

Assessment *in* Practice

The PLAIR Pilot Project: Perspectives from BSc in Public Health and Nutrition, Zayed University

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While most higher educational institutes strive to improve student learning through assessment, few have been able to demonstrate improvements in student learning (Banta, Jones, & Black, 2009). The reasons for that are thought to be multidimensional, and suggestions include a lack in pre-assessment, lack of coordination in intervention efforts, single cohort assessment, and lack of alignment in assessments and evaluations to name a few (Banta, Jones, & Black, 2009).

In December 2014, NILOA published Occasional Paper No. 23, *A Simple Model for Learning Improvement: Weigh Pig, Feed Pig, Weigh Pig* (Fulcher, Good, Coleman, & Smith). That paper presented an accurate portrayal of the current state of assessment, concluding that programs rarely complete all three phases of the assessment process: assess- implement changes- re-assess (see Figure 1). This often results in an inability to accurately determine whether the assessment process has led to improvements in student learning. Fulcher et al. explained that what regularly happens is that programs 1) assess and re-assess, 2) assess and implement changes, or 3) implement changes and re-assess, but seldom are all three phases of the assessment process completed in full (2014). As a solution, the Program Learning Assessment- Intervention- Reassessment (PLAIR) was introduced as a framework for a complete assessment process. The PLAIR process is a strategy to facilitate and evidence improvement in student learning. Our experiences in piloting PLAIR and the *PLAIR Consultation Tool (PCT)* within Zayed University's (ZU) BSc in Public Health and Nutrition (PHN) are the focus of this article.

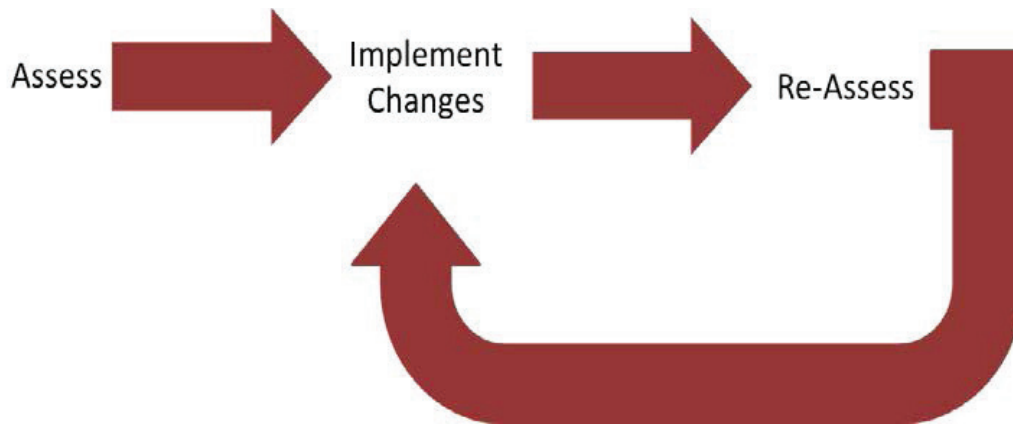


Figure 1: PLAIR Assessment Process

ZU'S EXISTING PLO ASSESSMENT PROCESS AND IMPETUS FOR CHANGE

For a number of years, ZU has had a well-established program learning assessment process in place. Following a basic Assess-Analyze-Act model, the process was such that each academic program assessed two program level learning outcomes annually to keep the workload manageable and to allow time for programs to implement meaningful changes. A single cycle was nearly two years in duration and was framed by a standardized assessment plan and an assessment report. Over the course of approximately 3-4 years all of a program's learning outcomes (PLOs) were assessed and, where appropriate, meaningful actions implemented. In 2015, because of our commitment to continuous improvement we conducted a major evaluation of our assessment program where we scrutinized in detail all of the reported actions over the past few years. What we found was that, similar to many other assessment programs, we rarely demonstrated increased student learning, or even implemented meaningful changes as often as we would have liked (Schoepp & Benson, 2016). Because of this, we knew we wanted to make improvements to our processes and fortunately the PLAIR paper (Fulcher, et al., 2014) had just been published, so we made the decision to use part of our upcoming assessment retreat to share the results of our program evaluation and to seek participants for a new initiative, our PLAIR pilot program. The appeal for faculty members was that they would have an opportunity to pause the usual assessment cycle and focus on a single learning outcome, one which they felt was the most consequential, for multiple years. The BSc in PHN was one of two academic programs that chose to work with the Office of Educational Effectiveness (OEE) on PLAIR.

Fulcher et al. (2014) describe PLAIR as a two-part process. Part one is a readiness stage in which key participants in the process, e.g., core faculty and program leadership, in consultation with assessment experts, meet to discuss the PLAIR process, determine the assessment methodology and secure leadership support. In our case study, key participants comprised the program chair, a core group of PHN faculty and 2 representatives from the OEE.

Part two of the process involves identifying the target learning outcome, reviewing existing assessment data, conducting a thorough needs assessment, formulating interventions and developing a timeline for assessment-intervention-re-assessment implementation. To help operationalize PLAIR, Zayed University's

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OEE developed a **PLAIR Consultation Tool (PCT)**, a document that expands on the steps outlined in the original PLAIR paper and serves as a roadmap to guide collaboration with program teams through the entire PLAIR process (see Appendix). The PCT lays out tasks and questions that the team need to answer as they navigate through PLAIR. Specific foci for faculty are to:

- Analyze Learning Outcome and Available Data;
- Analyze Current Efforts;
- Determine Assessment Point/s and Method/s;
- Conduct Assessments;
- Analyze Current Context;
- Analyze Environmental/ Other Factors;
- Determine Intervention;
- Implement Timeline.

The PLAIR process may take up to 3 years to complete, so it is essential that there is a clear awareness, on the part of the PLAIR team and senior leadership, of the resource commitment, and that careful documentation of the process exists to provide accountability, continuity in the event of participant turnover, and, of course, evidence of learning improvement. It is also essential that those tasked with facilitating the implementation are adept in facilitating change. Engaging faculty is vital, as is an openness and willingness on the part of faculty to discuss and contribute, and make changes in assignments, assessments and pedagogy, if needed.

CASE STUDY: BSc IN PUBLIC HEALTH AND NUTRITION

After an initial planning meeting between the program chair and OEE consultants, the PHN PLAIR team held their first meeting, and used the PCT as a guiding instrument to facilitate the PLAIR process. We devoted most of our first meeting to crafting a shared understanding of the Critical Thinking and Problem Solving Skills (CTPSS) PLO which reflected what CTPSS ‘meant’ in our program. Once we were happy with this PLO, we began analyzing existing assessment data. It became evident that there were no data available in regards to students’ CTPSS when they entered the program, nor were there any data available at program exit level since assessments had earlier been conducted across numerous departments simultaneously and not disaggregated to just PHN (see Figure 2).

We began collecting baseline data to be able to measure if the interventions would be effective in improving student learning. Faculty came together, agreed on courses to target (one in the first semester of the program, and one in the final semester) and selected an already existing assessment in each of these courses to use for the baseline assessment. With the help of OEE, the instructions and rubrics for CTPSS in these assessments were improved, and in spring 2015 the tools were tested (see Figure 2). After further modifications, the baseline assessments were carried out in fall 2016. It was confirmed that students’ CTPSS are weak when they enter the program, and while students are improving throughout the program, they do not meet expected levels when exiting the program. Another finding was that some students are struggling with their English, as this is not their first language, and this might be another important

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factor to consider as CTPSS are closely related to language proficiency (Rashid & Hashim, 2008).

Our next step is to plan and implement changes; the intervention phase of PLAIR. These changes are currently being discussed and include better instructions for how to complete assignments, changes in existing assignments and rubrics, workshops on how to teach critical thinking in the classroom, sharing best practices within the classroom, asking for student input, language support and more (see Figure 2). Interventions will be implemented over the next two semesters, after which students' learning will be re-assessed according to the PLAIR process and the framework within the PCT. These interventions depend on faculty opening up their classroom to educational experts who can provide support on how to engage students in meaningful activities and assess their performance. This requires continued courage and time from the team and several faculty have already expressed interest in these interventions.

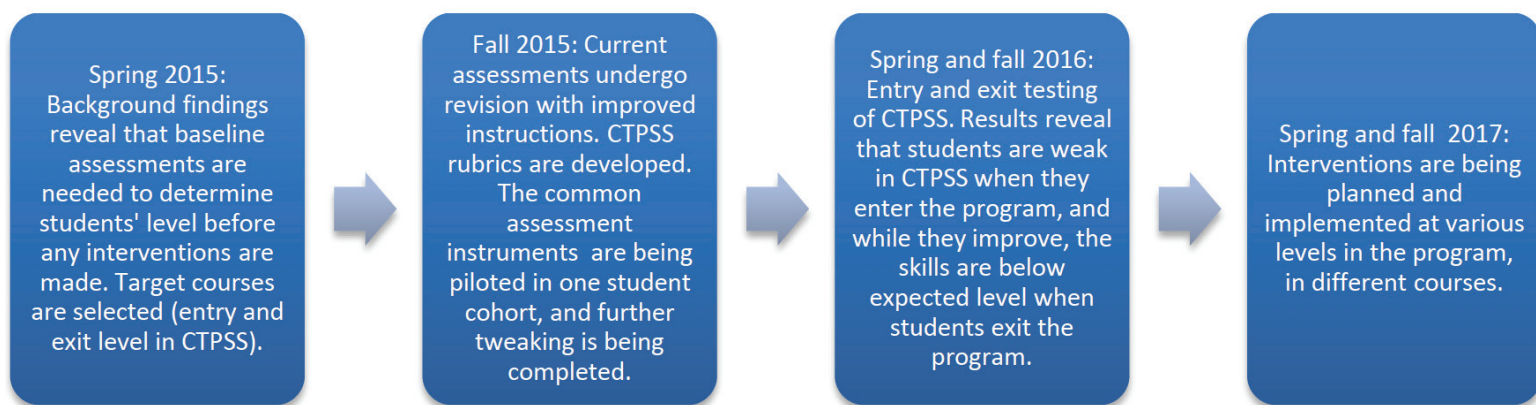


Figure 2: The PLAIR process in the BSc in PHN (including the readiness and intervention stages)

CONCLUSIONS AND LESSONS LEARNED

In our experience so far, implementing PLAIR has been a challenging process at times, but a rewarding one overall. It has built collegiality, and it has created engagement beyond our own courses, and faculty have gained a greater understanding of how to assess and evaluate results. Table 1 summarizes some of the lessons learned and factors to consider before engaging in PLAIR. We are now excited to implement change that hopefully will lead to improvement in student learning over time.

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| Factors | Comment |
|---|---|
| Long term thinking around assessments and improvements | PLAIR is a 3-year process, with ongoing work throughout the process. The investment may seem big, but if it, unlike many other assessment strategies (Banta, et al., 2009) leads to improved student learning, it is serving its purpose. |
| Leadership support | Since PLAIR is a long term process, it is necessary to secure needed resources to complete the process This means approval from senior management, faculty time within programs, and support from assessment experts. |
| Speaking the same language | There has to be an agreement between faculty across the program in terms of defining the targeted learning outcome to ensure that we are aiming to measure the same parameter. |
| Faculty “buy in” and engagement | PLAIR is focused on improving learning outcomes within a program, not only within a course, and hence faculty across the program need to be engaged. This is easier to achieve if faculty can see the added value of the process. |
| Team work | The process is an extended assessment process that requires teamwork, across sections and across the program. |
| Openness to change | Throughout the stages of PLAIR, faculty will be asked to show “their work” in terms of assessments, rubrics and more, and they will also need to be open to feedback on how to (if necessary) change and improve assessment strategies and classroom activities to better support student learning. This requires courage and faculty need to feel supported. |
| Incentives | Incentives might not be necessary in PLAIR, but it might help in getting everyone onboard in the process. Examples may include exemption from the regular assessment cycle, course release, release from other duties, and faculty development funds. |
| Shared evaluation of student performance | Faculty felt more engaged and it was more manageable when faculty shared the responsibility for evaluating student performance, regardless if the faculty member was teaching the course or not. With sufficient instructions, any faculty can assist. |
| Assessment support | The process is doable with the support from assessment experts who can help guide the process, so these need to be identified early on in the process. The PCT tool proved to be very useful to operationalize the process. |
| Collect baseline data | Changes/improvements cannot be measured unless you know students’ current performance. Before anything else gets started, assess the current performance of students. |

Table 1. Factors to consider before engaging in PLAIR

REFERENCES

Banta, T. W., Jones, E. A., & Black, K. E. (2009). *Designing effective assessment: Principles and profiles of good practice*. San Francisco, CA: Jossey-Bass.

Fulcher, K. H., Good, M. R., Coleman, C. M., & Smith, K. L. (2014). *A simple model for learning improvement: Weigh pig, feed pig, weigh pig*. National Institute for Learning Outcomes Assessment. Retrieved from http://learningoutcomesassessment.org/documents/Occasional_Paper_23.pdf

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If you have any questions about this work, please feel free to contact the authors. Please note that since authoring this piece, Scott Benson has now become a Senior Assessment Specialist at Washington State University's Office of Assessment of Teaching and Learning (ATL). Scott's email address at WSU is scott.benson@wsu.edu.



Appendix

| Analyze Learning Outcome and Available Data | | | | | |
|--|--|----------------------------|---|--|--------|
| Program Assessment Data Qualitative data from faculty | | | | | |
| Task | | | Questions | | |
| Identify the target outcome Define target outcome Define desired performance | | | Which learning outcome do you wish to improve? What is the rationale for focusing on this outcome? Provide assessment data / rationale What does this learning outcome mean to you? What does successful attainment of this outcome "look like" in a student? What is your target? | | |
| Analyze Current Efforts | | | | | |
| Investigate current efforts Hypothesize | | | What is your program doing to help students achieve this outcome? Why do you think that students find it hard to meet this outcome? Why do you think the current approach is not as effective as it could be? | | |
| Determine Assessment Point/s and Method/s | | | | | |
| Curriculum map Syllabi Assessments | | | | | |
| -Analyze Curriculum map and identify opportunities to address the target outcome -Analyze Course Syllabi and identify opportunities to address the target outcome -Analyze assessments, instructions, rubrics, samples of student work -Consensus | | | Where are the ideal location/s to assess the outcome? Are there currently assessments that are appropriate for assessing the outcome? If not, can current ones be modified, or new ones be created? Who will make the changes? Are existing rubrics and instructions sufficient? Does student work seem representative of the learning outcome being assessed? Are the assessment point/s and method/s agreed? | | |
| Conduct Assessments | | | | | |
| Determine roles, responsibilities, and establish timeline Analyze the results Disseminate results | | | Who will be engaged in what? When will the assessments be conducted? How will the assessments be marked? How will the results be analyzed? Have students performed to the desired level? How will results be communicated to the faculty? | | |
| Analyze Current Context | | | | | |
| Analyze Curriculum map outcome alignment Analyze Course Syllabi in relation to the learning outcome Assignments and assessments | | | Are the outcomes truly practiced where indicated? How do we know? Do the assignments provide students with appropriate opportunities to practice the learning outcome? Do students have sufficient opportunities to practice the outcome? How do we know? Are there sufficient assessment opportunities for students to demonstrate the outcome and receive formative feedback? | | |
| Analyze Environmental/Other factors | | | | | |
| Teaching Methods Resources Communication | | | Do teaching methods optimally foster the target outcome? Do faculty have the requisite knowledge and skills to address the outcome, i.e. is there a need for professional development or support in this outcome area? Can students be expected to do more? Is there a breakdown in communication or coordination across sections? | | |
| Determine Interventions | | | | | |
| Description see Closing the Loop actions p.7 | | Rationale | | Responsibility Who will be responsible for initiating and managing the intervention? | |
| Intervention 1 2 3 | | | | | |
| PLAIR Implementation Timeline | | | | | |
| Action | | Academic Year 1 20 - 20 | | Academic Year 2 20 - 20 | |
| | | Fall | Spring | Fall | Spring |
| | | Academic Year 3 20 - 20 | | Academic Year 3 20 - 20 | |
| | | Fall | Spring | Fall | Spring |

| | | | | | | |
|---|--|--|--|--|----------------|--|
| Assessments/s | | | | | | |
| Intervention/s | | | | | | |
| Assessments/s | | | | | | |
| “Closing the Loop”: Possible Actions Taken After Conducting Learning Assessment | | | | | | |
| Changes | | | | | Actions | |
| Program | | | | | | |
| Curriculum | | | | | | |
| Academic Processes | | | | | | |
| Assessment Plan/Process | | | | | | |
| <p>University of Central Florida’s Assessment Handbook http://oeas.ucf.edu/doc/acad_assess_handbook.pdf University of Texas-Austin- Making Changes Based on Evidence http://www.utexas.edu/provost/iae/resources/pdfs/Making%20Changes%20Based%20on%20Evidence.pdf</p> | | | | | | |

Full version of PCT available here:

http://www.zu.ac.ae/main/files/contents/assessment_resource/support_docs/PCT_23.3.2015.pdf

Please Cite As:

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About NILOA

- The National Institute for Learning Outcomes Assessment (NILOA) was established in December 2008, and is co-located at the University of Illinois and Indiana University.
- The NILOA website contains free assessment resources and can be found at <http://www.learningoutcomesassessment.org>.
- The NILOA research team has scanned institutional websites, surveyed chief academic officers, and commissioned a series of occasional papers.

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