></td>
<td><strong>Explicitly describes assumptions and provides compelling rationale for why assumptions are appropriate.</strong></td>
<td><strong>Explicitly describes assumptions.</strong></td>
</tr>
</tbody>
</table>

| **ULO 3- EVALUATE ARGUMENTS AND EVIDENCE CRITICALLY** | | | | | |

<table>
<thead>
<tr>
<th><strong>Explanation of issues</strong></th>
<th><strong>4</strong></th>
<th><strong>3</strong></th>
<th><strong>2</strong></th>
<th><strong>1</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Issue/problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.</strong></td>
<td><strong>Issue/problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.</strong></td>
<td><strong>Issue/problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/or backgrounds unknown.</strong></td>
<td><strong>Issue/problem to be considered critically is stated without clarification or description.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Evidence Selecting and using information to investigate a point of view or conclusion</strong></td>
<td><strong>Information is taken from source(s) with enough interpretation/evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.</strong></td>
<td><strong>Information is taken from source(s) with enough interpretation/evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.</strong></td>
<td><strong>Information is taken from source(s) without any interpretation/evaluation. Viewpoints of experts are taken as fact, without question.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Influence of context and assumptions</strong></td>
<td><strong>Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.</strong></td>
<td><strong>Identifies own and others' assumptions and several relevant contexts when presenting a position.</strong></td>
<td><strong>Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).</strong></td>
<td><strong>Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.</strong></td>
</tr>
</tbody>
</table>

**WHEN APPLICABLE: Student's position (perspective, thesis/hypothesis)**

| **Specific position (perspective, thesis/hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/hypothesis) are acknowledged. Others' points of view are synthesized within position** | **Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/hypothesis).** | **Specific position (perspective, thesis/hypothesis) acknowledges different sides of an issue.** | **Specific position (perspective, thesis/hypothesis) is stated, but is simplistic and obvious.** |
| WHEN APPLICABLE: Conclusions and related outcomes (implications and consequences) | Conclusions and related outcomes (consequences and implications) are logical and reflect student’s informed evaluation and ability to place evidence and perspectives discussed in priority order. | Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly. | Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly. | Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified. |
Scoring Faculty Comments

2013 Reviewer Comments

(1) On the whole, readers scored consistently, seldom more than 1 point difference in any category in any paper with two readers. But also see item 4, below.

(2) On the whole, the students whose work was reviewed appear to be performing at a reasonably competent level. A description of performance at the 1 level is consistent with a minimally satisfactory result. In only a few instances did readers assign a score of 0 in a category.

(3) Student scores tended to be higher with more challenging assignments with clear expectations laid out in the assignment. Likewise, scores were lower when the assignment made fewer specific demands (e.g., “write about x”).

(4) Student scores also ended to be lower when the assignment seemed unclear. In those instances, inter-rater reliability was lower as well.

Fall 2014 Assessment Academy Core Outcome Rubric Scores - Reviewer Comments

Reviewer 1: It seemed that students had the best grasp of explanation of the issues. Their perspective and conclusions seemed to be included when they were asked to do so.

Students tended not to consider the context and assumptions much.

Also, it was striking how the students' performance seemed so dependent on the written instructions from the instructor. It was pretty clear that students seemed to feel that minimal guidance called for a minimal response!

Further, their use of "evidence" seemed to depend greatly on what was asked of them by the instructor. There was a lot of variability in how (and if) students opted to cite their sources, and the bias and breadth of sources they consulted.

Reviewer 2: After reviewing the rubric again, I recall the following general patterns:

1) Explanation of issues tended toward leaving some terms undefined, and ambiguities frequently left unexplored.

2) Information was frequently taken from sources without much in the way of elaboration or overt attempts at interpretation. Viewpoints of experts were taken as fact, without challenge, in all but a small few of the papers I reviewed.
3) Specific positions in most papers were identifiable, and there were general acknowledgments that "two sides" of each issue exist (again, in most papers that I reviewed).

**Reviewer 3:** The biggest issue I remember is the lack of any critical evaluation of the source material or any consideration of alternative causes/solutions. The rubrics really do not guide the student in the process of critical thinking.

**Reviewer 4:** The strongest reactions I recall having with the grading was struggling to fit the rubric to what the students were doing. The items inside the boxes seemed to apply independently. I found frequently that one of the sentences from 2 different boxes would apply to the paper, but not all the sentences from the same box. Mostly this is an issue of my reliability scores as a rater.

Also, I noticed in (I believe it was) the psychology papers - the goal of those papers was more about organizing previous research and therefore not really about their own interpretations. I wondered then if this led to the conclusion that there is a lack of critical thinking going on. In looking at my scoring, that is what I ended up indicating. I would like to say there is critical thinking happening in those papers, but the thinking seems to come before the paper is written - in the selection of what to put in the paper. I would certainly admit that it's hard to assess this kind of critical thinking. I believe there were times I ended up grading the less organized papers as higher in critical thinking because they were able to put more of themselves into it. I'm not sure if this is a good thing.