May 14, 2013

Monitoring Report Review Team
Higher Learning Commission
230 South LaSalle Street, Suite 7-500
Chicago, Illinois 60604-1411

Dear HLC Review Team:

It gives me great pleasure to acknowledge the significant advancements that have been made at the University of Arizona in the area of institutional and program level student outcome assessment. The Second Monitoring Report in response to the May 20, 2011 request by the Institutional Actions Committee of the Higher Learning Commission is attached. The report describes the assessment activities that have been accomplished since the University of Arizona submitted the progress report and plan on assessment on August 16, 2011.

The report follows the plan for assessment under three assumptions:

1) Assumption 1: ongoing assessment of program level student learning outcomes is best accomplished with sustained engagement by the faculty members who create and teach the curriculum,
2) Assumption 2: faculty members understand how to conduct program level outcome assessment and recognize the potential of the process to improve academic programs, and
3) Assumption 3: a faculty-driven program level outcomes assessment process is strongly supported by university level administration and valued in the process of reviewing academic programs.

In addition, the report includes appendices that link to examples that highlight our assessment activities.

Please accept the submitted report as our response to the request for a Second Monitoring Report on assessment.

Sincerely,

Ann Weaver Hart, President

CC: Andrew Comrie, Senior Vice President for Academic Affairs and Provost
The University of Arizona (UA) Plan for Institutional and Program Level Student Outcomes Assessment

A Second Monitoring Report Prepared in Response to the 05-20-2011 Request by the IAC of the Higher Learning Commission
Prepared by: Debra Tomanek, UA Assistant Vice Provost for Instruction & Assessment and Gail Burd, UA Vice Provost for Academic Affairs
May 15, 2013

This report summarizes the progress made in implementing our assessment plan at the University of Arizona, submitted to the IAC of the Higher Learning Commission on August 9, 2011 and approved on August 23, 2011. On pages 2-6, the reader will find the approved plan activities (in black type) along with the implementation updates for each specific activity (in red type). However, we also feel it is important to briefly discuss our original rationale for this plan and the observations we have since made that suggest the plan is having an impact. To begin, these are the three assumptions that guided the development of the activities comprising our plan:

Assumption 1: Ongoing assessment of program level student learning outcomes is best accomplished with sustained engagement by the faculty members who create and teach the curriculum.
Assumption 2: Faculty members understand how to conduct program level outcomes assessment and recognize the potential of the process to improve academic programs.
Assumption 3: A faculty-driven program level outcomes assessment process is strongly supported by university level administration and valued in the process of reviewing academic programs.

These assumptions underlie the central importance of faculty and their departments/programs as the epicenters of real change and improvement in learning outcomes assessment. Central administration must support, mentor, and guide faculties as they build their assessment programs. However, if assessment is to have any chance of supporting improvement in our academic programs, the central administration cannot do the important work of assessment for our academic units. Faculty members must build their own outcomes, select or develop assessments appropriate for the outcomes, and use the assessment findings as evidence in their decision-making about ways to improve teaching, curriculum, or other learning activities. All of the activities in our plan align with this essential rationale for a successful learning outcomes assessment plan.

Worth noting, since implementing this plan in August 2011, we have observed the significant placeholder that the coaching/mentoring services offered by assessment experts in our Office of Instruction & Assessment (OIA) has had on engaging faculty in the process. The coaching/mentoring activities follow programs’ completion of the Academic Program Review (APR) process. In small groups, 1:1 interactions, and small workshop formats, the assessment experts, who are faculty members themselves, mentor their colleagues about best practices in assessment, provide multiple rounds of formative feedback on the programs’ changing assessment plans, and advise on how to use assessment data as evidence in decision-making. At the time of initial plan implementation, the significant impact of this coaching/mentoring was unanticipated. However, we now believe this role of central administration assessment experts to be a necessary and vital component of the UA assessment plan. We highlight this point here only because it is not a highly visible part of the plan that we report on in the following pages. We are convinced that without the coaching/mentoring activities, faculty engagement in the UA’s assessment plan, a key element in the overall plan, would be difficult indeed to accomplish.
**Table 1. UA Plan for Program Level Student Outcomes Assessment (August 2011)**

**Assessment Plan Updates for the HLC Monitoring Report in RED (May 2013)**

**Assumption 1:** Ongoing assessment of program level student learning outcomes is best accomplished with sustained engagement by the faculty members who create and teach the curriculum.

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Activity 1a: Required Program Level Assessment</th>
<th>Activity 1b: Regular Assessment of All Campus Program Assessment Processes</th>
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<tr>
<td>Annual</td>
<td>Identify or build activities/tools and data collection plans for measuring outcomes, collect-summarize-report outcome findings, discuss findings as a faculty, and make changes in programs. Individual programs use a variety of indirect and direct measures to measure student learning at the program level. For an example of this information posted by one of our programs, see: <a href="http://assessment.arizona.edu/eng/Mining%20and%20Geological%20Engineering%20Undergrad">http://assessment.arizona.edu/eng/Mining%20and%20Geological%20Engineering%20Undergrad</a>.</td>
<td>All academic program assessment websites are reviewed with a rubric to assess the quality of the programs’ assessment processes. A baseline review was completed in March 2011 (see the rubric as Appendix A on pages 8-9 with the average scores from the baseline review of all 165 programs). From our baseline assessment, we have learned that programs need the most help in creating assessments to measure outcomes, organizing their assessment findings, and making changes in response. Individual scored rubrics are sent to each program and each Dean receives copies from all programs in his/her college. Program heads are encouraged to meet with OIA personnel or Assessment Coordinating Council (ACC) members from their colleges (see Plan Component 2a below) for assistance in improving their assessment plans and processes. A time schedule for review of program assessment websites was developed in May 2011. Each of the 165 programs’ websites will be reviewed every 3 years.</td>
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<tr>
<td>Once every 3 years after baseline review of all programs</td>
<td>MONITORING REPORT UPDATE: Annual updating of assessment information on the website continues to be a required activity for most academic programs. The only exceptions are some professional programs that undergo additional rigorous external accreditation (e.g., Nursing). By May 1, 2013, 51% of all UA academic programs required by the VPAA to report assessment findings had updated their assessment website information during the last year. For an example of a 2013 program posting, see: Appendix A. However, for programs that had recently gone through the APR evaluation, with increased attention to assessment (see Activity 3b below), 95% of the programs reviewed in APR the last two years had updated their websites. Clearly, the increased accountability for reporting assessment results in the APR process is influencing units’ assessment reporting.</td>
<td>MONITORING REPORT UPDATE; We are on schedule to complete the 3-year reviews, beginning in 2014, since the new plan was implemented in 2011. The review will involve a rubric re-scoring, beginning with the programs that completed their APRs in 2011-12. These data will provide important documentation for each program as improvements are made in its assessment process.</td>
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### Activity 1c: The Critical Thinking Assessment Project (CTAP) for General Education

The Critical Thinking Assessment Project (CTAP) for General Education is a project that uses a course-embedded approach to measure critical thinking skills from samples of student work in General Education and Foundations courses. The critical thinking assignments are developed by the participating faculty members and used in class as assessments. However, the assigned writings, based on a common reading, are then also scored independently using a standardized rubric developed for the project. The CTAP began in the Fall 2009 as a pilot and continues to be implemented today. For a summary report of the first two years of the project, see:

http://assessment.arizona.edu/sites/default/files/Critical_Thinking_Assessment_Project_Report_Fall_2010.pdf

**MONITORING REPORT UPDATE:** We are extending the assessment of critical thinking in our General Education and Foundations Courses to Writing Emphasis (WE) courses in the majors (upper division course requirement in every undergraduate major). Preliminary results from a Survey of Writing Emphasis Courses, conducted in 2012-13, are already suggesting that writing competencies are a concern for instructors of our Writing Emphasis courses. See the Preliminary Summary of the Writing Emphasis Survey at **Appendix B**. This survey assessment of WE instructors’ opinions on writing in their courses is a first step in developing an undergraduate assessment of writing following the CTAP model. Recent discussions are leading to the development of a Faculty Learning Community (FLC) for WE Instructors. These upper division WE courses will become sites for CTAP-like assessments of student writing.

### Activity 1d: General Education Course Reviews

Subsets of Tier One and Tier Two General Education courses are reviewed in alternative years by faculty members of the University-Wide General Education Committee (UWGEC). The reviews take the form of interviews conducted by 2 UWGEC members and the instructor of one of the randomly selected Gen Ed courses. The purpose of the reviews is to document best practices in instruction and to determine the degree to which Gen Ed instructors are implementing the content and instructional criteria expected of the courses. The UWGEC members use a standardized list of questions to conduct the interviews, the notes are submitted to a faculty leader in the group, and the findings are summarized in an annual report. For the summary report for the most recent Tier One review, see:


**MONITORING REPORT UPDATE:** In 2012-13 the UWGEC began exploring and piloting questions that may be more useful than instructor interviews for gathering learning outcomes assessment information in general education courses. Therefore, a Tier Two interview assessment was not conducted in 2012-2013. In the Fall 2013 the UWGEC will again take up the discussion, including the need for gathering learning outcomes assessment data regularly from all the courses that are a part of our university wide general education course offerings.
**Assumption 2:** Faculty members understand how to conduct program level outcomes assessment and recognize the potential of the process to improve academic programs.

<table>
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<tr>
<th>Monthly during the academic year</th>
<th>Activity 2a: Program Support by College Colleagues - The ACC is comprised largely of associate deans representing the majority of UA colleges, but also includes faculty representation from the General Education program, and staff representation from Student Affairs. The ACC meets regularly to discuss program level assessment and strategies for working with faculty to support improvement of assessment. ACC members serve as information links between academic programs, the OIA, and the Office of the VPAA (Vice Provost for Academic Affairs). The ACC, beginning in the 2011-12 year, will also assist with the rubric-facilitated assessment of program assessment websites (see discussion in Activity 1b). See the current ACC membership at: <a href="http://assessment.arizona.edu/council_membership">http://assessment.arizona.edu/council_membership</a>. MONITORING REPORT UPDATE: The ACC continues to serve as an important link between institutional level assessment and units that impact student learning across campus. In 2011-12, the ACC conducted website reviews of academic programs’ assessment plans, findings, and changes. However, the process did not result in an efficient means of consistently using that information to coach the faculty and department heads about ways to improve their assessment processes. At this same time, it was noted that the assessment experts in the OIA were experiencing an increasing number of 1:1 consultations about assessment with department heads and faculty members, likely influenced by the elevated expectations for assessment in the APR process (see Activity 3b below). Therefore, beginning in 2012-13, the ACC spent less of its time reviewing websites, now more easily linked to the OIA consultations with departments, and more of its limited meeting time learning about the assessment resources available across campus and discussing how, as associate deans and unit leaders, they might become better sources of information for faculty and department heads in their colleges or units. Beginning in the Fall 2013, the ACC will plan the process for campus-wide data collection on critical thinking and writing outcomes using VALUE rubrics, a part of our commitment to the Voluntary System of Accountability (VSA) (see Activity 3a).</th>
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<td>Beginning in September 2011 and ongoing for several years</td>
<td>Activity 2b: The Faculty Learning Community (FLC) for Assessment Project – The concept of learning communities is identified by the LEAP Program (AAC&amp;U) as a high-impact educational practice. We are creating a FLC for Assessment to engage more faculty members in program level outcomes assessment through interactions with colleagues involved in the FLC. The UA has successfully supported two FLCs, one focused on curriculum challenges and the other focused on developing high quality online programs. At the start, the FLC for Assessment will be comprised of 7-10 faculty members who share an interest in program assessment and improvement. The FLC members will learn about successful program assessment, implement changes in their departments, and become influential assessment leaders in their colleges. Selection of the first Faculty Fellow (leader) for Assessment will occur in August 2011. A 6-member team of faculty members and administrators from our institution who attended a recent AAC&amp;U “Engaging Faculty” institute, called the Assessment Advisory Group, will support and mentor the Faculty Fellow in his/her work with FLC faculty colleagues. The FLC will document their assessment activities within their own programs or colleges as well as their interactions with colleagues for use in assessing the success of the FLC model. MONITORING REPORT UPDATE: The group of 13 FLC members met regularly throughout 2011-12 and 2012-13. Each member conducted his/her own assessment project, each summarized in Appendix C. The two FLC facilitators, Drs. Debra Tomanek and Amy Kimme-Hea, agreed that FLC members learned a great deal about assessment from...</td>
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Annual in spring semester

**Activity 2c: Assessment Showcase** – The Showcase is held to highlight campus programs that demonstrate best practices in program level assessment. Each showcase has a keynote speaker of national stature in program assessment followed by brief updates/talks by department heads or faculty in charge of program assessment in their units. These annual events generally attract between 40-70 faculty, staff, and administrators from all UA colleges. See information on the 2012 Assessment Showcase at: [http://assessment.arizona.edu/node/1285](http://assessment.arizona.edu/node/1285). **MONITORING REPORT UPDATE:** For information on the 2012 Assessment Showcase, see [http://assessment.arizona.edu/assessment_showcase_2012](http://assessment.arizona.edu/assessment_showcase_2012). In 2013, per suggestions by ACC members, the Showcase format was changed from previous years. In 2013 a keynote speaker was substituted with FLC-member facilitated “Table-Talks” about common challenges with assessment experienced at the program level. For information on the 2013 Assessment Showcase see Appendix D. Evaluations completed by the showcase participants show a majority favoring the table-talk discussions over the keynote speaker format.

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<th>Assumption 3: A faculty-driven program level outcomes assessment process is strongly supported by university level administration and valued in the process of reviewing academic programs.</th>
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<td><strong>Activity 3a: Institutional Level Support for Program Assessment Assistance</strong> – The Office of Instruction &amp; Assessment (OIA) is a unit within the Office of Academic Affairs at the UA. OIA personnel with high levels of academic experience in assessment are available to consult with and support program faculty and program heads in their efforts to build or improve their program assessment plans and practices. In the 12-month period ending in mid-May 2011, the OIA assessment experts interacted with approximately 240 faculty members and administrators through invited presentations, one-on-one consultations, an institution-wide Assessment Showcase event, and written feedback or emails. See the OIA website at: <a href="http://oia.arizona.edu">http://oia.arizona.edu</a> <strong>MONITORING REPORT UPDATE:</strong> In the 12-month period ending May 1, 2013 (the time of this report), the OIA assessment experts had interacted with over 420 faculty, departmental staff, and administrators through the communication sources mentioned in the above paragraph. Much of the increase in interactions is attributable to the close mentoring/coaching that occurs between the OIA assessment experts and the department personnel when the departments begin their work identified on their Post-APR Assessment Improvement Plans. These plans are written by an OIA assessment expert after she has met with the program faculty or department head to discuss their rubric-scored assessment generated in the program’s APR process. In addition to the rubric “scores,” programs are also provided with written feedback on how improvements can be made to the assessment plan. After this post-APR meeting, an OIA assessment expert engages in what often results in a multi-month coaching process where formative feedback on the program’s progress is used by the program to accomplish its Improvement Plan objectives. The ACC has been asked by the VPAA to develop a process for using the AAC&amp;U VALUE rubrics to assess critical thinking and writing in our general education writing program. The ACC will formalize this plan in the Fall 2013 as a part of our institutional decision to join the VSA.</td>
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Activity 3b: Review of Assessment Sections in Academic Program Review (APR) Self-Studies — Each academic program at the UA is reviewed every 7 years for quality of its program. Reporting of program assessment results has long been a requirement of the APR process. However, beginning in the Fall 2011, all assessment sections in the APR self-studies will be reviewed for quality using a rubric. Members of the Assessment Coordinating Council and assessment experts in the OIA will conduct each review and forward the assessment results to the Vice Provost. If evidence for “closing the loop” by using program level outcomes to make program improvements is missing, the Vice Provost will place the program on probation and request that the department seek assistance from the OIA to improve its practice of program assessment. A follow-up review will be planned to determine whether the program has made progress on its program assessment activities.

MONITORING REPORT UPDATE: We are currently completing the second year of this new APR-linked intervention in our assessment plan. The table below shows the progress made by the 21 academic programs that went through APR as Cohort #1 of our new APR-linked assessment intervention. The blue bars show the overall average rubric score (excluding the scored item for updating on the website) generated at the time of APR and the red bars show the re-score a year later after the program has made its improvements. Only 3 of the 21 programs earned 1-Year Post APR rubric scores lower than the year earlier, due either to under-reporting of data or recent small improvements in the rubric scoring criteria. These programs will make improvements for these deficiencies in the fall. The rubric used to score the APR Self-Study Sections is found in Appendix E.
Appendix A

Speech, Language and Hearing Sciences: Undergraduate Program
Assessment Webpage
Speech, Language and Hearing: 
Undergraduate Programs

Overview

The undergraduate program in Speech, Language, and Hearing Sciences is designed to provide students with a strong broad-based Bachelor of Science degree that builds upon the general education curriculum in English composition, the biological and physical sciences, mathematics, and social and behavioral sciences. Coursework within the two-year major provides an understanding of the biological, acoustic, psychological, developmental, linguistic, and cultural foundations of human communication processes. This includes normal aspects of speech production and perception, language processing, hearing, swallowing, and the cognitive and social aspects of communication. The curriculum also provides a strong background regarding the nature of communication disorders, and the basic principles of treatment. The undergraduate degree is preparatory for graduate study in speech-language pathology, audiology, and research degrees in speech, language, and hearing sciences. However, the undergraduate major is designed to foster critical thinking, writing skills, and problem-solving abilities in a broad sense, so the education has wide application that is not limited to pre-professional training

Outcomes

Undergraduate Student Learning Outcomes

The training mission of the SLHS undergraduate program is to provide academic and pre-clinical education to students in speech, language, and hearing sciences that is sufficient to master foundational knowledge and skills necessary for advanced learning at the graduate level. The learning outcomes relate to standards set by the American Speech-Language-Hearing Association (ASHA) that are to be fully achieved at the graduate level. By the completion of the program, undergraduate students are expected to:

1. Demonstrate understanding of basic principles of biological and physical sciences,
2. Demonstrate knowledge of basic human communication and swallowing processes, including their biological, neurological, acoustic, psychological, developmental, and linguistic and cultural bases. (ASHA Standard III B)

3. Demonstrate knowledge of the nature of speech, language, hearing, and communication disorders and differences and swallowing disorders, including the etiologies, characteristics, anatomical/physiological, acoustic, psychological, developmental, and linguistic and cultural correlates. (ASHA Standards III C)

4. Demonstrate basic understanding of principles of assessment and intervention over the range of communication disorders specified in the current scope of professional practice for audiology and speech-language pathology. (ASHA Standard III D)

5. Demonstrate adequate writing skills for scientific and clinical report writing. (Standard IV B)

Activities, Findings and Changes

Assessment Activities

The student learning outcomes enumerated above are assessed within the associated courses in which the content and skills are taught. Outcome data are available from pre-post tests (10-point multiple choice) in the following classes:

**SLHS 207** Survey of Human Communication and Its Disorders: This introductory course is taken by pre-majors, majors, and non-majors. It provides an assessment of acquisition of new knowledge in a diverse cohort of students

**SLHS 473/477** – Communication Disorders I and II: This foundational two-course sequence for majors covers a wide range of communication disorders. These courses build upon other foundational courses in SLHS.

**SLHS 471** Speech Sound Disorders: This speech disorders course requires more in-depth knowledge of communication disorders than preceding courses and should be representative of more advanced knowledge in the major.

Assessment Findings

**Figure 1.** shows the performance on the 10-point multiple choice quizzes taken at the beginning and end of the four courses described in the previous section (SLHS 207, 471, 473, and 477). A consistent pattern of performance is demonstrated whereby the average performance on the pre-test averages about 40% and improves to 80% after the course. The information sampled by these quizzes relates specifically to the learning objectives. The primary goal is
for students to achieve the 80% or better mastery level, but it is interesting to note that it appears that the level of mastery for SLHS 471 and 473 improved over the four years that were sampled in the exact same manner.

**FIGURE 1. Assessment Findings for Undergraduate Learning Outcomes.** Scores on 10-point multiple-choice test taken on the first day of class (pre) and at the end of the course (post) for courses SLHS 207, 471, 473, and 477.

In order to examine outcomes with regard to writing skills, writing skills are sampled from writing samples graded using a standard rubric from SLHS 362 Neurobiology of Communication

SLHS 362 is typically the first of three writing emphasis courses taken by majors in SLHS, and thus includes considerable attention to scientific writing form. Didactic instruction is provided regarding scientific writing and a strict scoring rubric is implemented.

Learning outcomes for writing skills have been sampled in a consistent manner for the past 3 years (2010-2012) in SLHS 362 (Neurobiology of Communication). In this class, students write two papers on a scientific topic related to the course content and are provided with writing guidelines and a standard scoring rubric. Students are allowed to submit a re-written paper following feedback from the first essay. As noted in **FIGURE 2.**, the first papers are far from meeting the strict criteria for well-written papers. Students show marked improvement, both in their response to editorial input used to re-write the papers (post) and in the writing of the second
paper compared to the first. Student learning in the area of writing continues in the two other writing-emphasis courses, so that they should have the tools for graduate school, or other life pursuits that involve analytical writing skills.

**FIGURE 2. Changes in writing scores over the course of the semester in undergraduate writing emphasis course (SLHS 362).** Light bars indicate first draft by students (Pre); dark bars indicate papers re-written after feedback (Post). Average class size = 60 students. Error bars = SEM.

**Changes in Response to Outcomes**

With regard to objective measurement of learning outcomes in SLHS, the pre-post test scores have been confirmatory of our impression from other indicators that students clearly advance their knowledge in the targeted areas. This information combined with the strong course evaluations indicate overall success in our teaching mission. That said, we continue to review, evaluate, and modify our curriculum in order to achieve the best possible educational sequence for our students.

With regard to writing skills, the annual review of student writing performance in our three writing emphasis classes (SLHS 340, 362, 430) has led to considerable change over time in an effort to improve student outcomes. These changes include:
increased consistency in the rubrics used to evaluate writing in the writing emphasis courses and sharing of that rubric with all faculty
increased use of student preceptors in the writing emphasis courses in order to increase the feedback to students and allow for re-writing of papers in SLHS 362 in response to feedback. (Note that preceptors only do the initial review and feedback on papers, and all grading is done by the responsible faculty member).

increased structure of preceptor training with supervising faculty to maximize scoring reliability.

Improvements to the courses were based on informal feedback from students, formal course evaluations, as well as peer critiques and discussions.

Three courses related to hearing (acoustics, hearing science, and audiology) were sequenced and topics reorganized to allow students to build knowledge over three consecutive semesters. This sequencing has improved student performance in the upper division course in Principles in Audiology (SLHS 483R/L). This improvement in the curriculum is due to an increase in faculty numbers allowing us to offer lower division courses both fall and spring semesters.

Laboratory experiences for three courses (SLHS 261, 380, and 483L) have been restructured to add hands-on laboratory demonstrations designed to illuminate difficulty concepts in these courses. The addition of a cadaver to the laboratory for SLHS 261 has allowed for the opportunity to see anatomical structures in situ, thereby improving students’ recognition of the structures and allowing for application to clinical disorders presented in later courses. Labs in Hearing Science (SLHS 380) and Principles of Audiology (483L) have been reworked to include hands-on demonstration of auditory/acoustic phenomena. The personal experience with these phenomena improves retention and transfer of knowledge when built on during a subsequent course. The laboratory components of these courses are unique compared to peer institutions that offer few undergraduate laboratory experiences.

We have also been able to offer SLHS 367, Clinical Phonetics, again, a course that had not been taught as a full course for several years due to insufficient faculty. The availability of this course has greatly improved our ability to prepare students for the elective course in Speech Sound Disorders (SLHS 471). Student performance in SLHS 471 has improved as a direct result of training in clinical phonetics and this has allowed the instructor to cover topics in more depth and provide a strong clinical foundation for future clinical work.

The Department has also added a registration for teaching preceptors at the undergraduate level (SLHS 491). This registration allows us to offer additional opportunities for top students to work with their peers as a mentor and solidify their knowledge in an area.

The Department has added a number of courses (1 lower division, 2 upper division), which improves breadth of students’ knowledge in the field. These include SLHS 255 Hearing, Health, and Society (GEN ED), SLHS 435 focusing on Multicultural and Multilingual Populations, SLHS 430 Cognitive
Neuroscience of Language.
Two upper division undergraduate courses covering communication disorders (SLHS 477 and 473) were reworked by the faculty to approach communication disorders using a lifespan approach (consistent with the prevailing views of the field), avoiding duplicate presentation of material, and increasing the number of different disorders covered. The focus has also expanded to include evidence-based practice as a pillar of the field.

Source URL: http://assessment.arizona.edu/sci/Speech%20Hearing%20Sciences%20Undergrad
Appendix B

Preliminary Summary of the UA Writing Emphasis Instructor Survey
Summary
The Writing Emphasis (WE) survey found that WE courses are mostly taught by Tenure-Track professors who value the WE designation, but are somewhat unaware of its definition. A majority of WE courses contain over 25 students, have no TAs, and are graded solely by the instructor who require more than 15 pages of student writing (375 pages of writing/WE course/instructor). Nearly half of the WE instructors believe their students are not prepared for the kinds of writing required in their WE course, and they are concerned about second language writers. Less than half use the plagiarism detection device on D2L, our course management system. Summarizing, evaluating, synthesizing information was reported to be both most important and most difficult for students, as were issues of clarity (organization of paragraphs, and grammar/mechanics). More than half of instructors are interested in professional development opportunities that focus on managing the grading load, while just under half are interested in responding to student writing, and a third are interested in the design of writing assignments, and teaching with writing technologies. Only 1 in 5 instructors are interested in professional development opportunities about teaching writing to students whose primary language is not English.

The Survey Instrument
The request for survey participants was sent out to every individual professor from the UA Writing Program on February 4th and February 27th. We received approximately 45 responses on the first recruitment, and 27 responses on the second. We currently have a representative sample:
- 72 responses from 327 requests,
- a 22% response rate, within the 95% confidence interval.

Description of WE Courses
- 81% (n=58) are taught by TT professors. 6% (n=4) are taught by graduate students.
- 82% (n=59) said the WE designation was important to extremely important in the design of their course.
- 43% (n=31) were unaware of the WE definition in the course catalogue.
- 63% (n=45) said the WE definition adequately characterized their class.
- 53% (n=38) of WE courses have >25 students. 47% (n=34) of WE courses have <26 students.
- 68% (n=49) of WE courses have no TAs.
- 74% (n=53) of WE courses are graded only by the instructor.
- 69% (n=49) of WE courses require more than 15 pages of student writing.
- Much more than 50% of the grade is most often tied to writing assignments in WE courses.
Summary of Survey Results
The Writing Practices in WE courses are highly diverse with an emphasis on analysis, report of findings, argumentation with appropriate evidence, and specific citation styles. Less common are narrations or descriptions of experience, description of methods, integration of numerical or statistical information, revision, and multimedia projects (all 40% or less).

A majority of instructors provide instructions, describe expectations, and explain the grading criteria. Less than half of instructors (40% or less) ask students to conduct peer review, write collaboratively, require multiple drafts, or assign brief writing assignments.

Just under half (46%) of WE instructors believe their students are not prepared for the writing requirements in their WE course.

About half (49%) of WE instructors are concerned about second language students.

No single citation style is the most common across the curriculum. Use of citation styles is highly diverse.

The three most important characteristics of student writing (from professors’ perspectives) are: 1) Use of appropriate evidence to make an argument (61%); Summary, evaluation, and synthesis of information (56%); and Clarity (40%).

The three most pressing challenges to students (from professors’ perspectives) are: 1) Summarizing/evaluating/synthesizing information (56%); Grammar and mechanics (47%); Logical organization of paragraphs (42%).

A significant majority of instructors post course materials (syllabi, assignment sheets, etc.) online. Just under half (43%) use the plagiarism detection device (turnitin) on D2L (UA’s course management system), and assign at least one major written project using online technologies (41%). Only 13% of instructors use online or digital technologies to facilitate student-to-student peer review, and only 13% of instructors are not interested in using online or digital technologies. One in five (21%) are interested in learning more about using online or digital technologies.

The top five professional development opportunities that instructors are interested in are:
• Managing your grading load (54%, n=39);
• Responding to student writing (42%, n=30);
• Developing effective writing assignments (37%, n=27);
• Effectively integrating writing into your WE course (37%, n=27);
• Teaching writing with technology (32%, n=23).
• Teaching writing to students whose primary language is not English (18%, n=13)
Appendix C

Faculty Learning Community on Program Assessment
Faculty Learning Community on Program Assessment

The Faculty Learning Community (FLC) on Program Assessment is a community of colleagues working to develop faculty knowledge of and expertise with program assessment through study, support, and individually or collaboratively-designed projects of benefit to FLC members, their departments and our university community. [pdf version]

FACILITATORS

Amy Kimme-Hea
Faculty Fellow for the OIA
Director, Writing Program
Associate Professor in the Rhetoric, Composition, & Teaching of English Program
Department of English
kimmehea@email.arizona.edu

Debra Tomanek
Assistant Vice Provost for Instruction and Assessment
Professor, Molecular and Cellular Biology and the College of Science Teacher Preparation Program
dtomanek@email.arizona.edu

MEMBERS
Paul Blowers
Associate Professor, Chemical & Environmental Engineering
Dr. Paul Blowars is currently an associate professor in Chemical and Environmental Engineering, which he joined in 1999. In his time at U of A, he has been selected for the faculty award winner for Excellence in Academic Advising in 2007, was selected by the National Academic Advising Association as one of the top four faculty advisors in the US in 2008, was named the College of Engineering daVinci Circle award winner for engagement with students in 2009, was selected as the Leicester and Kathyn Sherrill Creative Teaching Award co-winner in 2010, along with the UA Honors College Five Star Faculty Award winner. He was named the Carnegie Foundation Arizona Professor of the Year as one of the top 27 faculty members in the US at undergraduate institutions in 2011, and was most recently named University Distinguished Professor, the highest teaching honor at UA in 2012.

What is the challenge that my project addresses?

My project addresses both how to get faculty to provide assessment data and also how to manage the data collection through the use of D2L.

How did I pursue the challenge?

I built rubrics in D2L with the intent that these would be used to archive scores and numerical data about how well students were achieving chemical engineering's ABET required a-k criteria. I met with faculty prior to the beginning of the semester to detail what criteria would be measured in each class and then followed up after the semester was over with another meeting.

What have I learned?

I've learned that data will not be easily pulled from D2L, but that it was still useful to have the rubrics that detailed how students were meeting the criteria and what the threshold values for success were. Grading the assignments that were targeting the different criteria automatically led to easy assessments.

My advice for others pursuing similar assessment challenges is:

Meet with faculty more often and provide reminders of what you need and set timelines for deliverables.

Faiz Currim
Senior Lecturer, Management Information Systems
currim@email.arizona.edu

Faiz Currim is a senior lecturer with the Department of Management Information Systems (MIS). The MIS Department has developed assessment plans for their undergraduate and graduate programs. Dr.
Currim received his Ph.D. from the University of Arizona in 2004, and teaches on-campus and online courses at both the undergraduate and graduate level.

What is the challenge that my project addresses?

Our department wanted to review and revise our student assessment materials. A key challenge we addressed in this project was thinking in terms of program-level student learning outcomes, instead of course level outcomes. Most of us looking at assessment know what courses our students should take to be successful, and why. We also had a sense of course-level skills we want students to master.

Our project looked at higher-level outcomes across courses, from the perspective of the student. For example, instead of saying a student would learn to do specific kinds of software design in course A or course B, we abstracted that into a program-level outcome, "Understand and apply design principles in Information Systems."

How did I pursue the challenge?

During the course of the FLC meetings, we discussed outcomes in different programs (e.g., in the sciences and engineering) and also looked at exemplars from other disciplines. This, combined with feedback from the FLC group and Deb Tomanek, proved very helpful. We were able to develop and refine our student learning outcomes as well as map them to course-level outcomes (which could then be measured in tests or assignments). One of our goals was to look at the assessment process as a feedback loop. In other words, to develop a data collection mechanism within individual courses that would feed into overall student learning outcomes. Examining the level of student performance on these outcomes would tell us whether we needed to provide students with more instruction in specific areas we believed were important.

What have I learned?

One of the important pieces of learning was understanding what makes a good student learning outcome. A student learning outcome (SLO), unlike a TCE, does not evaluate courses or faculty members. Instead, the SLO seeks to identify what is important for our students to learn, and how can we measure whether they learned it (preferably in a quantitative and separable way) in courses.

My advice for others pursuing similar assessment challenges is:

A good place to begin is to look at examples available on the assessment.arizona.edu site. This helps someone starting afresh to see how SLOs can be developed and measured (across courses). Once the outcomes are in place, it is helpful to simplify outcome measurement within courses. The purpose is to reduce additional burden on faculty (which ultimately helps faculty participation in the assessment process). In the ideal scenario, an outcome can be measured through questions in existing course assignments or tests. In addition, if those assignments and test questions are easily identified and able to be tracked separately, data collection can be facilitated. It is helpful to have at least one instructor who is willing to 'beta test' the process to demonstrate the process to other faculty. It is also important that the department is supportive of
the assessment efforts. The beta test can help to achieve this as it provides a concrete example of how data can be collected and used to improve the program and benefit students.

Wendy Davis
Lecturer, Animal Sciences
wdavis@ag.arizona.edu

Wendy Davis is a faculty member in the College of Agriculture and Life Sciences’ Department of Animal Sciences and Associate Coordinator for the Race Track Industry Program (RTIP).

Established in 1973 at The University of Arizona, the RTIP is world renowned for its curriculum focused the pari-mutuel racing and equine bloodstock industries. Program graduates - including two Kentucky Derby winning trainers - represent many of the who’s who in racing today. The educational reach goes beyond the UA campus and students as each year, the RTIP faculty and students host one of the largest racing conferences on the international calendar; delegates representing 20 countries and six continents attended the most recent renewal in December of 2012.

In addition to her participation in the Faculty Learning Community on Program Assessment, Davis serves on CALS’ Curriculum and Assessment Committee as well as Animal Sciences’ Equine Steering Committee, Scholarship/Curriculum Committee and Peer Evaluation Committee. She is an advisor for both RTIP students as well as those completing other animal science-based degree options and teaches or co-teaches several courses in the RTIP.

The challenge that my Faculty Learning Community on Program Assessment project addresses is getting the initial “buy in” and subsequent participation in the assessment process by faculty. The main focus of this project is undergraduate curriculum and the model uses a department with fifteen campus-based faculty members.

My approach to this challenge was to break the process up into very small steps with support at each step. Once created, this step-by-step process doesn’t add a significant time obligation to any one faculty member and reduces the stress related to “Now what is it exactly that I’m supposed to do?”

This process can be compared to a paint-by-number picture. As each color (or step in the assessment cycle) gets completed (the various assessment activities), the picture becomes more clear (during data analysis). If the end result is a masterpiece, then leave well enough alone! But the odds are that there will be “too much blue” or “not enough green” in some areas (as identified with assessment findings) and this process will suggest where the palette should be amended (make programmatic changes) for a better composition the next time through (and student learning outcomes will be better met).

The following is a very brief timeline snapshot the project:
1. Update the unit’s desired outcomes to make sure they are accurate, appropriately worded and agreed upon by faculty.

2. Create a brief survey for faculty to identify which outcomes they believe are addresses in their coursework or the student learning opportunities.

3. Given the information gained from the survey, select the outcome(s) and courses/opportunities that will be used for the current cycle of assessment.

4. Once selected, support those faculty members in identifying and creating the appropriate instrument (many times a custom-designed rubric) to be used to measure the outcomes.

5. Evaluate the findings and take the information back to the faculty to determine if any changes are needed to meet the stated learning outcomes.

Most of the above steps are ideally presented and discussed in faculty meetings or other appropriate group settings; in this case, they were carried out with faculty on an individual basis.

What I’ve learned to this point is that once the mystery is taken out of the process and it is made clear that this is not “reinventing the wheel” and doesn’t put another burden on faculty they are supportive and even interested in the outcomes.

My advice to others is to assure the faculty that they are already “painting” many colors on the assessment canvas and that all we are doing is organizing the information in a logical way. Probably the biggest issue is convincing the faculty that finding something that isn’t working as planned or expected isn’t a negative mark on the faculty or department but rather an opportunity to make a positive change.

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**Ryan Foor**

Assistant Professor & Director of Graduate Studies, Agricultural Education

rfoor@email.arizona.edu

Ryan M. Foor is an Assistant Professor and Director of Graduate Studies in the Department of Agricultural Education in the College of Agriculture and Life Sciences. He teaches coursework in teacher preparation, agricultural communications, agricultural literacy, and leadership. His research interests include teacher mentoring and induction.

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**What is the challenge that my project addresses?**

My project focuses on assessing the graduate programs in our department. We have two
degrees, a master of science and a master of agricultural education (a practitioner based degree). Each degree has two option areas. The master of science degree includes a research option and a professional agriculture option. The professional agriculture option is designed for distance students. Within the master of agricultural education degree, the options include a career and technical education (CTE) option and a practitioner option. The CTE option is designed for students pursuing certification to teach high school agriculture and the practitioner option is designed for practicing teachers. While our programs are small, there is much diversity across the options in terms of the students pursuing the degree options and the outcomes for each option area. Therefore, our challenge was to design outcomes and assessment activities for each of the four degree options.

**How did I pursue the challenge?**

My first consideration was to gather input from all faculty in our department. We are a small department, with only five faculty members, so it was relatively easy to get everyone’s input at a faculty meeting. My approach was to take the opportunity to look at the big picture of our programs by creating a logic model for each option area. During the faculty meeting, I gave each person three index cards for each option area (12 cards total), labeled long-term, medium-term, and short-term. For each option area, we started with the long-term card and I directed faculty members to create a list of the long-term impacts or consequences we seek for that option area. We continued creating medium-term outcomes or actions for the degree option, and finished with the short-term outcomes or learning activities. Then, I recorded the outcomes for each degree option where we were able to examine all outcomes and revise collectively. From these mutually agreed outcomes, I created a logic model for each degree option, and crafted the short-term learning outcomes for use in program assessment. The logic models and learning outcomes were sent to the faculty for a final review and revisions were made. With the learning outcomes established, I identified existing learning activities in our graduate programs to serve as assessment points. Finally, I created rubrics for assessment activities to measure the learning outcomes (e.g. rubric for assessment of the master’s thesis and oral defense). I shared the rubrics with the faculty for review and made revisions. Data collection is underway for the 2012-2013 academic year.

**What have I learned?**

I have learned that program assessment does not have to be as difficult and complex as it initially sounds. At first, I was aiming to collect and report data for each individual student in each degree option. What I learned from the assistance provided by the Office of Instruction and Assessment is to "look at the bigger picture with the program" and report assessment data collectively for all students in the program. Instead of tracking each student, we will take a collective approach to reporting data for each learning outcome.

**My advice for others pursuing similar assessment challenges is:**

Get the faculty on board early. Creating a program assessment committee at the department level (especially for departments with a larger number of faculty) will help facilitate the process.
The admissions process at the College of Medicine is a challenging enterprise. Thousands of applications are reviewed to produce a matriculating class of about 115 students each year. The Admissions Committee, consisting of 11 faculty and 5 medical students, spends over 200 hours each reviewing and voting on applications. While successful in choosing excellent students each year, there was a clear need for a formal assessment system.

During this past year, the Admissions Committee developed and used an assessment system based on 11 attributes considered most desirable in entering students. These included academic preparation and clinical exposure as well as "distance travelled". Each attribute was scored 1 to 5 for each candidate reviewed. In addition, each candidate was given a "gestalt" score. The attribute scoring provided a means by which to rank order every student considered as well as to focus discussion.

In the future, the attributes scoring will be used in conjunction with student outcomes to prioritize those attributes which are best predictors of later success. In this way, the assessment process can be improved in an iterative way.

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Chris Johnson

Assistant Professor, Educational Technology

cgj@email.arizona.edu

*Chris Johnson is an Assistant Professor in the Masters of Science in Educational Technology program at the University of Arizona, Sierra Vista. The program is an on-line program that works with K-12, corporate and higher-education instructional technologists and trainers with the Military Intelligence School at Fort Huachuca.*

My FLC project originally focused on developing Program Assessment for the Educational Technology Program. However, as I began work, I became aware that Dean Shockey was interested in infusing Program Assessment across University of Arizona, Sierra Vista. An Assessment Committee, chaired by Dr. Dieter Steklis, with Dr. Aaron Tesch and myself, was
formed and we are now focused on three pilot projects. The first is an upper-division Bachelor of Applied Science program on Family Studies and Human Services. The second is our shared program in Psychology. And the third is the graduate program in Educational Technology. The Assessment committee is developing a model for incorporating Program Assessment across UAS. As part of this work, we are currently developing an assessment of critical thinking across a number of core UAS courses based on the Critical Thinking Rubric developed by the Association for American Colleges and Universities.

For the Educational Technology Program, we began by developing new Expected Learning Outcomes that are based on the standards of the Association for Educational Communications and Technology. We are just completing a curriculum map that aligns these new ELOs to our courses and our exit portfolio. We will then identify assessment activities for data collection.

We are also developing an exit interview to be administered at graduation and a follow-up survey for our graduates to be administered a year after graduation. Both of these new assessment activities will be tied to our ELOs. Once we have completed the curriculum map, program faculty will meet to identify an ELO for initial data collecting and analysis to test our process.

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Carl Maes
Associate Dean, Optical Sciences
cmaes@optics.arizona.edu

Carl Maes completed his PhD in Optical Sciences from the University of Arizona. He was previously an Associate Professor at the United States Air Force Academy, Colorado, where he was a member of the Lasers and Optics Research Center. He is the Associate Dean of Academic Programs, College of Optical Sciences. His research spans from adaptive optics, lasers, to studies of the fundamental nature of light. He has 13 years of teaching experience in undergraduate and graduate courses in physics and optical sciences.

What is the challenge that my project addresses?

Assessment of PhD in Optical Sciences (and more broadly Physics and some Engineering disciplines)—I really wanted to answer the question: how does one become a scientist and how might it be assessed?

How did I pursue the challenge?

I conducted a lot of discussions at FLC meetings, Faculty meetings, Faculty Retreats, Graduate Curriculum Committee meetings, and did a web search of graduate program assessment in Physics and Electrical Engineering at other institutions.

What have I learned?
Working with faculty is a complex dynamic that significantly constrains how assessment plans are developed and implemented.

My advice for others pursuing similar assessment challenges is:

Developing and implementing a program assessment plan will depend greatly on whether there is institutional and department head level support to take the time to truly develop and implement a value added assessment plan with broad support.

The process can be enabled by a faculty committee that needs comparable authority and numbers as other high priority department committees. This committee would take about two years to collect data: consider various PhD program milestone events, collect student, faculty, alumni, 1st and 2nd employers, and other relevant constituents’ feedback on program quality and how to measure it, meet with faculty from other departments and institutions to discuss how a program’s standard of quality is known/measured, consider NRC, etc. program rankings, and then propose an assessment plan to the rest of the faculty. This dedicated and thoroughly researched approach by a team of faculty would stand a good chance of getting broad faculty consensus. To gain faculty support, the assessment plan must be relevant, actionable, and with direct implications affecting metrics used for national level institutional rankings and accreditation, faculty promotion and tenure, and with both faculty and students’ notions that the effort is worth supporting. In effect, this version of assessment would carry the same significance as for example, a publication in a respected journal. Assessment in this manner would not merely be an additional duty of select staff/faculty, but an important part of what we do as a faculty.

Katrina Miranda
Associate Professor and the Assistant Chair of Education and Assessment
Department of Chemistry and Biochemistry
kmiranda@email.arizona.edu

Katrina Miranda joined the Department of Chemistry and Biochemistry in 2002 where she is currently an associate professor and the Assistant Chair of Education and Assessment. Her research program focuses on defining the chemistry of physiological and pathophysiological processes involving nitrogen oxides and on producing nitrogen oxide donors as analytical and pharmacological tools. She teaches chemistry courses at both the undergraduate and graduate levels, and her awards include receipt in 2010 of the University of Arizona GPSC Achievement Award for Outstanding Mentor of Graduate/Professional Students.

Why is the challenge that my project addresses?

The primary question was what should a person with a BS in chemistry and biochemistry be able to do upon graduation? Of course this challenge leads to others, not the least of which is
convincing faculty that assessment is a valuable process and must be a component of the educational efforts of the faculty as a whole and of individual instructors.

How did I pursue the challenge?

This involved many meetings: at faculty meetings and retreats, with the Undergraduate Program Committee, with a newly instituted Lab Curriculum Committee and with both FLC and the OIA. The Department of Chemistry and Biochemistry is the product of a departmental merger several years ago. We have since been making efforts to coordinate both the major and minor programs offered within the department. These discussions led to a number of programmatic changes, drawing from strengths of both the chemistry and biochemistry programs, and also to creation of new courses that better serve our majors.

The primary question of my project led to a top down approach to assessment. From the basis of the question of what should a person with a BS in chemistry and biochemistry be able to do upon graduation, we have been discussing the content of lecture and lab courses. The lab courses at the 400 level in particular offer the opportunity to assess student competency.

What have I learned?

Programmatic assessment can be a daunting process but is worth the time invested. Small, positive changes at the beginning can lead to faculty buy-in and trust in the process. As an ongoing process, assessment challenges the status quo, but hopefully leads to an understanding of the need to continue to evolve our curricula and programs, just as our science does.

I was surprised to learn that programmatic assessment of chemistry and biochemistry programs is not being widely pursued. I was hoping to utilize existing assessment tools from other departments, but was rather disappointed to find that these did not exist, at least in readily adaptable formats.

My advice for others pursuing similar assessment challenges is:

Talk to the OIA as soon as possible. Be satisfied with small changes. Collect those interested in programmatic assessment into a working group.

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**Teresa Polowy**

**Department Head, Russian and Slavic Studies**

tpolowy@email.arizona.edu

*Teresa Polowy is Head of the Department of Russian and Slavic Studies which offers a Russian major and minor and a Masters in Russian. Her areas of scholarship include contemporary Russian women's writing, twentieth and twenty-first-century Russian literature, cultural studies, literary translation, and the problem of alcoholism and gender in Russian literature. She engages in ongoing professional development which is not only personally, but administratively beneficial, keeping her abreast of issues in education and allowing her to lead by informed example. Her*
ability to better guide departmental assessment efforts will continue to improve since being selected to participate in the two-year Faculty Learning Community on Assessment funded by the Office of Instruction and Assessment.

What is the challenge that my project addresses?

Like many of us, my challenge was educating, convincing, demonstrating for the faculty members of my department the reasons and the value of assessment. Once faculty understood that assessment addresses student learning rather than faculty teaching, and that we, as a faculty within our curriculum are already doing many important types of assessment, response was positive.

One challenge was to put SLOs in place for all 4 years of Russian language learning for Russian majors.

The largest challenge was agreeing on an assessment measurement for one or two of the SLOs given for our undergraduate major in Russian and MA in Russian. We want to find a measure to assess our SLOs for language proficiency at the end of four years and at the end of the two years of the MA.

How did I pursue the challenge?

An MA student is doing an Internship under my direction which is proposing SLOs for each of the four years of the Russian language learning in the major. Faculty has been impressed and positive about this work.

As department head, I called an assessment workshop for a Saturday. Faculty was given plenty of lead-time throughout the fall semester 2012, and in Feb. 2013, we held the day-long workshop.

I asked each faculty member to think of the one thing that s/he would like to change in terms of student learning at the undergraduate and graduate programs.

Then I asked each to think of how s/he would measure the change that s/he wanted to institute.

Commonality was reached since many desires for change were interrelated. Discussion resulted in agreement on specific assessment measures for the language proficiency SLO at the end of in each program.

What have I learned?

I have learned to value and revisit the training in Student Centered Learning (SCL) that I received in 2005-06 as a member of the Tri-University faculty group on Student Centered Learning sponsored by ABOR. Assessment, like SCL, has everything to do with effective student learning and ensuring that faculty keeps that goal front and center. Discussions as a teaching team about types of assessment measures and articulation issues, are invigorating, stimulating, and good for faculty morale.
My advice for others pursuing similar assessment challenges is:

Persist and try to educate your colleagues, in a gentle way, about the value of assessment. Know your colleagues and what they value – that is, do they want to capitalize on success, work for improvement, or some combination of both when discussing assessment measures and SLOs. Do not try to be over-ambitious in terms of the scope of the assessment measures your unit is implementing to demonstrate a SLO.

Claudia Stanescu  
Senior Lecturer, Physiology  
stanescu@email.arizona.edu

Dr. Claudia Stanescu is a senior lecturer at the University of Arizona in the Department of Physiology, College of Medicine. Dr. Stanescu earned her doctoral degree in Physiological Sciences at the University of Arizona in May 2005.

In addition to teaching, Dr. Stanescu serves as the Associate Director for the Physiology Undergraduate Major and the Human Anatomy and Physiology course coordinator. She joined the Faculty Learning Community on Program Assessment in 2011 and has become the Assessment Coordinator for the Department of Physiology.

The Department of Physiology Assessment Plan was developed by Dr. Anne E. Atwater, a now Emeritus faculty member, who was the Director of the School of Health Professions. When I joined the FLC on Program Assessment, I discovered that the department had continued to collect some data each semester but the data was not being analyzed and presented to the faculty for feedback on a regular basis. My project as an FLC member was to revise the assessment plan and to get faculty feedback on the student learning outcomes so the plan reflects the current program and faculty. In addition, my plan is to continue to collect data, analyze it and present it to the faculty for feedback. The revised student learning outcomes and assessment plan are outlined below.

**Student Learning Outcomes**

Physiology involves the study of how living systems function, from the molecular and cellular level to the systems level, and emphasizes an integrative approach to studying the biological functions of the human body. Students who complete the undergraduate major in Physiology should have a firm grasp of basic physiological principles and their application in real-life situations.

Content mastery should include knowledge of:

- Cellular function: the functions of cells; how cells grow, interconnect, and interact
• Organ systems function: basic concepts and mechanisms underlying the physiology of each organ system; interaction of all organ systems, foundation in all organ systems and depth in selected organ systems

• Integration of physiology from the cellular and molecular level to the organ system and organismic level of organization

• Comparative physiology: comparison of physiological characteristics of various organisms

• Current topics in physiology

• Career options in physiology

• Experimental design in physiology

In addition to acquiring knowledge about physiology, students who complete requirements for graduation should demonstrate mastery of the following skills:

• Understand scientific literature: the ability to critically read and evaluate scientific literature; ability to distill media information

• Oral communication skills: use effective oral communication in presenting and interpreting scientific information

• Written communication skills: use effective written communication in presenting and interpreting scientific information

• Physiology laboratory techniques: hands-on experience in selected laboratory techniques

• Quantitative evaluation of data: data collection, analysis and interpretation

Assessment Plan

• Faculty will mark the outcomes met in their courses on an easy to use grid and give feedback on the student learning outcomes.

• The newly vetted Program Student Learning Outcomes will be added to the Exit Survey given to Physiology graduating seniors. Data will be collected from students anonymously as they come in to get their senior picture for the graduation ceremony.

• At the end of each spring semester, the department will organize a Focus Group that will consist of graduating seniors to collect qualitative data related to the program.

• Embedded exam questions will be used for assessment of student knowledge in the different aspects of Physiology. Integration from cell to system was a major topic covered in our core courses (PSIO 201, PSIO 202, PSIO 303A, PSIO 303B) according to the faculty survey. Integration will be assessed using embedded exam questions in the core courses.

• The information from the Exit Survey, the Focus Group and the data collected from embedded questions will be discussed in the departmental Curriculum Committee and
presented annually at a faculty meeting.

- Feedback from the faculty will be discussed in the Curriculum Committee and changes to the program will be made as needed.

Hal Tharp

Associate Department Head, Electrical & Computer Engineering

tharp@email.arizona.edu

Hal Tharp received his B.S., M.S., and Ph.D. degrees in Electrical Engineering. Since 1987, he has been with the Electrical and Computer Engineering (ECE) Department at the University of Arizona where he is currently the Associate Department Head. His main research interests are in the general area of control theory, with his primary focus being on applying effective control strategies to real-world systems. He has worked on controlling large flexible space structures, optical disk drives, space-based calorimeters, instructional control systems, temperatures inside living tissue, gyroscopically stabilized platforms, metrology, and micro-electromechanical systems (MEMS). His teaching activity has been extensive and includes courses in control, circuits, signals and systems, introductory engineering, power electronics, embedded systems, and senior design. His teaching continues to incorporate technology when appropriate. He has taught video classes for distance-based students, developed a web-based electric circuits course for non-ECE students, prepared short-course material for Professional Engineering training, incorporated video-material via the web to enhance his automatic controls lab component, integrates screen-capture material to supplement his conventional courses, and participated in an active learning project involving the three Arizona universities. Dr. Tharp has also been very active in the assessment activities in the ECE Department.

What is the challenge that my project addresses?

The challenge in this project was to integrate an assessment process into the newly established B.S. Electrical and Computer Engineering degree program. Additionally, we wanted to be able to effectively interpret the collected assessment data and utilize the assessment process to continuously improve the ECE program.

How did I pursue the challenge?

In addition to the help received through the FLC, I worked with the newly appointed Department Head to help simplify the existing assessment process in the ECE department. The simplified assessment process amounted to requesting student data from each ECE faculty member teaching a core course in the ECE program. The Student Outcomes or learning outcomes for the undergraduate program in Electrical and Computer Engineering are aligned with the Student Outcomes established by the ABET accrediting agency. Each core course faculty member was asked to select one course activity for each student outcome that was assigned to their course.
The faculty member then provided the student scores for that course activity, the maximum possible score for that activity, and the score that meets the criteria. Each of the eleven Student Outcomes was assigned to more than one core course. Thus, the assessment process incorporated a level of redundancy in the coverage of the Student Outcomes. The data were then processed relative to the scores meeting the criteria, with the percent of students meeting the criteria being computed. A table, documenting these percentages, was constructed to provide a visual record of how effective the ECE program was meeting their assessment goals. Program changes or improvements can now be taken based on the tabulated data.

What have I learned?

The assessment process should be as simple and straightforward as possible. It should not represent a significant increase in the workload for any of the faculty. Ideally, the assessment data can be collected from pre-existing graded material. For our particular assessment of Student Outcomes, I created a pre-formatted spreadsheet for each faculty member teaching a core course. The faculty member only needed to enter the student data for the few items being assessed in their course.

My advice for others pursuing similar assessment challenges is:

Don’t make the assessment process too complex or tedious. Only require a few assessment measurements for each assessed course. Standardize the process, so that each faculty member is being asked to do the same level of work.

Source URL: http://assessment.arizona.edu/fic-2010-2012
Appendix D

UA Assessment Showcase 2013 Agenda
UA Assessment Showcase 2013

What: The Annual UA Assessment Showcase

When: Wednesday, April 10, 2013 from 10:00 a.m. to 12:00 p.m.

Where: Hall of Champions, Eddie Lynch Pavilion

AGENDA

This year’s showcase will feature brief presentations by campus assessment leaders and table discussions facilitated by UA faculty members who have been meeting together to learn about best practices in student learning outcomes assessment. The event is sponsored by the Office of the Provost, the Assessment Coordinating Council, and the Office of Instruction and Assessment. Beverages and mid-morning goodies will be provided.

All faculty, staff, and administrators involved with program level assessment of student learning. RSVP is requested at: http://www.surveymonkey.com/s/9DXTVGB

For more information contact Becky Perez at rperz@email.arizona.edu.

Discussion topics:

Building Faculty Interest for Assessment

John has been asked by his department head to lead the learning outcomes assessment work in the Department of Sociology. Little has been done with outcomes assessment in the department. After attending some workshops offered by the university, he has a general understanding of what it is all about. Furthermore, John believes that evidence of student learning collected through assessment can help his department improve. The challenge is that many faculty and instructors in his department do not share his belief in the value of assessment, rather believing that learning outcomes assessment is just one more thing that the administration is requiring them to do. John believes that in order for the sociology programs to benefit from assessment, buy-in from everyone who teaches and participates in decision-making in the sociology curriculum needs to be involved.

Discussion Starters: How might John begin building faculty buy-in for assessment? What are some possible first steps and possible follow-up steps?

Assessment Data: How much and what kind?
Sue and Phil volunteered to build a draft plan for learning outcomes assessment to be considered by the Psychology Department faculty. They have attended assessment workshops and reviewed resources showing steps that can guide the development of a department’s assessment process. Sue and Phil have even received consensus at a faculty meeting on a few key learning outcomes that the faculty value for students in the psychology programs and possible points in the curriculum where the outcomes might be assessed. However, they are stumped on HOW to conduct the assessments.

**Discussion Starters:** How do Sue and Phil determine appropriate assessment activities for the outcomes? How much data need to be generated in order to be useful for program improvement?

Rubrics to Assess Graduate Outcomes

Mary uses rubrics to assess student presentations in the senior capstone seminar, a course she teaches each year in the undergraduate microbiology program. She is a believer in rubrics as useful tools to assess learning in a single course and even across courses in a program. At the program level, Mary believes that rubrics could generate evidence of student learning as tied to the program’s stated learning outcomes. The evidence could be used to inform departmental discussions about possible improvements in curriculum and instruction. After recent departmental meetings about graduate program learning outcomes, Mary decides to pursue the challenge of building a rubric that could be used to measure two key learning outcomes that the graduate faculty has agreed upon. Her intention is to take the rubric to the next graduate faculty meeting asking for revisions and then possible implementation in the graduate outcomes assessment process.

**Discussion Starters:** How does Mary start the task of building the rubric? What does she need to consider? What objections to using rubrics to assess outcomes in the graduate program is Mary likely to encounter among her colleagues? How might she think about responding to these concerns?

Assessment Alignment: Outcomes -> Findings -> Changes

To prepare for this year’s Academic Program Review, Luis has been asked to coordinate learning outcomes assessment work in his home department of political science. Last year, the faculty members agreed on both five learning outcomes and the four courses in the undergraduate program in which data on student performance would be collected. Over the course of the past two semesters, six different faculty members have collected those data. In preparation for an upcoming faculty meeting, Luis reviewed the data submitted by one instructor, in whose course the outcome to be assessed was, “demonstrate knowledge of the institutions and processes of the American political system.” However, what the instructor submitted was survey data from the students about how much they enjoyed the class and learned from it. He also recommended that the department make no changes to the course since students were satisfied. Luis was disappointed that the survey data did not align with the learning outcome. He also was concerned about a faculty discussion about changes that were not linked to learning
outcomes.

Discussion Starters: How should Luis plan to discuss this assessment data at the upcoming faculty meeting? How can he lead the other faculty members to “discover” the misalignment between learning outcomes and findings? How can he guide a discussion of more completely aligning the program’s outcomes, findings, and changes?

Writing Good Student Learning Outcomes

Helena has volunteered to coordinate the development of student learning outcomes for her art history graduate program. In preparation for this work, she has done some reading on how to write good outcomes, and she has consulted with assessment experts on her campus. At a faculty meeting about assessment, Helena asks for volunteers to help her write learning outcomes for the program. Several colleagues tell her that the program already has learning outcomes, and they are prominent on the program’s website. The site states:

The Art History program offers a complete range of courses in Western art, from ancient to modern, as well as Pre-Columbian and African. We provide our students in-depth knowledge in a specialized field within the discipline of art history and serve as a foundation for those students who plan on pursuing academic, curatorial, and research positions in a professional environment.

Discussion Starters: What feedback should Helena provide to her colleagues? What reasons could she provide for this not being a good student-learning outcome? How can she guide her colleagues in writing better learning outcomes?

Managing the Assessment Process within a Department

Marla has accepted the role of helping her home department of philosophy implement a new assessment plan that was developed with help from the OIA after their recent Academic Program Review. After two productive faculty meetings about the new assessment plan, the faculty has developed student learning outcomes and has started looking at points in the curriculum where the outcomes could be assessed. Marla is feeling pretty good about how she and her colleagues have accomplished these necessary first steps. However, the more planning that is accomplished, the more questions Marla begins to consider regarding how this work will be integrated within the department.

Discussion Starters: What are some best practices that Marla can implement to collect and archive assessment data? Who should be responsible for collecting and storing assessment data? For how long should data be stored? What if the tools used to collect assessment data change? How can all faculty members be involved in the assessment process?

Source URL: http://assessment.arizona.edu/showcase_2013
Appendix E

Rubric for APR Assessment Plans
Rubric for Assessing APR Assessment Plans

Program:
Each program’s Academic Program Review Self-Study was reviewed for each of the criteria below and scored between 1 (Inadequate) and 4 (Excellent). See back page for more detailed explanation of scoring.

<table>
<thead>
<tr>
<th>Score (1-4)</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Expected Learning Outcomes:</strong> Expected student learning outcomes identify the intended knowledge, understandings, or abilities that students will acquire through the academic program. Outcomes are included which explicitly describe what students know, understand, or are able to do.</td>
</tr>
<tr>
<td></td>
<td><strong>Assessment Activities:</strong> Activities for assessing outcomes are listed and described for each outcome. The activities appropriately measure the outcomes. Direct and indirect measures of outcomes are collected through the activities. The ways in which faculty and staff are involved in the development, implementation, and use of student learning outcomes assessment are described.</td>
</tr>
<tr>
<td></td>
<td><strong>Assessment Findings:</strong> The findings describe what was learned from the assessment activities. Findings from assessment activities are summarized and clearly reported in ways that align with expected outcomes. If the findings are not yet available, rubrics or other tools to be used for data collection are linked.</td>
</tr>
<tr>
<td></td>
<td><strong>Change in Response to Findings:</strong> The findings are used to drive change and improvement in the program. Assessment findings are appropriately used as information that drives improvement in learning, instruction, curriculum, or strategic planning. Specific changes are described that clearly link to the findings.</td>
</tr>
<tr>
<td></td>
<td><strong>Reporting on the Website:</strong> The program’s assessment website is current and updated with all of the information reported in the APR self-study. The information includes outcomes, assessment activities, findings, and discussion of changes made in response to findings.</td>
</tr>
</tbody>
</table>

Comments:

Scoring: 4 = Excellent, 3 = Achieving, 2 = Needs Development, 1 = Inadequate
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Score</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Expected Learning Outcomes:</strong> Expected student learning outcomes identify the intended knowledge, understandings, or abilities that students will acquire through the academic program.</td>
<td>4</td>
<td>Outcomes are included which explicitly describe what students know, understand, or are able to do.</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Outcomes are included, but do not explicitly describe what students know, understand, or are able to do.</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Outcomes are included that describe course level evaluation. No program level outcomes are included that explicitly describe what students know, understand, or are able to do.</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Outcomes are absent. Rather, the expected learning outcomes section describes program goals and objectives rather than student learning outcomes.</td>
</tr>
<tr>
<td><strong>Assessment Activities:</strong> Activities for assessing outcomes are listed and described. The activities appropriately measure the outcomes, and include direct and indirect measures. Faculty and staff involvement in the development, implementation, and use of student learning outcomes is described.</td>
<td>4</td>
<td>Activities are listed and described for each outcome. The activities are appropriate measures of the outcomes. Direct and indirect measures of outcomes are collected through the activities. Involvement in the assessment process by faculty and staff is described.</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Activities are listed and described for each outcome. The activities are appropriate measures of the outcomes. Activities do not include direct and indirect measures OR involvement in the assessment process by faculty and staff is not described.</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Activities are listed and described for the outcomes. Some activities may not be appropriate measures of the outcomes. Activities do not include direct and indirect measures OR involvement in the assessment process by faculty and staff is not described.</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>A discussion of assessment activities is absent or vague OR assessment activities are not linked to Learning Outcomes.</td>
</tr>
<tr>
<td><strong>Assessment Findings:</strong> The findings describe what was learned from the assessment activities. Findings from ongoing assessment activities are summarized and clearly reported in ways that align with expected outcomes.</td>
<td>4</td>
<td>Findings from assessment activities are summarized and clearly reported in ways that align with expected outcomes.</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Findings from assessment activities are linked to learning outcomes. However, findings are not reported in a clear and concise way. If findings are not yet available, rubrics or other tools to be used for data collection are provided.</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Findings from assessment activities are linked to learning outcomes. However, findings are only from indirect measures.</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>No findings from assessment activities are reported OR the findings are not linked to Learning Outcomes.</td>
</tr>
<tr>
<td><strong>Changes in Response to Findings:</strong> The findings are used to drive change and improvement in the program. Assessment findings are appropriately used as information that drives improvement in learning, instruction, curriculum or strategic planning. Specific changes are described that clearly link to the findings.</td>
<td>4</td>
<td>Changes are described that link back to findings from assessment of student outcomes and contribute to program improvement.</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Changes are noted but are not linked to assessment findings. There is insufficient evidence that changes were related to program improvement. If insufficient data have been collected to justify changes, the report should note this.</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Changes are included but there is no evidence that changes are related to improving student outcomes</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Changes are not described. No evidence is provided that indicates a connection between assessment findings and program improvement.</td>
</tr>
<tr>
<td><strong>Reporting on the Website:</strong> The program’s assessment website is current and updated with all of the information reported in the Post-APR improvement plan. The information includes outcomes, assessment activities, findings, and discussion of changes made in response to findings.</td>
<td>4</td>
<td>A summary of the program’s student outcomes assessment appears on the website. The information includes outcomes, assessment activities, findings, and discussion of changes made in response to findings.</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>A summary of the program’s student outcomes assessment appears on the website. However, the requested information is not complete, with at least one of the items not reported.</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>A summary of the program’s student outcomes assessment appears on the website. However, the information is either vague or inappropriately described, even if all of the items are included.</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Either no information is provided on the website or the information has not been updated.</td>
</tr>
</tbody>
</table>