

Drexel University

2018



ACADEMIC
ASSESSMENT
CONFERENCE

*Leading
A Collaborative
Revolution
For Change*

2018 Conference
Proceedings



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FORWARD

Drexel University is always searching for new initiatives, novel outreaches and sustainable projects that serve to enhance the professional growth and development opportunities of our conference participants. Once such idea implemented last year was the development of a virtual conference book, or proceedings of the conference, comprised of chapters submitted by session presenters that are refereed by a conference publication panel. This year's edition is the 2nd in the series.

This second Virtual Proceedings of the Conference will be uploaded to the Drexel Assessment Conference website for worldwide access as was done with the inaugural issue. Each chapter submission is an expansion of a participant's conference presentation, since every effective presentation must represent a solid body of work, which cannot be fully articulated and discussed in a standard presentation delivery format. Drexel University views this as an opportunity for presenters to enhance their CV, stretch themselves professionally, and augment their professional network.

The procedures and guidelines required of participants included:

General Guidelines:

- Acceptance of the session proposal is required before any chapter submission material is reviewed
- The proposal review process is concluded by late September
- The deadline for final submission of a proposed chapter is traditionally, September 30 of each year
- The list of chapter authors, their affiliation, and chapter title is provided within the document
- There will be an 8-chapter limit placed on the publication

Requirements for Submission:

- Use of APA referencing styles
- Limitation of chapters to no more than 5,000 words including references
- Tables, charts, graphs or illustrations must be camera-ready to guarantee publication
- Writing must be clear and informative and all jargon avoided
- The work must be original thinking by the author presented for the first time for publication

INTRODUCTION

This online conference book is the 2nd compilation of chapters submitted by conference presenters attending the 5th Annual Assessment Conference. The Assessment Conference has become a highlight of assessment and evaluation throughout the nation and abroad. Presenters in this process underwent a rigorous vetting for this publication, and as the conference continues to expand, we look forward to an increasing number of presenter chapters in the future. Following are short synopses of the eight chapters selected for inclusion in this significant work.

The chapter by Wilkins and Donat presents a model for evaluating current assessment performance in the context of institutional culture. With a focus on prioritizing where to invest institutional efforts they discuss strategies to uncover and overcome barriers to key elements of assessment performance. Finally, they offer several models for strategic planning that assessment professionals can use to lead advancements in learning outcomes assessment on their campus.

Carbonaro and Meehan's chapter describes an institution's curriculum revision process led by faculty and initiated by its then dean. This effort resulted in a competency-driven curriculum, which maps to an expansive set of program outcomes (competencies) and sub-competencies (measurable abilities) aligned to the needs of the profession and which address many main objectives of education framed in The Cardinal Principles of Secondary Education, established in 1918 that proposed a list of main objectives of education. The design of their chapter includes many visuals that enhance the text.

Di Girolamo and Hecht discuss test item design using the first five of the six Anderson and Krathwohl – Bloom's Taxonomy Revised reference as their structure. They provide their rationale for omitting the highest level of the revised taxonomy; namely, Creating:

Putting elements together to form a coherent or functional whole; reorganizing elements into a new pattern or structure through generating, planning, or producing. Creating requires users to put parts together in a new way or synthesize parts into something new and different creating a new form or product. This process is the most difficult mental function in the new taxonomy.

They also compare three variables that can affect students' test performance on proctored exams administered in class versus non-proctored offsite testing; namely, environmental differences, familiarity with a particular testing method, and cheating. This discussion includes a richness of research findings.

The Hostos Assessment Team chapter describes creation of a university level Assessment Fellows program with the goal of supporting the implementation of the Assessment Initiative (AI). The authors provide a rich description of the population involved in this initiative as well as the challenges they overcame.

Sister Janet Thiel's chapter examines the process of reflective practice applied to individual course assessment that yields continuous improvement at the course level while providing important data applicable to university-wide assessment. The author provides key questions that underlie the reflection: what the instructor intends to keep doing, change, or stop doing to enhance student learning in the course. She presents quantitative evidence of how stated outcomes align with levels of Bloom's taxonomy as well as a discussion of alignment with the institution's faith-based mission.

Willkomm and Pinnelli in this chapter use their experience as reviewers to provide the dos and don'ts to faculty who would like to engage in the role of external reviewer. The authors detail the functions for

preparation, site visit, and reporting and describe how the external reviewer brings knowledge, skills, and experience to evaluate program(s) and offer constructive feedback. The chapter includes six key considerations for anyone looking to take on an external evaluator role that provide a roadmap for the program evaluation process.

Edelman and Harring describe their institution's general education assessment plan that places the responsibility for designing assessment projects, collecting data, interpreting findings and drafting reports in the hands of the faculty who teach the courses that fulfill individual requirements. The authors report that placing responsibility for assessment with the instructors who teach the courses that has been the key to success in implementing the assessment plan.

The Miller chapter argues that assessment efforts within higher education today fail to account for the perceptions and experiences of a key constituency: the students assessed. The chapter presents a scholarly literacy review of ways to involve students in intentional, meaningful ways within the assessment process to provide a full feedback loop. The point is made that if students completed a program and cannot articulate what they learned or map learning outcomes to relevant courses, have we really fulfilled our mission of articulating an intentionally designed experience geared toward producing successful, satisfied alumni? The author then provides a detailed description of how this institution addressed this issue.

CONFERENCE SUMMARY

By all accounts the 5th annual conference, "Leading a Collaborative Revolution for Change" was a ringing success. We hosted 420+ attendees from 30 states and several foreign countries. We had 155 panelists and presenters and offered 56 concurrent sessions, 2 blocks of snapshot sessions and 2 very well received plenary speakers [Todd Zakrajsek and Jillian Kinzie]. We also offered 5 pre-conference half-day workshops attended by over 80+ registrants, and for the first time aligned with AALHE to offer a sold out Institute for people new to our profession. We also treated our guests to an ice cream social [replete with Mario the Drexel Dragon], a Betsy Ross House Courtyard reception, entertainment by a Jazz Ensemble, special guests President George Washington and Betsy herself, traditional "Philly" snacks [you all now know how to keep the icing on the butterscotch krimpet and not the cellophane], two breakfasts and a very well received plenary luncheon panel in Behrakis Grand Hall showcasing the Presidents of four major Philadelphia institutions, Colleen M. Hancyz, President of La Salle University, President Mark Reed of Saint Joseph's University, President Donald Generals of the Community College of Philadelphia, and moderated by Drexel's president, John A. Fry.

Like any great task, it takes so very many people working in concert with a team orientation to bring this project to a quality conclusion - and that is where our folks come into play. As I have previously indicated, I feel so blessed for this event to consistently be the recipient of my colleagues' talents, humor and generosity. I think you will agree with me that we are fortunate indeed to have such a dedicated cadre of volunteers, including two recent retirees!. Much gratitude must also be extended to those behind the scenes such as event services, facilities, maintenance, catering, instructional media services, IT, graphic design, web development, protocol, transportation and printing, and the countless faculty and staff pulling

together. Rod Gibson, who oversees Provost Communications, was kind enough to put together a brief video of conference highlights. You can access it at: [Watch the Video Recap of the Assessment Conference](#)

We hope that we produced a conference which was unique, restorative and beneficial to all who attended. There is little question that assessment/teaching and learning conferences such as Drexel University's Annual Conference on Assessment provide an effective platform for creative discourse and sharing. We trust this on-going effort will be perceived as evidence in support of that statement.

By Fredricka Reisman, Ph.D

Stephen L. DiPietro, Ph.D

ABOUT THE TEAM

Dr. Fredericka Reisman is founding Director of Drexel University's School of Education. She has served as an Assistant Provost for Assessment and Evaluation, and is a member of the University Advisory Committee [UAC] on the Evaluation of Teaching and Learning. Her research focuses on the diagnostic teaching of mathematics, especially at the elementary and middle school grades and most recently has designed and implemented the Creativity and Innovation program.

Dr. Stephen DiPietro serves as Vice Provost of University Assessment, Accreditation & Institutional Effectiveness at Drexel University in Philadelphia, PA. In this position, he has oversight of all university assessment activities, the annual conference, the program alignment and review program as well as all accreditation and compliance issues. Prior to assuming his duties at Drexel, Steve served as a Senior Manager of the College Board Middle States Regional Office for many years in the area of SAT/PSAT testing and administration. His most recent publication was "Predicting Grades from an English language assessment: The importance of Peeling the Onion" published in the Journal of Language Testing.

WHAT IF THERE WAS NO FAILURE, ONLY FEEDBACK? HOW VISIBLE LEARNING PROVIDES A PLATFORM FOR LIFELONG LEARNING

Suzanne Carbonaro, Philadelphia College of Pharmacy at the University of the Sciences

Caitlin Meehan, AEFIS

ABSTRACT

This chapter reveals an innovative approach to curricular, co-curricular and experiential education assessment design using an online assessment management system integrated within a modular program. This transparent, cloud-based system is the foundation of an assessment infrastructure, which provides visible, real-time, meaningful feedback to all stakeholders to inform student learning and instructional effectiveness. Receiving regular real-time feedback of learning within a modular course structure is essential for students, faculty and administrators as they strive for success and meet their goals. “The analysis of teaching through critical self-reflection promotes better teaching, which leads to increased student learning,” (Blumberg, 2014). Using a robust and nimble technology base, the assessment system design is couched in the research of educator John Hattie (2012) and his work on high leverage factors that affect student learning, with opportunities to practice and feedback being paramount to the process of student achievement and programmatic improvement.

What if there was no failure, only feedback?

How Visible Learning Provides a Platform for Lifelong Learning

The Cardinal Principles of Secondary Education, established in 1918, “proposed the following “main objectives of education”: (1) health, (2) command of fundamental processes (reading, writing, arithmetical computations, and the elements of oral and written expression), (3) worth home membership (“calls for the development of those qualities that make the individual a worthy member of a family, both contributing to and deriving benefit from that membership,” (Raubinger, Rowe, Piper, West, 108)), (4) vocation, (5) citizenship, (6) worthy use of leisure (“should give the student the skills to enrich his/her body, mind, spirit and personality in his/her leisure,” Raubinger, Rowe, Piper, West), and (7) ethical character (Ornstein, et. al, 2015, p. 225). So many of these elements are not part of the school day for typical high school students yet at the college-level they are expected to demonstrate a healthy practice of these high leverage competencies. As students enter college, they are afforded opportunities to join organizations that align with their interests while also supporting their career goals. The question is do students have the opportunity

to allow these co-curricular and curricular experiences intersect so that they bolster their mastery of the particular competencies or “main objectives of education” as the Cardinal Principles of Education? And for that matter, do students receive feedback from multiple stakeholders (peers, faculty, potential employers, etc.) which help them grow the essential skills they need to be well-rounded contributors to society through their jobs?

In an effort to address the evolving needs of employers and to enable students to be effective contributors to their communities, specifically in the healthcare, the Philadelphia College of Pharmacy (PCP), the first school of pharmacy in the United States, recently went through a curriculum revision process led by faculty and initiated by its then dean. The result is a competency-driven curriculum developed by the faculty, which maps to an expansive set of program outcomes (competencies) and sub-competencies (measurable abilities) aligned to the needs of the profession and which address many main objectives of education framed in The Cardinal Principles. The American Council for Pharmacy Education (ACPE), the accrediting body of colleges of pharmacy, provided guidance to PCP to assess the notion of “Do No Harm” for students in this new curricular program versus the traditional higher education semester of 14 to 15 week concurrent courses approach. The PCP competency-driven approach to pharmacy education includes a modular course structure with spiraling knowledge and skills taught within an integrated science and practice sequence. This innovative program design features a fluid structure of curricular, co-curricular and experiential education curriculum mapping, which provides evidence of student mastery of skills necessary for success in their profession.

The purpose of this chapter is to provide insight into the development of an electronic assessment system which provides transparency of student achievement of requisite knowledge and skills essential for pharmacy practice. This assessment infrastructure is a design that can be adapted for institutions and programs seeking to provide its students with clearly defined learning outcomes, benchmarks, multiple opportunities to grapple with the knowledge and skills aligned to these outcomes longitudinally and continuous, specific feedback on formative and summative assessments. This transparent and visible assessment design provide students with the information they need to build confidence, grit and successful outcomes of their preparation. If there was no failure, only feedback, students would have a safe space to learn and grow, preparing them to be practitioners of their own learning. This assessment design is the start of this transition of mere grades, to transferrable learning experiences aligned to high leverage practices essential for career and societal success. And although reducing failure through frequent feedback is a lofty goal, the ideal is that students don’t see their mistakes as failures but rather learning with feedback to help them reach success.

A New Curriculum Design Aimed at Preparing Tomorrow’s Healthcare Leaders in Pharmacy

The competency-driven curriculum at the Philadelphia College of Pharmacy takes into consideration these four educational outcomes: Foundational Knowledge, Essentials of Practice and Care, Approach to Practice and Care and Personal and Professional Development and aligns these domains to its twelve competencies, which students must demonstrate mastery by the completion of the program (ACPE 2016 Standards). These twelve competencies (Figure 1) are packed with a wide range of essential knowledge and skills for pharmacy practice and include measurable abilities, which drill down into more specific information that drive student success and instructional design and pedagogies.

1. Patient Safety	Demonstrate a commitment to and a valuing of patient safety by assuring accurate preparation, labeling, dispensing and distribution of prescriptions and medication orders
2. Basic Patient Assessment	Collect record and assess subjective and objective patient data to define health and medication-related problems. Patient information must be collected in a manner demonstrating knowledge of patient educational level, the unique cultural and socioeconomic situations of patients, and comply with requirements for patient privacy.
3. Foundational Knowledge	The graduate is able to develop, integrate, and apply knowledge from the foundational sciences (e.g. medication information, biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences) to evaluate the scientific literature, explain drug action, solve therapeutic problems, and advance population health and patient-centered care
4. Drug Related Problems	Correlate drug related variables and patient related variables to identify and assess drug related problems. Evaluate how the unique characteristics of patients and patient populations impact on manifestations of drug-related problems.
5. Pharmacy Calculations	Utilize pharmaceutical and pharmacokinetics mathematics to perform accurate medication calculations. Value the importance of total accuracy in performing and applying these calculations.
6. Behaviors	In all health-care activities, demonstrate knowledge of and sensitivity towards the unique characteristics of each patient. Comply with all federal, state, and local laws related to pharmacy practice. Demonstrate ethical and professional behavior in all practice activities.
7. General Communication	Demonstrate effective communication abilities in interactions with patients, their families and caregivers, and other healthcare providers. Communication should be consistent with education level, cultural issues, and be empathetic. Elicit feedback validating understanding of communication.
8. Patient Counseling	Provide effective health and medication information to patients and/or caregivers and confirm patient and/or care giver understanding of the information being provided .
9. Drug Information	Assess information needs of patients and health providers and apply knowledge of study design and literature analysis and retrieval to provide accurate, evidence-based drug information.
10. Health/Wellness	Know and apply principles of health and wellness in provision of individual and population-based health and wellness information. Integrate unique characteristics of individuals and populations in design of health and wellness information.
11. Insurance/Healthcare	Utilizing knowledge of a wide array of private and public health insurance options, assist patients and caregivers to obtain their medications and related para-pharmaceuticals in an affordable manner that meets their healthcare needs.
12. Innovation/Entrepreneurship	Engage in innovative activities by using creative thinking to envision better ways of accomplishing professional goals.

Figure 1: The Philadelphia College of Pharmacy Competencies (2017)

Hattie’s Visible Learning research (2009) focuses on viewing learning from the students’ perspective while teachers guide students to see themselves as their own teachers, using feedback to improve. Learning from failure through classroom discussion, peer to peer collaboration and individualized learning plans help students see their areas for improvement and result in increased achievement. “Errors should be seen as opportunities to learn but to admit error requires high levels of trust (between student and teacher, and between student and student)” (Hattie, 2013, p. 25). In his keynote address for Education Weekly in April 2018, Hattie stated as reported by Mammina, “that among the top factors that he’s found improve student achievement, most are related to teacher and school leader expertise—including having high expectations, welcoming mistakes as opportunities to learn, and maximizing feedback to teachers about their impact,” (Education Week Teacher, 2018).

The infrastructure for assessment of the pharmacy education competency-driven curriculum is anchored to the Visible Learning philosophy, designed to provide real-time, meaningful feedback to all stakeholders, informing student learning and program and instructional effectiveness (Hattie, 2012). Helping students move from surface learning to deeper learning is rooted in the feedback at various benchmarks within the professional curriculum leading toward mastery of the twelve pharmacy competencies aligned to best practices dictated by the profession. “The most powerful person in most classrooms who relates to enhanced achievement is the teacher – the more teachers are open and seek feedback about their impact (relating to how many students they affect, which aspects of the lessons are being learnt, struggled with, and so on, where to go next)” (Hattie, 2013, p.24) . Students receive feedback through both formative and summative assessments (Figure 2), aligned to competencies and measurable abilities, which provide the information they need to direct their own learning and hone their skills.

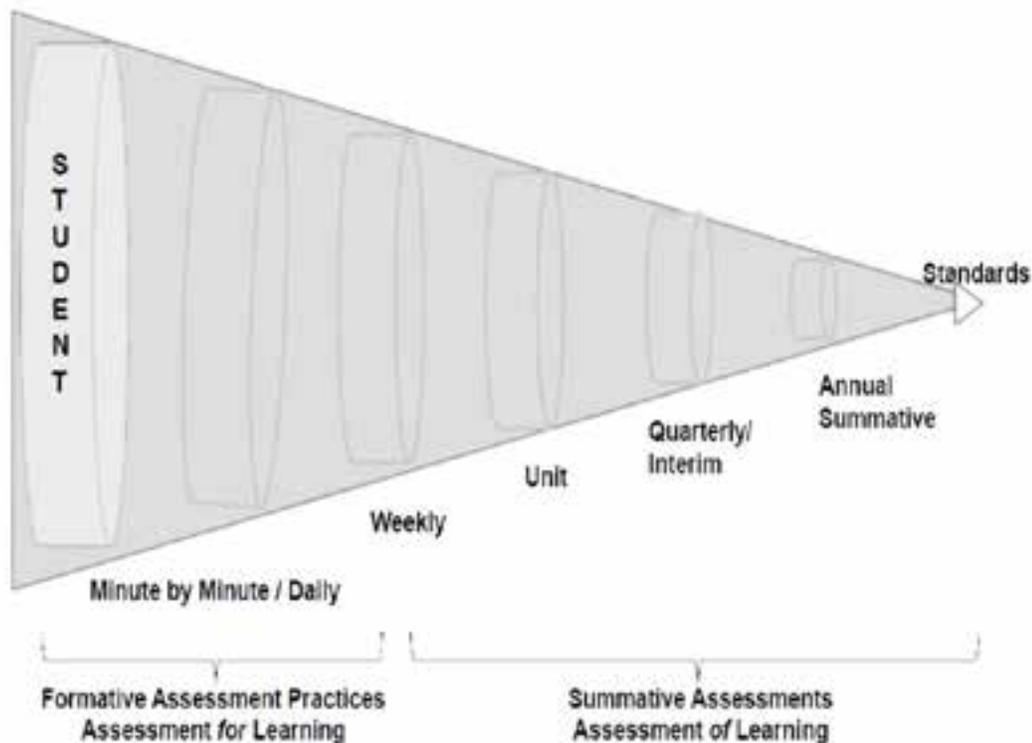


Figure 2: Best Practices for Student Feedback on Assessments- (PCP Feedback Philosophy based on Hattie (2009))

The Course Design Journey: Begin With the End in Mind

The backward design principles of course design provide insight into the intentional course development process by faculty within the competency driven curriculum. Faculty design student learning outcomes based on the competencies and measurable abilities aligned to their course.

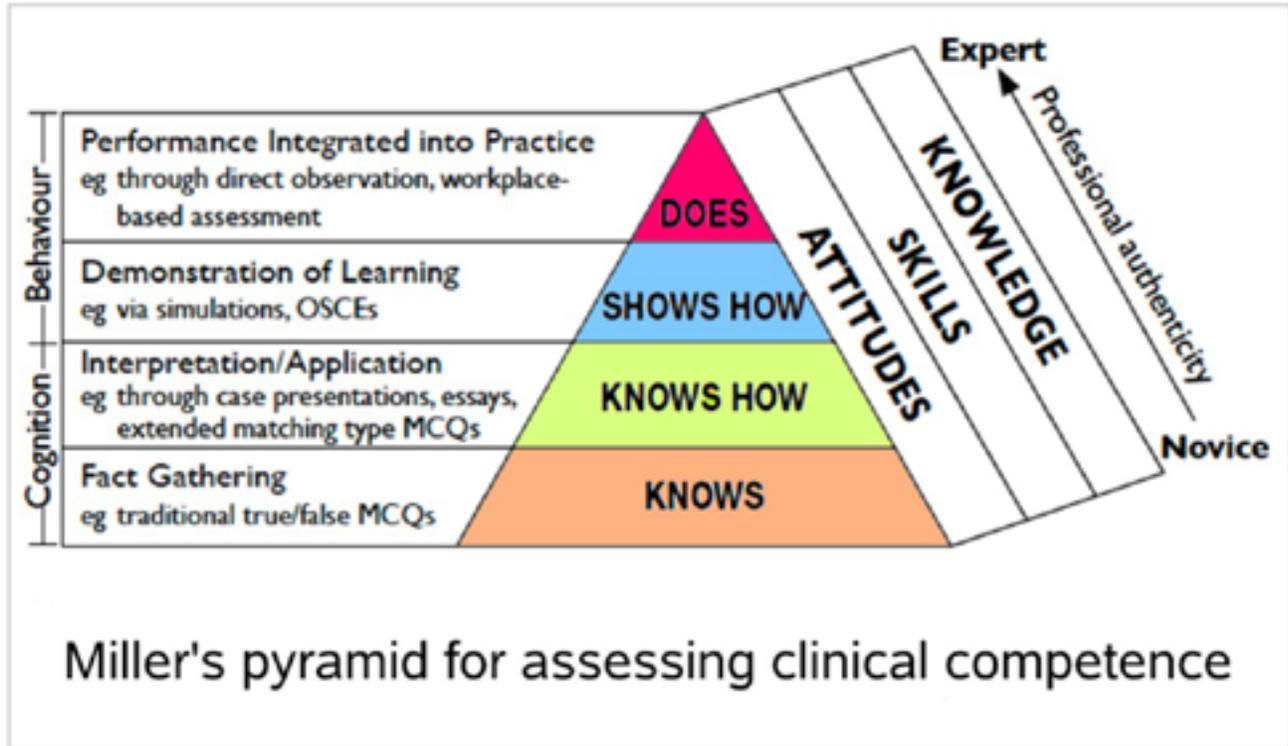


Figure 3: The Miller Model of Course Design

The Miller Pyramid is a learning model, which is particularly relevant to learning outcomes assessing clinical competence. This model was used in framing the student learning outcomes by the competency-driven module teams. "Although this taxonomic structure was designed for medicine, and is very well known through all Health professions, the approach has application well beyond the Health area. The model illustrates a progressive development from being able to demonstrate knowledge to performing in a workplace context," (University of South Australia, n.d.) As pharmacy students start their program designed to help them build professional expertise, they move from the lower levels of the pyramid to the upper levels. At the lower levels of the pyramid, students begin to understand the theory that supports clinical competence. Much of this learning comes from fact gathering from lectures, readings, and demonstrations. At the upper levels, students begin to seamlessly "integrate theory (intellectual skills), psychomotor skills and professional attitudes to perform as health professionals in different contexts" (University of South Australia, n.d.).

The content within the competency of, for example Competency 10 Health/Wellness, frame what is expected of students by the end of the course and at what level (Figure 3) for this competency. Whether students are expected to achieve a foundational level (Knows) or a higher level on Miller's pyramid (Shows

How), the assessments are set at the right expectation level for the students' year within the professional pharmacy curriculum. In addition, within the pharmacy education competency-driven curriculum, students are assessed on competencies during the course, outside of the course and in readiness assessments for the next course sequence. These periodic extrinsic assessments are triangulated with data from within the course and with readiness assessments to allow both students and faculty to know where students are at all times as they progress through the pharmacy program. This information is transparently shared with all stakeholders on the electronic, cloud-based assessment system, so faculty know what content comes after their course and what was previously included within the course design of modules before them.



Figure 4: Curriculum Mapping within AEFIS Assessment Management System (2018)

Students know ahead of time what is expected of them, at what level and by when, as the course syllabus integrates with the curricular map within the assessment system and pushes this information to the students (Figure 4). Faculty developed student learning outcomes with their curriculum and assessment team and connected the outcomes to measurable abilities within the competency driven framework. These measurable abilities link to the course syllabus on the assessment system, are mapped to ACPE (Figure 6) standards and other outcomes including interprofessional education competencies (IPEC), the pharmacist patient care process (PPCP) and the co-curricular program outcomes (Figure 5). “When curriculum maps are in place, teachers can trace the previous knowledge and skills of their students and build on them,” (Shilling, 2013, p. 26).

Course Schedule

Please use the following link to access the course schedule for RX310 [RX310 Course Schedule](#)

Credits

3 credits

Required/Elective

Required

Course Learning Outcomes (CLOs)

- 1 Students will identify and classify medication-related problems given a simulated patient scenario
[C196]
- 2 Students will collect information from electronic resources to answer drug information questions
[C197]
- 3 Students will interpret and use common medical terms and abbreviations
[C198]

10 Health/Wellness

Know and apply principles of health and wellness in provision of individual and population-based health and wellness in individuals and populations in design of health and wellness information.

Performance Indicators

- 10a Participate in activities that promote health and wellness and the use of preventive care measures
- 10b Promote to patients the importance of health, wellness, disease prevention (e.g., immunizations, tobacco cessation, diseases and medication therapies to optimize outcomes
- 10c Provide preventative health services (e.g., immunizations, tobacco cessation counseling)
- 10d Public Health: Promote to patients the importance of health, wellness, disease prevention, and management of the optimize outcomes

11 Insur/Healthcare

Utilizing knowledge of a wide array of private and public health insurance options, assist patients and care givers to obtain pharmaceuticals in an affordable manner that meets their healthcare needs.

Performance Indicators

- 11a Assist a patient or caregiver in problems related to prescription medication coverage, health insurance, or government

12 Innovation/Entrep

Engage in innovative activities by using creative thinking to envision better ways of accomplishing professional goals.

Performance Indicators

- 12b Develop new ideas and approaches to improve quality or overcome barriers to advance the profession.
- 12c Demonstrate creative decision making when confronted with novel problems or challenges.

Figure 5: Course Syllabus Example from AEFIS Assessment Management Platform (2018)



Figure 6: Outcomes mapping within AEFIS Assessment System

Assessment Mapping: Making the Connections Meaningful

Students are able to use the evidence and feedback on the variety of assessments including multiple choice exams, Objective Structured Clinical Examinations (OSCEs), case studies, presentations, reflective essays and clinical observations to direct their own learning while also using these data to formulate an outcomes competency-driven transcript that includes experiences within the didactic curriculum and outside of it within their experiential and interprofessional activities with other healthcare practitioners. Assessments are scored on the assessment system or are imported into the system from outside assessment software such as ExamSoft™. Students use the criteria or subscore information linked to pharmacy competencies to position these experiences and artifacts in a visible portfolio (Figure 7) for employers and residency directors. Students can showcase certifications earned, skills and mastery of competencies.



Figure 7: Outcomes Transcript

Curricular mapping has a number of benefits to faculty as well, which include supporting the growth of a culture for and buy-in to assessment practices. Kallick & Colosimo, as cited by Shiller (2013), state “The mapping process gives teachers an opportunity to exchange information about instructional practices based on real classroom data. These data together with the assessment data can serve as “the basis for informed decisions to improve student learning,” (p. 21). The culture for improvement drive faculty to work collaboratively and use curricular and assessment data to drive their instructional shifts and course revisions.

At the Philadelphia College of Pharmacy the professional pharmacy program also includes a required co-curricular component which is part of its curricular map. “The co-curricular Student Excellence and Professional Preparation Program (StEPP) sets us apart from other schools. The pillars of StEPP—leadership, professionalism, community service, and career development—have changed the very approach to how we teach pharmacy,” (PCP, dean’s message). The StEPP program provides mentorship of students, to ensure they set and meet goals aligned to their future pharmacy practice and that students progress through their professional program, prepared and on time. In its pilot year (2017), StEPP captured qualitative data through student surveys aligned to two metrics: Faculty Mentoring and Student Skills. Through the assessment system’s Course Evaluation and Feedback Tools, the program designed questions aligned to these metrics and results shared with stakeholders. Mid and post surveys were deployed and revealed that students were highly satisfied with the mentoring and skill development for the first year of the StEPP program (Figure 8). The assessment system provides real time data of any course or program related surveys which can be triangulated with other measures offering multiple perspectives of feedback.

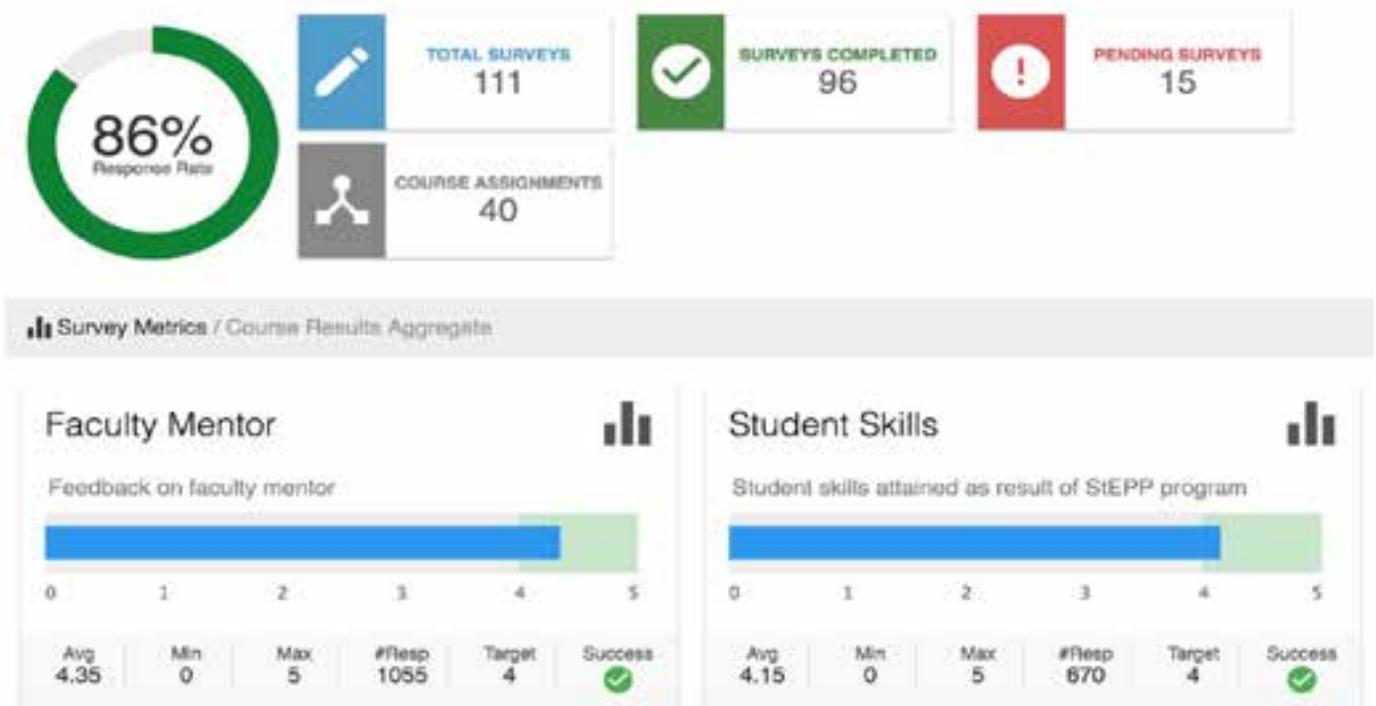


Figure 8: StEPP Survey Data

A direct assessment within the StEPP program used rubrics modified from Association of American Colleges & Universities (AAC&U) to capture student reflections on meeting the four pillars of StEPP and linked the program outcomes to the assessment system. These criteria were also aligned to competencies and measurable abilities. This process provided a rich data set for the first year of the new co-curricular program through the Outcomes Assessment and Evidence Collection. Professional development for faculty is planned as a result of this year’s data collection, based on the findings and areas for improvement.

Taking the Learning With Them

Students need to learn how to take the knowledge and skills they building within their program sequence and use it within the context of their professional lives. This is called transfer of learning, “the application of skills, knowledge, and/or attitudes that were learned in one situation to another learning situation” (Perkins, 1992). The current standards movement in education is rearing farther away from teaching students how to transfer their learning to these varying context for which they will be expected to apply elements into practice. In addition to this is taking the content with them and coupling it with the “soft” or “essential” skills required of them in real life. This means students need time to practice these skills, be given formative feedback to support their growth and repetitive opportunities to grow their skills, particular those for which they grapple. The assessment system design allow for multiple opportunities for students to practice and receive feedback on their learning.

“In general, according to Ericsson, deliberate practice involves stepping outside your comfort zone and trying activities beyond your current abilities. While repeating a skill you’ve already mastered might be satisfying, it’s not enough to help you get better. Moreover, simply wanting to improve isn’t enough — people also need well-defined goals and the help of a teacher who makes a plan for achieving them” (Lebowitz, 2018). Giving students time to integrate essential skills such as critical thinking, time management, self-care and interpersonal communication with the delivery of content in various contexts is the challenge for educators who are given a prescribed curriculum and expected to “cover” this content over the traditional school year. Instead, pharmacy educators are encouraged to think outside the box in order to give students time to practice skills, grappling with challenging ones, receive feedback, and deliberately practice again. This not only helps keep the learning relevant but it also increases the likelihood of transferring this learning into other context.

The pharmacy program is not just about teaching core subject areas within the discipline, it is about learning how to live, function effectively, take care of oneself, advocate for patients, become good citizens, and transferring all of this into the practice of healthy living.

The program is able to triangulate its data from multiple measures, captured through linkages to the curricular map, all in one system. The assessment system is a centralized place where stakeholders access to data on continuous improvement. It is visible evidence of the mission of the college in action. Accreditors, like ACPE, are able to clearly see how programs like the Philadelphia College of Pharmacy is meeting its standards and preparing candidates to be practice-ready at the completion of the program. This system as well as years of development, stakeholder involvement and best practices in pharmacy education led to the program receiving full term accreditation for its PharmD program in fall 2017.

Building a Culture for Assessment for All Stakeholders

In today’s competitive world, students need to stand out and offer more than just a degree and GPA to employers as a result of their program completion. In the case of the Philadelphia College of Pharmacy, students offer a portfolio of experiences that show their growth in meeting competencies over time. Institutions of higher education at large are beginning to look at what the IMS Global Learning Consortium is calling a student’s Comprehensive Learner Record. “Emerging educational models focus on the results of the educational process in the form of demonstrated competencies and seek to represent those competencies in digital credentials,” (Advancing digital credentials and competency-based learning, n.d.).

This extended outcomes transcript brings together the learning of the whole student; not just grades in a course but community service, extracurricular activities, leadership roles, teamwork and other non-cognitive aspects of the student's record not indicated on the traditional academic transcript. Assessing the whole student through portfolio, reflective writing and project-based learning enables universities and schools to better construct a more accurate image of their students and students to provide this of themselves to their future employers. In addition, an IMS Global Learning Consortium and the University of Maryland pilot entitled New Learning Model, revealed that students who develop 21st Century digital evidence of their learning versus a traditional academic transcript create a more holistic picture of their value to not only the needs of healthcare but the needs of society (IMS Global Learning Consortium, 2017).

The outcomes approach places the accountability on faculty to design learning experiences which help students provide evidence of their learning. The assessment system becomes a repository of a fluid curriculum map which connects to student learning outcomes (SLOs) of coursework within the program. The SLOs are assessed through multiple measures, providing many opportunities for students to demonstrate their learning in various ways and a structure to drive programmatic improvement via pedagogical enhancements, delivery options and individualized pathways leading to student success. The professional pharmacy curriculum uses a category approach to mapping which breaks down student performance, provides insight into how faculty teach and when they teach and a transparent mechanism for sharing continuous improvement to all who can benefit.

Although an institution or program can enter the design of an assessment system using a variety of pathways, the Philadelphia College of Pharmacy began its journey by way of the curriculum mapping and outcomes alignment. As a result, faculty work more collaboratively and with a clearer purpose in mind as they are motivated by the success of their students and the data that the mapping will provide them continue to improve their program delivery. The curriculum map not only provides a guide or planning tool, but it is linked to student learning outcomes from courses, assessments, and the student gradebook in the learning management system. The technology, although robust, is not a stand alone; the process needs to be driven by passionate leaders, who are focused on student learning, and educator effectiveness.

This assessment design can be replicated by any program or institution who wishes to have a transparent system of continuous improvement accessible by all stakeholders. It is a commitment of time and resources but its pay off could worth the investment and planning necessary for getting started.

References

- Blumberg, P. (2014). *Assessing and improving your teaching: Strategies and rubrics for faculty growth and student learning*. San Francisco: Jossey-Bass.
- Brookhart, S. (2017). *How to use grading to improve learning*. Alexandria, VA: ASCD.
- Clark, D.R. (2011). *Transfer of learning*. Retrieved from: <http://www.nwlink.com/~donclark/hrd/learning/transfer.html>
- Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. New York: Routledge.
- Hattie, J. & Yates, G. (2013). *Understanding learning: Lessons for learning, teaching and research*. Research Conference 2013.

IMS Global Learning Consortium, Inc. (2018). IMS Global Learning Consortium: Better learning from better learning technology. Retrieved from: <https://www.imsglobal.org/>

Jacobs, H. H. (2010). Curriculum 21: Essential education for a changing world. Alexandria, VA: ASCD.

Lebowitz S. (2018, February 14). A top psychologist says there's only one way to become the best in your field — but not everyone agrees. Business Insider. Retrieved from: <https://www.businessinsider.com/anders-ericsson-how-to-become-an-expert-at-anything-2016-6>

Mammia, A. (2018, April 23). 'Too often, teachers deny their own expertise': John Hattie on the educator mindframe. Education Week: Teacher. Retrieved from: http://blogs.edweek.org/teachers/teaching_now/2018/04/too_often_teachers_deny_their_Own_expertise_john_hattie_on_the_educator_mindframe.html

Ornstein A., Pajak E., Ornstein S., (2015). Contemporary Issues in Curriculum. New Jersey: Pearson.

Philadelphia College of Pharmacy Faculty. (2018). Philadelphia College of Pharmacy Competency-Driven Curriculum.

Raubinger, Rowe, Piper, West. The Development Of Secondary Education. New York: Macmillan, 1969. <https://www3.nd.edu/~rbarger/www7/cardprin.html>

Slotnik, W. J., & Orland, M. (2010, May 6). Data rich but information poor. Education Week. Retrieved from: <https://www.edweek.org/ew/articles/2010/05/06/31slotnik.h29.html?r=368032243&mkey=6789C8FE-814A-11E8-B4CF-51FCB8682667>

The Assessment, Evaluation, Feedback & Intervention System—AEFIS. Retrieved from <https://www.aefis.com/>

University of South Australia. (n.d.). The Miller Model for Assessing Competence. In NC00202: Teaching and learning in health sciences, Design and teach a course. Retrieved from <https://lo.unisa.edu.au/mod/book/view.php?id=611025&chapterid=105881>



Suzanne Carbonaro
University of the Sciences
Director of Assessment, Philadelphia
College of Pharmacy

Suzanne Carbonaro is the Director of Assessment at the Philadelphia College of Pharmacy at the University of Sciences. In her current role,

Suzanne is a member of the Dean's Leadership Team, which led the re-accreditation efforts of the College of Pharmacy in its most recent ACPE visit in fall 2017. She is currently leading the assessment of PCP's competency-driven curriculum and co-curricular programs and capturing key performance indicators in an online assessment system which includes an outcomes transcript of student learning. As students complete their doctor of pharmacy program, they can take their robust transcript of accomplishments and certifications with them.

In 2018, Carbonaro, was awarded the third annual Founders' Day Staff Award of Merit on Feb. The award is presented to an outstanding staff member who "exemplifies the innovative and entrepreneurial spirit of USciences' founders, and who has engaged in research, or some form of scholarly pursuit, that results in the development or discovery of something new."

Carbonaro has 20-plus years of experience in higher education teaching, administration and leadership, working with various populations of students from pre-freshman, non-traditional and traditional students, and adult learners. She's written and directed multiple grant projects totaling over a million dollars allocated to support mentoring and curriculum initiatives in K-12 districts across New Jersey. Carbonaro led the curriculum revision of teacher education programs at Rider University where she served as director of assessment and strategic partnerships in the College of Education and Human Services. Under her leadership, Rider received national recognition for its 18 education programs and full term NCATE accreditation.



Caitlin joined AEFIS in 2011 where she quickly rose through the ranks to a leadership position. As the Vice President of Operations, Caitlin has assumed the crucial role in planning, directing and coordinating operations in support of the company's growth. She has excelled in customer engagement and support while maintaining efficient

team structure and performance through analytics, processes, and tools, maximizing new client engagement. She also manages ongoing relations with key strategic partners including University of Wisconsin at Madison, University of Rochester and others. As a key member of the AEFIS Strategic Leadership Team, she helps determine future direction and growth of AEFIS. The AEFIS system was created to help ease the pains associated with assessment and accreditation in educational settings and providing solutions that work together to enhance the curriculum while engaging students and faculty. The scalable platform enables the continuous quality improvement of curriculum and fosters personalized learning by engaging administrators, faculty, students, alumni, and industry.

IT TAKES A VILLAGE: CREATING SHARED OWNERSHIP OF AN ASSESSMENT INITIATIVE

The Hostos Assessment Team

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The Assessment Initiative

In fall 2015, under the leadership of the Provost and Vice President for Academic Affairs, the Office of Academic Affairs began supporting a number of Assessment Fellows to champion assessment activities in the departments across the disciplines. The Fellows offer both moral and technical support for engaging in assessment activities and help their colleagues with understanding data and how it can be used to support telling the story of student learning in the disciplines. The Assessment Fellows replaced the work of the former Assessment Committee when it was disbanded in 2015. The Fellows started their work by supporting the completion of Academic Program Reviews (APRs) in the departments and their work quickly turned toward supporting the implementation of the Assessment Initiative (AI).

Information about the AI was first shared with OAA staff and academic chairpersons in fall 2017. The goal was that each department would begin to discuss how the development of these core competencies was assessed across courses across a student's complete degree.

In the Education Department, for example, the chair asked the 11 full-time faculty to consider one assignment that could be shared across the discipline and to identify which basic skills this common assignment might assess. There was immediate confusion as to whether this assignment would be department-wide. This caused concern and sparked resistance because the Education Department spans four distinct units: Aging and Health Sciences (GERO), Community Health Education (HLT), Early Childhood Education (ECE), and Physical Education (PED). Which area would have the most input? What would be the benchmarks that determined a student's score on the rubric?

The second round of information received put this initiative into clearer perspective. Three units (GERO, HLT, and ECE) were asked to start with program-learning outcomes as they offered degree programs, and PED focused in individual courses. They were also instructed to review who exactly formed the population.

The Behavioral and Social Sciences Department consists of units housing academic disciplines, with the majority of students in this department taking multi-sectioned courses such as Anthropology, History, Psychology, and Sociology as part of other majors, especially Liberal Arts. Four programs also exist under Behavioral and Social Sciences: Criminal Justice, Paralegal, Police Science, and Public Administration.

This discussion focuses on the efforts of six faculty members (one Early-Childhood Education, one Digital Design, and four Psychology professors) and one member of the Office Academic Affairs. With

their interest in assessment and by taking an approach that matched the needs of two specific and distinct academic departments, they were able to create unique plans for implementation of this initiative.

Institutional Demographics

Hostos Community College, housed within the City University of New York, enrolls 7,000 students each semester. Approximately one-third of students enter with two or three remedial needs in reading, writing, or math, and so there are a large number of courses running each semester that are designed to serve this population of students. Students are almost evenly distributed between full-time (57 percent) and part-time (43 percent), and, although most want to attend college full-time, the busy nature of their lives forces many to drop to part-time. The college is an Hispanic-serving institution and close to 60 percent of students identify as Hispanic while 20 percent identify as black. Nearly 70 percent of the student population is female, and the average age of students is 25 years (Student Profile, 2015-17).

The largest degree program is the Associate in Arts (A.A.) in Liberal Arts and Sciences, and Early Childhood Education (ECE) is among the top five largest degree programs for the past five years. The ECE degree program tends to graduate 10-12 percent of its students each year and it is consistently the second largest group of graduates behind the A.A. in Liberal Art, which steadily comprises approximately 30-40 percent of the graduating class. The number of graduates continues to increase with students taking approximately four and one-half years to complete a degree program (Graduation Profile, 2015-2017). All campus divisions continuously work to improve graduation rates and have a visionary goal of reaching 50 percent graduation rate by 2022 (Strategic Plan, 2017-2022).

Assessment Fellows

The need for the Assessment Fellows emerged after a series of failures: failure to create an effective Assessment Committee, the failure to motivate and support departments and units to complete Academic Program Reviews, and the failure for the college as a whole to create a culture of continuous assessment. The Provost selected four faculty from varying departments to work with the Executive Associate to the Provost. Faculty were selected for their interest and experience in assessment; many had spearheaded their own Academic Program Review process or assessment initiatives.

The first task for the Assessment Fellows was to come to an understanding of their role. Assessment Fellows are not the administration, but rather are each faculty members themselves. In the end, the Fellows decided that their role was one entirely of support and facilitation. The model proved incredibly successful with supporting the Academic Program Review process. Fellows kept faculty on track and demystified a process that had been made unnecessarily complicated in the past. They also helped departments catch up with work that had gone unaddressed for some time.

The Assessment Fellows were later handed the challenge of supporting faculty through the development of the common assignment, which was to launch the broader scoped assessment initiative. In the beginning, Fellows spent their internal meetings trying to merely understand what the administration wanted faculty to do. Faced with a college comprised of a variety of different degree programs as well as Liberal Arts, it became apparent very quickly that no one could agree to the word common and that common assignments were not going to work for everyone. The word itself was divisive but faculty still took the time to find a solution that would work for the degree program or service unit faculty.

General-Education Competencies

An additional responsibility of the Assessment Fellows was to emphasize the newly streamlined general-education competencies and to help faculty include these skills in their daily classroom activities, including the syllabus and assessment vehicles. The Association of American Colleges and Universities urges higher-education institutions to conduct “meaningful assessment of student learning, and” to use “general education as essential for enhancing curricula and pedagogy” (AACU, 2018).

Learning Outcomes and Common Assignments

Assessment of the academic experience that probes what students are exposed to beyond the classroom has become a vibrant part of the collegiate landscape in recent years. Much of this endeavor encompasses the establishment of course, program, departmental, and institutional goals and the attempts to determine the efficacy in which those aims are being met. But just as vast as the depth and variety of educational opportunities across institutions of higher learning, the protocols that may be used to assess them has become almost as immense. Thus, a question that must be asked by those undertaking such an effort then is what method of assessment would work for MY particular needs?

Much of the assessment process begins at the course level and an examination of what are commonly referred to as Student-Learning Outcomes (SLOs). SLOs are designed to explore student development typically missed by the traditional exams and assignments that are created to determine whether or not course material has been learned and synthesized, and not otherwise meant to evaluate the achievement of these other parallel aims. Examples of SLOs may include critical thinking, quantitative and qualitative reasoning, analysis of original writings, evaluating evidence, producing well-reasoned and organized arguments, working collaboratively, and the like. SLOs are typically developed by faculty and are often specific to a particular course, although it is common for SLOs to be shared among courses within a department, program, and across disciplines. Once the SLOs for a given course have been agreed upon, the issue then becomes how to assess these SLOs if they are not measured by the instruments used for grading?

An approach to course level assessment that has proven popular is often referred to as the common assignment (CA). CAs are exercises, exams or individual test items that have been designed to assess a particular outcome or competency. Typically, the CAs are created by faculty that instruct the courses with the specific SLOs to be assessed. The CA is then required to be administered in all sections of that particular class for which it was designed. Faculty typically incorporate the CA into their course so that the data gleaned from the CA may also be used toward a student’s grade in addition to assessment of the SLO. Benefits to this approach largely include the value of having a standardized instrument across multiple sections of the same class so that it is possible to compare SLOs across those sections.

For departments offering degree programs leading to specific careers or the possibility of transferring directly to a four-year program, outcomes are expanded to encompass skills that meet those in specific job descriptions and the requirements to gain entry into a baccalaureate program. These are program learning-outcomes (PLOs). Common assignments are effective assessment vehicles in career- or transfer-focused departments or units because the skills are often measured in the student’s ability to perform a specific task. For example, an ECE graduate should be able to write a lesson plan, conduct a child observation, and research a current trend in early-childhood education. Therefore, the practice across the ECE body of courses is to use common assignments.

Issues with the Common Assignment

It has been observed, however, that there are also problems with CAs that have made the approach untenable for some assessment endeavors. Among these challenges has been how time consuming and difficult it can be to develop and agree upon a CA. Every faculty member, even those within a department and those teaching a specific class, has their own unique approach to pedagogy. During the creation of a CA, it is not uncommon for faculty to feel that their style and attitude toward teaching is being ignored. Thus, in an attempt to create a CA that assesses a specific learning outcome, that assessment may fail to consider the methods of the faculty in their classroom in the process. Additionally, the greater the number of sections and different faculty teaching the course, the more this problem presents itself. The result then may be unhappy faculty who feel that their academic freedom has been impinged upon by imposing an exercise that does not consider what they do in their classes. Similarly, another problem observed with the CA is how it is sometimes perceived as reductionist and does not fully encapsulate the breadth of approaches that are available to explore a student- or program-learning outcome. In response to this perception, faculty may engage in the practice of teaching to the exercise as a way to avoid potential criticism for not being perceived as meeting the needs of the student.

So, is there an approach at assessing SLOs that is sensitive to and maintains the unique approaches to teaching faculty believe in while maintaining the integrity inherent in the assessment process?

Equivalent Assignments

A novel approach to assessing SLOs that avoids the problems of CAs outlined above is referred on this campus as Equivalent Assignments (EAs). The process with EAs is identification, not production. That is, each faculty teaching a particular course is asked to identify an exercise, exam, or test item that they are already using.

A common-assignment model is a typical way of addressing the assessment needs of large-course sections because it allows faculty to use a single assignment to assess all the learning outcomes of a particular course or program, the primary benefit of which may be to save time. However, what if this method did not work in every instance? The rationale for generating a repository for faculty material stemmed from the need to address the issue of how best to deal with assessing course-level learning outcomes across one course with multiple large sections, where faculty were not using and were resistant to using a common assignment.

The project grew out of the theoretical position that it could be possible to avoid the common assignment by using equivalent assignments. The premise being that learning outcomes can be assessed through diverse means; in other words, a particular-learning outcome could be assessed using more than one assignment, exercise, or test item. Another premise behind this idea was that faculty already had valuable assessment methods and that, instead of negating these practices, an assessment model should recognize and value them. As such, using an equivalent assignment approach would take advantage of the faculty's existing unique approach to pedagogy instead of imposing a dreaded common assignment.

In order to gather the varied types of assignments that faculty were already using, it was clear that a repository needed to be constructed. The first step in doing so took place through the faculty mentorship

program employed by the department. This process allowed adjunct faculty to be apprised of the new assessment initiatives. This line of communication was followed-up at the department's annual Adjunct Day, with a discussion of the assessment initiatives and the administering of a short survey. The survey asked the faculty to identify the classroom activities they were using that fit the particular learning outcomes. Additionally, faculty were asked to submit copies of their actual assignments and test items.

This process presented the issue of how store this information, and what would become of it, and how would it be used. It was decided by the project lead (a junior faculty tenure-track assistant professor), that this material should be held on Blackboard, the learning-management system (LMS) used by the college. A preliminary database was constructed with the assistance of Educational Technology Services, after which the collected assignments and test items were organized by individual learning outcome and faculty folders were created for additional submissions. The repository was launched and made accessible to all current faculty teaching the course. The repository would appear as a course to each faculty member. To announce the availability of the repository, faculty were sent an email describing its purpose and instructions on how to access it, as well as an invitation to submit additional test items and assignments.

Developing a Rubric

Because the common-assignment approach was a good fit for their program, faculty in the ECE unit took part in a Retreat Day held for the four units in the Education Department in May 2017. The Assessment Fellow assigned to their department was there to offer advice and moral support as was an executive assistant from OAA. Faculty had already identified the common assignment that would serve as the assessment for each PLO by discussing what would evidence that the PLO was met actually look like. The main goal for this day was to identify one or two general-education competencies implicit in the individual PLO and construct a measurement tool—a rubric.

It was quickly decided that, since they already existed and were also part of this initiative, the corresponding General-Education Competencies would be used for the vertical column of each assignment's rubric (see Table 2). The wording for the horizontal row, which assigned value, would use specific parts of the assignment's directions. By doing this, faculty could use the rubric as an instructional resource when explaining the task to the students.

<p style="text-align: center;">Program-Learning Outcome 4</p> <p style="text-align: center;">Common Assignment: Child-Observation Study</p> <p style="text-align: center;">Students will be able to conduct a classroom observation that may include making focusing on pedagogy, describing a particular child’s academic and social behavior, working one-on-one with an individual child on a targeted skill, and/or writing an assessment of a child’s work.</p>				
General -Education Core Competency	Proficient 4	Competent 3	Developing 2	Novice 1
A2. Skills Develop the acts of speaking, reading, listening, and writing; demonstrate the act of speaking and synthesizing information correctly and effectively with the ability to use context-appropriate vocabulary and communication technology; parse lectures, text, and other educational material.	The report and journal will contain strong evidence of on-going professional discussions between student in EDU 113 and the supervising teacher, including on which methods might work for the child being observed; educational vocabulary will be used throughout report.	The report and journal contain evidence that an initial conversation took place between the student in EDU 113 and the supervising teacher, including on methodology; some educational vocabulary was used.	The report and journal contain no evidence that a conversation took place between the student in EDU 113 and the supervising teacher; no educational vocabulary was used.	The journal is inadequate for the project or has not been done; no educational vocabulary has been used.

Table 2. Rubric for Child Study Common Assignment Program-Learning Outcome 4

It is the belief of the ECE faculty that using these common assignments will strengthen the partnership between the community- and four-year college programs and between the community college and the child-care centers and early-childhood educational facilities that hire their students for several reasons. First, there is direct connection between general-education skills and professional activities that are pre-requisites for employment or transferring to the next degree program. Second, through the use of specialized software, faculty will be able to track the development of specific skills across the program, which will enable them to make purposeful decisions for growth and improvement within the program. Lastly, it supports accepted best practice as communicated by the Association of American Colleges and Universities (AACU). The AACU encourages higher-education institutions to shift their assessment focus from being grade-centric to putting the emphasis on measuring student growth in learning objectives, which are rooted in general-education skills. According to AACU President, Carol Geary Schneider, “It has been clear for some time that educators and employers have reached strong agreement that specific cross-cutting capacities or learning outcomes are absolutely necessary for any graduate who wants to succeed in today’s economy and in a complex, fast-changing world” (AACU, 2016).

Conclusion

The Assessment Initiative continues to be a priority at this community college. There are currently four Assessment Fellows working among nine academic departments. They are each assigned to specific departments and are currently working with them on creating a means of assessing the development of skills described in student- or program-learning outcomes. Some disciplines will use equivalent assignments; certain programs will use common assignments; others will use question banks; and still others may create an as yet unknown tool. It will be left to the individual areas to determine what works best.

At an Assessment Day held the last week of September, more than 50 faculty members listened to a keynote address given by the Provost, who discussed the rationale for the Assessment Initiative, who can be of assistance, and why this effort was begun. Faculty had the opportunity to attend workshops geared to different stages of involvement in the initiative. These workshops were repeated so three different ones could be attended or someone could hear the same information a second (and even a third) time. These sessions addressed using rubrics to grade and assess skills development, the differences between equivalent and common assignments, an introduction to the software that will be used to input assessment data, intentionally teaching the General-Education Competencies, and assessment of online learning.

What is common on this campus? Shared ownership among those involved in individual programs or academic-content areas is what will drive the success of this Assessment Initiative. Through the support of the Office of Academic Affairs and the Assessment Fellows, faculty will have the ability to tailor the tools at hand to best meet the needs of their units and their student cohorts.

References

- Association of American Colleges and Universities. (2018). General Education. Retrieved from <https://www.aacu.org/resources/general-education>
- Association of American Colleges and Universities. (2016, Feb. 17). Higher Education Learning Outcomes Assessment Movement Moves Away from Standardized Tests, According to New National Survey. Retrieved from <https://aacu.org/press/press-releases/higher-education-learning-outcomes-assessment-movement-moves-away-standardized>
- Hostos Community College Graduation Profile. (2018). Retrieved from http://www.hostos.cuny.edu/Hostos/media/Office-of-the-President/Institutional-wolfe-Research-Assessment/rptGraduationProfile_New_20180510.pdf
- Hostos Community College Student Profile. (2018). Retrieved from http://www.hostos.cuny.edu/Hostos/media/Office-of-the-President/Institutional-Research-Assessment/rptHostosStudentProfile20180802_1.pdf
- Hostos Community College Strategic Plan 2017-2022. Retrieved from <http://www.hostos.cuny.edu/Hostos/media/Office-of-the-President/Strategic%20Plan/Hostos-2017-2022-Strategic-Plan-Framework-Booklet.pdf>. page 6.

The Hostos Assessment Team at Hostos Community College of the City University of New York offered two different approaches within on-going initiative at Hostos that seeks to reconcile general-education competencies with either program-learning or course-learning outcomes. In the Psychology unit, faculty

focused on identifying requisite skills students develop in each course in this discipline and creating individual yet equivalent assessments through which this development can be assessed on a course section-by-section basis. Faculty in the Education Department identified skills the students in four distinct career programs need for employment or transfer to a bachelor's degree program, and crafted common assessments and rubrics as assessment tools to be used across all sections of each course.

The members of this team are (alphabetical order):

Sarah A. Brennan, Executive Associate to the Provost and Vice President for Academic Affairs at Hostos Community College, CUNY, has been actively engaged in academic assessment activities in the division since 2015. This includes coordinating the Assessment Fellows, implementing the division's assessment



initiative, integrating an online assessment software, and supporting Academic Program Review processes.

Stacey J. Cooper, Ph.D., is Assistant Professor of Psychology in the Department of Behavioral and Social Sciences at Hostos Community College. In 2014, she started the Ethnic Minority Immigrant Student Research Project at Hostos. She constructed the Shared Faculty Resource utilized by the department's Psychology faculty and in the Psychology unit's assessment initiative. Her teaching and research interests include learning identity, ethnic identity, immigration, digital pedagogy and higher education.



Jacqueline M. DiSanto, Ed.D, is Associate Professor and Unit Coordinator of Early-Childhood Education (ECE) at Hostos Community College, CUNY. Her research interests

include student and faculty perception to online education and open-educational resources; her publication topics include translanguaging, online education, and high-school achievement versus college expectations. She is the co-director of the Scholarship of Teaching and Learning Initiative and is a partner in a grant-supported project to create a completely zero textbook-cost program.



Eugena Griffin, Ph.D, is Assistant Professor of Psychology position via Hostos Community College, CUNY. Her most recent research, focused on exploring interdisciplinary course

assessment of curriculum within the behavioral and physical health sciences to assess inclusion of cultural stressors and racial discrimination as a contributor to health outcomes among communities of color. She

has also developed an androgical approach to teaching first-generation college students of color, which consists of psychosocial techniques and is coined, the Cultural Empowerment Teaching Andragogy (CETA).





Catherine Lewis is Associate Professor in the Media Design Unit in the Humanities Department of Hostos Community College. She serves as an Assessment Fellow. In 2012, Lewis shared an NSF Advanced Technological Education Grant for “Designing Futures with Games: Game-Framed Mathematics and Science as a Pathway to Multimedia Technology Careers.” Lewis’ creative work has been shown at galleries across Manhattan and Brooklyn.



Kate Wolfe, Ph.D, is a social psychologist and Assistant Professor of Psychology at Hostos Community College, CUNY. She is an Assessment Fellow for the college. Her research interests include urban college student attitudes toward sexual minorities and student perceptions of online learning. She is a faculty associate on a collaborative National Science Foundation project titled “NICE: Numeracy Infusion for College Educators”. In 2014-2015 she was a Visiting Scholar at Teachers College, Columbia University as Fellow of the Metropolitan Colleges Institute for Teaching Improvement.



Antonios Varelas, Ph.D, is Associate Professor of Psychology and Assessment Fellow at Hostos Community College, CUNY. In addition to his duties in guiding faculty, programs and departments through the assessment process, he is an active Behavior Analyst whose research interests include the impact of technology on concept formation protocols in the classroom. He is the co-chair of the Scholarship of Teaching and Learning Initiative.

CHANGE IS THE ONLY CONSTANT: USING ASSESSMENT BEST PRACTICES TO GUIDE STRATEGIC PLANNING

Kate Oswald Wilkins, Ph.D.

Susan Donat, Ph.D.

Messiah College

“You have been assigned this mountain to show others it can be moved.” – Unknown

ABSTRACT

Moving the needle on assessment efforts involves both the improvement of assessment processes, data collection, and results distribution, and the development of “a culture of continuous improvement.” To prioritize and sustain improvement efforts for an institution while concomitantly making positive improvements in assessment culture feels seems as Herculean a task as moving a mountain. To accomplish significant improvements in the assessment of student learning requires extensive collaboration with faculty, staff, and administrators; and our roles require us to engage in education and advocacy, as well as exercise patience, sound judgment, and strategic vision. This chapter presents a model for evaluating current institutional assessment performance and culture together. To help prioritize where to invest efforts for such a multifaceted task, we discuss strategies to uncover and overcome barriers to key elements of assessment performance. Finally, we present several models for strategic planning that assessment professionals can use to lead advancements in learning outcomes assessment on their campus.

Effective Assessment Efforts: At the Intersection of Health and Productivity

Assessment professionals are simultaneously change agents and culture-builders while being responsible for reporting on student learning. To accomplish those tasks, they must build collaboration, moving ever-closer to a learning organization, which Senge (2006) describes as a place where “people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured where collective aspiration is set free, and where people are continually learning how to learn together” (p.3).

The matrix of organizational health and productivity (Figure 1) resulted from a synthesis of assessment best practices. This matrix communicates organizational culture, where health is conveyed on one axis, and productivity is on the other axis (Figure 1). Institutional behaviors around the assessment of student learning can be described as unhealthy with high productivity, healthy with high productivity, healthy with low productivity, and unhealthy with low productivity. Using this matrix to characterize an institution’s assessment efforts brings into focus those areas needing greatest improvement, and it simultaneously captures assessment best practices and the organizational health needed to truly advance toward a “culture of assessment.”

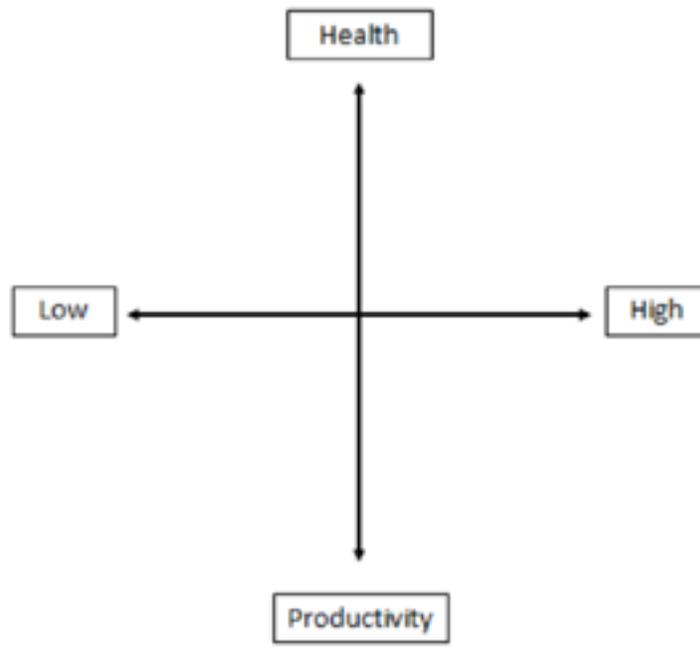


Figure 1. Matrix of Organizational Assessment Health and Productivity.

Healthy organizational culture is characterized by open communication, a team mentality, buy-in at all levels with institutional mission and vision. This aligns with Senge’s description of a learning organization: the institution articulates “individual and collective aspirations to set direction” and utilizes the “practice of reflective thinking and generative conversation” to “recognize and manage complexity” (Senge, 2012, p. 7-8).

Unhealthy organizational culture is compliance-oriented and uncollaborative. Individuals and offices exhibit passivity, avoidance, suspicion, political games, or hostility to other faculty members, administrators and offices/departments.

Productivity refers to both institutional level and department level in the completion of assessment activities. High productivity is characterized by significant organizational structures and resources devoted towards curriculum creation, maintenance, assessment and improvement. Minimal work time, processes, and resourcing devoted to assessment of student learning characterizes low productivity.

Health and Productivity in What Matters Most

A review of assessment literature provides a robust bank of assessment best practices, but the list of best practices can be overwhelming when compared to institutional constraints. An analysis of the best practices outlined by Suskie (2017), Maki (2010), Banta & Palomba (2015), Jankowski & Marshall (2017) and NILOA’s Excellence in Assessment Designation (2018) revealed a three key themes for effective assessment: articulate learning, use data for improvements in student learning, and collaborate with and communicate learning to stakeholders. This section unpacks each theme by describing characteristics in how the theme looks in each of the four quadrants of the health and productivity matrix. Finding the quadrant that best reflects assessment practices at one’s own institution provides a high-level evaluation of assessment culture. The language of the matrix provides a shared vocabulary that helps the experienced assessment professional, faculty, administration, and other stakeholders determine areas of strength and areas for growth.

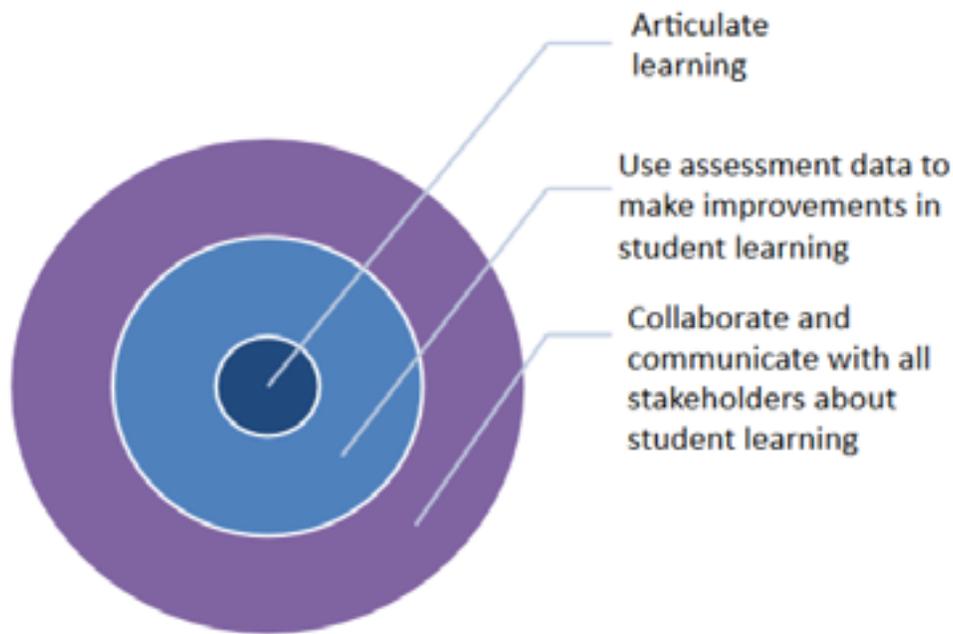


Figure 2. Best Practices for Institutional Assessment

Articulating Learning

The core of healthy, highly productive institutional assessment is articulating learning. Articulating learning is also the heart of what educators do—it is the foundation of each class session and course they deliver. Educators must have a clear understanding of what a course is designed to accomplish for student learning, segment learning into digestible components (classes), and develop appropriate learning activities to accomplish their objectives (Massa & Kasimatis, 2017). Student learning outcomes statements at each level (course, program, institution) should describe learning outcomes, i.e. observable, measurable statements of what students will be able to know or do as a result of completing the course, major, or degree, rather than course content, activities, or abstract ideals (Suskie, 2018). Healthy assessment cultures, or what Dunn et. al (2011) have called “dream teams,” produce these outcomes collaboratively and receive external input from various stakeholders of the program, while less healthy assessment cultures may struggle with faculty skepticism or hostility toward assessment language, faculty “ownership” of courses, and as a result, poor curriculum planning.

Institutional-level assessment plans. To ensure all educational units systematically gather and examine evidence of student learning, institutions plan how and when each unit will collect assessment data. Quality assurance is the aim of effective assessment plans (Carless, 2015). These plans disclose how the institution collects assessment data (processes, procedures, activities), identify assessment measures, and indicate how they are collected (NILOA, 2018). Assessment plans should clearly communicate to all organizational stakeholders the program outcomes and the data that measures each outcome. Effective assessment planning relies on the three “cornerstones” of clear statements of what students will learn as a result from completing a program of study, curricula that lead to the expected learning outcomes, and intentional

reasons for assessing and uses for assessment data (Suskie, 2018). Written plans should be comprehensive, clarify essential assessment tasks and educators’ roles in the process, convey the purpose for the selected assessments, and provide documentation needed for accreditation reporting purposes. They should be simple, flexible, and developed collaboratively.

A healthy assessment culture will be capable of transparency and open evaluation of assessment plans. Assessment plans will “focus less on proxy measures of student learning and more on actually evaluating what students know, understand, and can do” (Marshall & Jankowski, 2017). Less healthy assessment cultures may discover individuals who have created assessment plans in isolation that no one else sees or understands, or perhaps departments that select only learning evidence that will produce positive results as assessment measures.

The following matrix describes the differences among campuses whose ability to articulate learning falls in each of the four quadrants of assessment health and productivity.

<p>Unhealthy, High Productivity</p> <ul style="list-style-type: none"> • Course/program/institutional learning outcomes that look good on paper or the website, but are neither well known nor owned by educators • Outcomes written by a single person • Curriculum maps that one person created • Individuals or small pockets forwarding assessment efforts without full buy-in or a department chair doing all of the work • Fancy reports are produced by one person and read by no one 	<p>Healthy, High Productivity</p> <ul style="list-style-type: none"> • Clear, aligned student learning outcomes at all levels • Collaboratively produced by educators with external input • Plans to assess learning on a cycle are agreed upon by all relevant stakeholders • Plans change over time due to internal discussion and external feedback
<p>Unhealthy, Low Productivity</p> <ul style="list-style-type: none"> • Course objectives are non-existent or they are ambiguous statements of what students can know and do • Faculty lack understanding of how courses contribute to program outcomes • Program outcomes lack meaning • Committee-speak; Outcomes written by committee in such a way they are ambiguous and unmeasurable • Poorly planned curriculum • Resistant, defensive, non-collaborative, or hostile faculty Individual faculty feel ownership of courses rather than department ownership of curriculum 	<p>Healthy, Low Productivity</p> <ul style="list-style-type: none"> • Educators and administrators agree on the concept and ethos of learning at the institution but learning outcomes statements are not managed well or not scrutinized outside of individual educational units • Educators discuss student learning but use of systematic, documented assessment plans is minimal

Figure 3. Health and Productivity in Ability to Articulate Learning

Using Data for Improvement

The second theme for healthy, highly productive institutional assessment is using data for improvement. This includes carefully planned, resourced, campus assessment activities, evidence of student learning, and use of student learning evidence.

Institutional-level assessment activities. In order to do the work of assessment, an institution must plan, communicate, and resource expected assessment activities. Assessment activities include the “full range” of evidence collected to evaluate learning, and all activities designed to ensure improvements are made over time. NILOA’s (2018) transparency framework states that the most effective explanations of assessment activities indicate how the activity is used and connects that activity to the institution’s mission and vision.

An institution should determine which assessment activities to pursue by looking at the end goal: “Design assessment infrastructure in ways that facilitate not the collection but the use of resulting evidence of student learning” (Suskie, 2018, p. 117). Embed assessment activities within the academic calendar with special consideration to existing organizational structures and workflows.

In a healthy assessment culture, assessment activities such as these are understood and perceived as meaningful efforts connected to improving student learning. “Developmental communities,” a term coined by Kegan and Lahey (2016), can engage more fully in developmental activities because trust and vulnerability characterize evaluative practices. In unhealthy assessment cultures, assessment activities are perceived as busywork disconnected from the enterprise of improving student learning, or foils to disguise weaknesses in campus cultures lacking trust.

Evidence of student performance. In order to make improvements in learning, educators must examine evidence of student performance. Examples of direct measures include course embedded assessments and nationally normed exams. Indirect measures such as student or alumni surveys provide data on students’ perception of their learning and supplement our understanding of how they experience the curricula (Suskie, 2018). Jankowski (2017) points out that evidence of learning (student assignments/artifacts) must be well-aligned with course instruction and/or with course objectives and/or with program outcomes, otherwise data probably will not lead to meaningful improvements.

Additionally, institutions need to develop effective, manageable ways of collecting and reporting assessment data. Otherwise, assessment activities can become onerous and overly focused on data collection and reporting rather than the ultimate purpose of assessment: to make improvements in student learning. This is the observable difference in healthy versus unhealthy assessment cultures. Educators in healthy assessment cultures collect evidence of student performance with its use in mind, while unhealthy cultures collect data with compliance in mind, or even for the purpose of sharing positive evidence and hiding negative results.

Use of institutional-level student assessment data. The best practices described above are pathways to the essential purpose of student learning assessment: to use evidence in order to make improvements. NILOA (2018) indicates that transparent uses of student learning evidence are:

- Targeted to particular stakeholders,
- Include examples of assessment results,
- Document how results are used, (focusing on improved student performance),
- Specific about next steps, and
- Clearly articulated for various stakeholder understanding.

Ideally, institutions make necessary changes to policies, pedagogies, assignments, course requirements, and faculty development on the basis of sound evidence of gaps in student performance, with a mindset of improvement rather than compliance (Jankowski, Baker, & Kinzie, 2018). However, many assessment practitioners experience challenges moving institutional culture from an externally driven, compliance mentality (less healthy) to internally motivated practices driven by a desire to improve student learning outcomes (healthy). Kuh et. al (2015) identify a multitude of reasons the compliance mentality persists in higher education. When the institution uses sound data to make positive changes, this serves as evidence of a cultural shift toward health.

The matrix in Figure 4 helps identify your institution’s health and productivity regarding data usage for improvement.

<p>Unhealthy, High Productivity</p> <ul style="list-style-type: none"> • High levels of assessment activity that is perceived by most as busywork and disconnected from curricula and student learning • A lot of required reporting that is of little value/use to educators 	<p>Healthy, High Productivity</p> <ul style="list-style-type: none"> • Planned, equitable, manageable workflow for assessment data collection and analysis • Assessment activities are focused on collaboratively examining and using data for improvement • Changes for improvement are determined collectively based on knowledge of the curriculum, documented well, and evaluated for effectiveness
<p>Unhealthy, Low Productivity</p> <ul style="list-style-type: none"> • Few resources and organizational structures devoted to assessment of learning • Institution has scarce evidence to show for assessment efforts • Changes are made haphazardly by those with power • Educators are territorial/scared to share assessment results for fear that it might be used as rationale to cut programs/positions 	<p>Healthy, Low Productivity</p> <ul style="list-style-type: none"> • Educators want to talk about learning absent of reliable data on learning performance • Changes in curricula/assessment intuitively or by guessing rather than based on evidence • Educators care about learning but progress is limited due to lack of institutional policies, structures, and resources devoted to assessment

Figure 4. Data Usage for Improvement Matrix

Collaborating and Communicating

Finally, effective assessment means collaborating and communicating with all relevant internal and external stakeholders about student learning. This includes engaging a wide variety of groups and individuals in assessment activities, and it also requires investing the resources in those groups and individuals in a way that builds assessment capacity on a college campus.

Groups and individuals involved in assessment activities. Assessment of student learning is most meaningful to institutions of higher education when everyone is “on board” and “on the same page.” NILOA (2018) suggests that broad based understanding and participation in integrated assessment efforts

demonstrate the institution's commitment to assessment of student learning. Ideally, this participation and understanding is shared by senior campus leadership, staff, faculty, student support personnel, students, and even external stakeholders of the college such as alumni, employers, and members of institutional oversight groups. Suskie (2018) provides suggestions for ways to involve various types of internal and external stakeholders.

However, building a culture of assessment in which educators and administrators across campus collaborate to produce meaningful learning outcomes assessment seems to some assessment professionals an unattainable goal. Sometimes faculty see assessment as meaningless busywork that disrespects or micromanages their work in the classroom, or perhaps that it infringes on their academic freedom. Department chairs might see assessment as "one more thing" in their long list of tasks to complete. It is difficult to find time to involve employers, alumni, and other external stakeholders into the assessment loop.

Suskie (2018) reminds us that, while all of these concerns are valid, collaboration among educators reaps myriad benefits for students and academic programs: it ensures students have an integrated, coherent educational experience, it ensures programming benefits from multiple perspectives, it gives educators a greater sense of ownership of the programs to which they contribute, and it can improve assessment processes. Suskie (2018) has argued when we value and respect all of the participants in the assessment process, assessment professionals can help turn the tide in the direction of a healthy assessment culture.

Assessment resources. If colleges and universities expect to make significant improvement in student learning outcomes assessment, they must resource groups and individuals to accomplish the work. The Excellence in Assessment Evaluation Rubric (NILOA, 2018) provides a sweeping definition of resources. The institution needs to:

- Appoint and resource assessment professionals and committees to lead assessment efforts on campus
- Teach educators and administrators about assessment best practices, through assessment resources and trainings
- Invest in support staff to help with assessment tasks
- Provide time to work toward assessment goals
- Purchase technologies to assist with the collection and reporting of assessment data
- Develop and share information pertaining to assessment processes and best practices.
- Document and communicate how the curriculum and the co-curriculum evolve and improve as a result of assessment data and discussions.

In a healthy assessment culture, educators seek out and use robust, multi-channel campus resources on assessment (written, electronic, face-to-face through workshops), and individual academic units of the college plan and use well the time designated for assessment work. It is what Maki (2010) would label a "culture of inquiry" (p. 2). When the culture is unhealthy, educators are unaware of resources, avoid them due to resistance, or attend workshops/meetings only out of obligation but without genuine engagement.

This final matrix describes the differences among campuses whose ability to collaborate and communicate about assessment falls in each of the four quadrants of assessment health and productivity.

Unhealthy, High Productivity

<p>Unhealthy, High Productivity</p> <ul style="list-style-type: none"> • Communication channels and resources are invested, but educators are forced to engage without belief in the value of assessment • Political posturing, passivity, or hostility underlies the ethos of interactions • Campus achieves compliance with assessment expectations but it isn't meaningful and doesn't help educators make substantive improvements in student learning • Defensive and protective narratives characterize discussions about assessment 	<p>Healthy, High Productivity</p> <ul style="list-style-type: none"> • Wide range of internal and external stakeholders receiving information and providing collaborative feedback on assessment processes, plans, results, and action plans • Open, candid engagement among stakeholders leads to effective improvements in learning • Campus provides clear, well distributed and well used assessment resources for educators • Campus invests the needed financial resources in assessment personnel, support for educators, etc. • Educators receive release time/adjusted workload to devote to improving student learning
<p>Unhealthy, Low Productivity</p> <ul style="list-style-type: none"> • Political posturing, passivity, or hostility underlies the ethos of interactions, and it prevents meaningful collaboration • Campus does not devote needed resourcing to assessment so other priorities prevent meaningful progress toward improving assessment efforts 	<p>Healthy, Low Productivity</p> <ul style="list-style-type: none"> • Educators and other stakeholders engage in conversations about improving learning with few real outcomes • Stakeholders collaborate and provide input on learning but sustained efforts to document and maintain assessment processes over time fall short because the campus does not devote needed resourcing to assessment

Figure 5. Health and Productivity in Ability to Collaborate and Communicate about Assessment

How to Turn Weaknesses into Goals

When assessment professionals identify their current institutional reality on these matrices, they should identify areas of strengths to celebrate, and ways to focus improvement efforts as well. Next, a method for turning weaknesses into goals is offered, which includes imagining the desired future reality and uncovering the reasons for the lower performance or cultural barriers.

Imagine the Desired Future Reality and Uncover the Barriers to Change

Examining the characteristics of healthy, productive, assessment cultures provides the assessment professional with a vision for positive change on their campus. Imagining a future ideal can inspire, but it might also remind assessment professionals of the barriers they might encounter as they work toward goals. Kegan and Lahey (2009) recommend a mapping process to help identify and ultimately overcome these barriers, which has proven useful in application to institutional assessment. They recommend (1) identifying your visible commitment, (2) listing the things that are happening which actively go against the institution achieving this outcome, or things that the institution is doing instead, (3) Uncovering hidden competing commitments, and (4) unearthing the big assumptions underlying the hidden commitments. Analyzing these

kinds of dynamics among key stakeholders at the institution can help assessment professionals to get to the next step, which is (5) identifying the things that would need to happen instead, in order to attain the goal, and identifying which people, policies, and processes would need to be involved in the change.

Turning Goals into Plans: Strategic Planning for Assessment

After identifying strengths and weaknesses, turning key weaknesses into goals, then translate goals into plans. To accomplish significant growth, assessment professionals need a clear picture of where they are heading. Health and Heath (2010) stress the importance of articulating a clear direction to promote change. A strategic plan articulates the clear direction (or imagined best future) with concrete steps towards accomplishing those goals along with the resources and anticipated timeline for accomplishing each step.

Assessment leaders’ use of strategic plans can help direct campus resources toward assessment efforts. Resources are finite: time, money or people. Strategic plans help determine which idea is the best investment of our finite resources, based on our long-term goals. When built collaboratively, strategic plans help build institutional buy-in and embed the vision for a learning culture into formal institutional documents that shape resource allocation.

There are many formats for strategic plans; we provide three template examples here. The different formats illuminate specific aspects of your plan. Your audience should determine which template is best for your context.

The first template is the W. K. Kellogg Foundation’s (2004) logic model. A logic model (Figure 6) is a tool and a conscious process of articulating the challenges ahead, the resources available, and the timeline in which to accomplish the task. Completing the logic model helps link short-term (one to three year) outcomes, long-term (four to six year) outcomes, program activities and theoretical assumptions, where outputs are the direct products of program activities, outcomes are the specific changes in behavior, knowledge, skills and/or levels of functioning. It can also be a great tool to pair with accreditation activities, as it provides a map of change occurring within the institution as a result of program activities within seven to ten years.

Inputs	Activities	Outputs	Initial Outcomes	Intermediate Outcomes	Long-term Outcomes
1. Faculty					
2. College mission					
3. Accrediting agencies					
4.					
Assumptions: Assessment data can be used to improve instruction, etc.					

Figure 6. W.K. Kellogg Foundation’s (2004) Logic Model Strategic Plan Template.

Completing a logic model supports knowledge generation and promotes the learning culture, as various institutional offices speak into the plan and learn from other areas on campus. Referring back to the document at regular intervals helps the assessment leader and team to strategically monitor, manage, and report outcomes throughout the process. For smaller assessment offices, this support is crucial in reporting up and out to sustain the support of higher leadership.

The second strategic plan template (Figure 7) is less formal than a logic model. We built this template based upon NILOA’s (2018) Excellence in Assessment evaluation rubric. Organized by specific categories of recognized assessment best practices, this template may help build institutional knowledge regarding assessment best practices by guiding specific tasks towards those best-practice goals. A second benefit of this template is that it helps departments or individuals from different areas see how they are contributing collaboratively to the bigger picture, as defined by NILOA. The plan links each strategy to a strategic goal. Using this template presents the method for evaluating success. We have experienced many assessment skeptics who maintain their stance because it seems their assessment work is never complete. This plan helps skeptics see we are not interested in ever-increasing workloads, but instead we are aiming to build a learning culture.

This template does not contain a specific timeline or specify the person/group responsible for each task. While those elements can be added, the assessment committee or team may want to discuss the interpersonal and inter-office climate first. There may be instances where assigning specific people, offices, or time lines hinders efforts of building support for the long-term vision.

Excellence in Assessment Category	Current reality (where are we now?)	Strategic Goal (what do we want to accomplish?)	Strategies (how will we achieve this goal?)	Evaluation (how will we know we have achieved the goal?)
Diversity of groups and individuals engaged in assessment activities				
Student learning outcomes statements				
Assessment plans				
Current assessment activities				
Assessment resources				
Evidence and use of student learning				

Figure 7. Strategic Plan Template Based on NILOA’s Excellence in Assessment Designation.

A third strategic plan template that may be helpful is theme-driven pictured in Figure 8. This template allows the assessment team to group tasks under subgoals, goals and themes. While similar to the template based upon NILOA's Excellence in Assessment Designation, the theme-driven template reflects the unique goals of an institution's efforts toward promoting student learning. The institution may be at a very different place than those institutions applying for the EIA designation, and the team writing the strategic plan may be overwhelmed by the daunting task outlined by the EIA. This template helps to build an institutional vision for assessment efforts. Having succinct themes makes the vision easy to communicate and remember. The template provides accountability of which person/office is responsible for specific subgoals and action steps along with targets and timelines. The sources of evidence or indicators of success may help those writing accreditation reports communicate assessment efforts succinctly.

Sub-goal	Action Steps	Person/group responsible	Measure	Target	Timeline

Indicators of achievement /Sources of Evidence:

1. Example
- 2.
- 3.

Resources: Examples.....

Figure 8. Theme-driven Strategic Plan Template.

It is beneficial and illuminating to invite people from different areas on campus brainstorm resources to support each goal in this template. We found foundational documents, divisional strategic plans, and software/tools that supported our efforts. These items were not known campus-wide, and they became better utilized as a result of the process.

How to Create and Use Strategic Plans

Creating a strategic plan requires the assessment team to identify its resources, to be honest about the areas that fall short, and to explore the underlying causes (we look those in terms of what is making that area unhealthy, or what is impeding their productivity.) Creating a strategic plan helps to identify what unhealthy areas need to produce, and brainstorm ways to nurse them into health and productivity.

Regardless of which template is selected, start by identifying the desired future or the desired impact and work backwards. Then, identify unique resources from multiple areas on campus and work forwards. Build upon what Heath & Heath (2010) refer to as “bright spot evangelizing,” or identifying what is working well in the current assessment of student learning, and then asking how the campus can do more of what is working well.

Use an inductive, collaborate process to identify broad themes and goals. Craft goal statements, and subgoals, action steps, measures, targets, and timelines that balance the ideal and the feasible. (Our campus mantra is meaningful and manageable). The strategic plan gives us a filter. We work with amazing, intelligent and gifted content experts that have creative ideas. A strategic plan allows us to vet ideas to ensure they are aligned with the plan. Sometimes we encounter ideas that cause us to revise the plan and cut an activity/idea elsewhere. Sometimes we need to table the idea because in times of limited resources, a particular idea might require too many resources for the value it could generate.

Value the conversation as much as the final product. The process is time-consuming; however, the conversations are invaluable in building trust, voice, and an understanding of campus culture for committee members. At our campus, our goals emerged organically and in connection to our understanding of the college’s strategic plan, but we can now connect them to Middle States standards and suggestions to advance our assessment work. For example, the emphasis on continuous improvement is a hallmark of accreditation review. We also know that best practices, current trends, and accreditation call for the sharing of learning goals and results.

Conclusion

We can do hard things, such as moving mountains or serving as change agents and managing change. When assessment leaders learn to effectively diagnose assessment performance on their campuses, uncover the reasons for barriers to change, and develop concrete plans with buy-in, they will start to see the mountain move.

References

- Banta, T.W., & Palomba, C.A. (2015). *Assessment essentials: Planning, implementing, and improving assessment in higher education*, 2nd ed. San Francisco, CA: Jossey-Bass.
- Barr, R. & Tagg, J. (1995). From teaching to learning: A new paradigm for undergraduate education. *Change: The Magazine of Higher Learning*, 27:6, 12-26. DOI: 10.1080/00091383.1995.10544672
- Carless, D. (2015). *Excellence in university assessment: learning from award-winning teaching*. NY:Routledge.
- Dunn, D., McCarthy, M., Baker, S., & Halonen, J. (2011). *Using quality benchmarks for*

assessing and developing undergraduate programs. San Francisco, CA: John Wiley & Sons.

Heath, C. & Heath, D. (2010). *Switch: How to change things when change is hard*. New York, NY: Broadway Books.

Jankowski, N, Baker, G., & Kinzie, J. (2018). Assessment that matters: Reflecting on the past ten years. *NILOA Assessment Update*, 30(2), 8-10.

Jankowski, N. & Marsha, D.W. (2017). *Degrees that matter: Moving higher education to a learning systems paradigm*. Sterling, VA: Styling Publishing.

Kegan, R., & Lahey, L.L. (2016). *An everyone culture: Becoming a deliberately developmental organization*. Boston, MA: Harvard Business School Publishing.

Kegan, R., & Lahey, L.L. (2009). *Immunity to change: How to overcome it and unlock the potential in yourself and your organization*. Boston: Harvard Business Review Press.

Kuh, G., Ikenberry, S., Jankowski, N., Cain, T., Ewell, P., Hutchings, P., & Kinzie, J. (2015). *Using evidence of student learning to improve higher education*. San Francisco, CA: Jossey-Bass.

Maki, P. L. (2010). *Assessing for learning: Building a sustainable commitment across the institution*. Sterling, VA: Stylus.

Marshall, D., & Jankowski, N. (2017). Assessment in a learning systems paradigm. *NILOA Assessment Update*, 29(5), 8-9.

Massa, L., & Kasimatis, M. (2017). *Meaningful and manageable program assessment: A how-to guide*. Sterling, VA: Stylus Publishing.

National Institute for Learning Outcomes Assessment (2018). *Excellence in assessment designation*. Retrieved from <http://www.learningoutcomesassessment.org/eiadesignation.html>

Peterson, M. W. & Vaughan, D.S. (2002). *Promoting academic improvement in building a scholarship of assessment*. Banta, T.W. (Ed.) San Francisco, CA: Stylus Publishing.

Russ-Eft, D. & Preskill, H. (2009). *Evaluation in organizations: A systematic approach to enhancing learning, performance and change* (2nd ed.). New York: Random House.

Senge, P. (2012). *Schools that learn: A fifth discipline fieldbook for educators, parents, and everyone who cares about education*. NY: Random House.

Senge, P. (2006). *The fifth discipline: The art and practice of the learning organization*. NY: Random House.

Suskie, L. (2018). *Assessing student learning: A common sense guide*. San Francisco, CA: John Wiley & Sons.

W.K. Kellogg Foundation (2004). *Kellogg Model Handbook*. Retrieved from www.wkkf.org



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DEVELOPING FACULTY INVESTMENT AND EXPERTISE IN GENERAL EDUCATION ASSESSMENT.

Laura L. Edelman and Kathleen E. Harring
Muhlenberg College

As part of the implementation of a new general education curriculum at Muhlenberg College, faculty approved a comprehensive plan in 2014 to assess the required curricular elements. An ad-hoc committee of two members from the Academic Policy Committee and two members from the Curriculum Committee worked with the Dean of Institutional Assessment and Academic Planning to draft the plan. The committee included representatives from the four curricular divisions of the College (arts, humanities, natural sciences, and social sciences).

The general education assessment plan places the responsibility for designing assessment projects, collecting data, interpreting findings and drafting reports in the hands of the faculty who teach the courses that fulfill individual requirements. The ad-hoc committee outlined clear guidelines for the work that explained the function of assessment and principles that guide all projects. These practices are prominently displayed in the introduction to the plan:

Purpose of General Education Assessment

Assessment of the General Education curriculum at Muhlenberg serves several complementary functions that support student engagement, faculty development, and the mission of the institution. The purpose of general education assessment is:

1. To ensure that our graduates have the knowledge, skills, and dispositions consistent with the goals of the academic program
2. To provide evidence for on-going examination of the general education program
3. To support faculty engagement in the scholarship of teaching and learning

Guiding Principles of General Education Assessment

Valid and reliable assessment of student learning at Muhlenberg will be guided by the following principles:

1. Assessment will include both direct and indirect evidence of student learning
2. Assessment activities need to be practical, useful, and not burden or detract faculty from their responsibilities as teachers and scholars. Wherever possible, assessment should use existing course assignments (embedded assessments) and not add additional work for students or faculty.
3. Assessment evaluates broad academic goals and curricular elements, not individual courses, faculty, or students.
4. Student work used for assessment purposes will remain anonymous and only aggregate results will be shared in any reports.
5. General Education Assessment at Muhlenberg will be consistent with the 9 Principles of Good Practice for Assessing Student Learning (Astin, et. al, 1992).

The plan includes a timetable for evaluating one to two general education requirements each year. A committee of two to three faculty who teach courses for the requirement are appointed to oversee each assessment project over a three-semester period. Committee members receive a small stipend for their work. During the first semester the committee develops an assessment plan, typically researching similar projects and adapting those ideas to fit our learning goals. The faculty member who serves as the general education assessment coordinator provides resources and guidance to the committee and approves the final design. During the second semester the committee collects data through direct assessment methods where faculty who were teaching relevant courses use an online rubric to evaluate student work and through indirect methods by surveying faculty and students to evaluate the extent that student experience and learning aligns with a specific general education learning goal. The Office of Institutional Assessment provides data analysis support for these projects. In the third semester, the committee drafts a report of their findings and conclusions, including broad recommendations for “closing the loop.” Reports are submitted to the assessment coordinator, the provost and to the Academic Policy Committee (APC) who shares the findings with faculty stakeholders. The APC is tasked with developing proposals for curricular change informed by the assessment results and the discussions with faculty stakeholders. The assessment reports are archived on the College’s assessment tools site which gives new assessment teams access to detailed models and a standard structure for their work, as well as providing examples of effective designs and methods.

Our structure for support institutional and student learning assessment has changed over the past two years in response to a recommendation to broaden responsibility for overseeing assessment work and to address the loss of the Dean of Institutional Assessment and Academic Planning who was promoted to Provost. In the current organizational structure, institutional and student learning assessment is overseen by three sets of Assessment Coordinators who report to the Provost. Two faculty members oversee academic program assessment. Two administrators oversee administrative department assessment, and one faculty member serves as the General Education assessment coordinator. Their work is supported by the Director of Institutional Research.

The assessment coordinators are trained and regularly attend assessment conferences, such as the annual Drexel Assessment Conference. Each major and administrative department has one or two assessment liaisons who work with the assessment coordinators to plan the years assessment activities and provide an annual report of last’s years results. They provide support and guidance to individual programs and departments as they develop and implement their projects. In addition, the coordinators provide an annual summary of academic and administrative assessments that includes an evaluation of the types of assessment, the quality of projects, and the extent that results informed change in the program or department. The General Education assessment coordinator attends the annual workshops and works with the provost to set up the general education assessment committees for the requirements that will assessed that year.

This structure allows for more faculty and staff leadership of assessment across the institution and ensures that many faculty and staff members receive assessment training and direct involvement in meaningful projects that they developed. For the General education assessment, the three-semester task is short enough that faculty members do not find the work too onerous and they appreciate the compensation.

The remainder of this chapter describes several examples of our General Education assessment plans and outcomes. Please note that some of the requirements were evaluated with direct assessment and some

with a mix of indirect (surveys) and direct assessment. For each requirement, the assessment teams consisted of new and more experienced faculty who normally teach courses that fulfill the requirement.

The Reasoning Requirement

Students fulfill Muhlenberg's Reasoning requirement by completing one course in mathematics, computer science, or formal logic that develops their ability to reason effectively with words, numbers, and symbols. The assessment team for this project consisted of a mathematics professor and a philosophy professor representing the two departments that teach the relevant courses. During the first semester of the project, the team met with the general education assessment coordinator who supplied models from other institutions and discussed various assessment methods that could be used to evaluate student learning related to this requirement. Informed by the learning goals, the team developed a general rubric that could be applied to an exam question to assess student's ability to reason effectively. The rubric consisted of the following components:

1. Planning
 - a. understanding a problem,
 - b. identifying what is known, what is unknown, and what details are relevant,
 - c. developing a plan to use the information available to analyze the question.
2. Execution
 - a. implementing the appropriate skills developed in the course to analyze the question,
 - b. demonstrating mastery by correctly completing a logical analysis.
3. Interpretation and Reflection
 - a. determining whether results make sense and are appropriate within the context of a problem,
 - b. considering alternative scenarios and approaches,
 - c. extending results to larger contexts.

In the second semester the team met with all faculty members teaching a course that semester that fulfilled the reasoning requirement. They shared the rubric and asked everyone to have develop one question on their final exam to which they could apply the rubric. While the questions on the exams differed across courses, all questions required students to address a problem using the principles of effective reasoning. Faculty members who were teaching different sections of the same course agreed to use the same question. Questions were submitted to the assessment team for feedback. All instructors practiced applying the rubric to student work. Faculty teaching different sections of the same course collaboratively normed the rubric to ensure reliability of use. Course specific expectations for performance determined the application of the rubric. For example, computer science faculty outlined the student work developing an algorithm that would be rated either below, meeting, or exceeding expectations. At the end of that semester, the instructors evaluated their students' work using the rubric and entered their data into a google spread sheet. The responses were analyzed by the Director of Institutional Research and then provided to the assessment team. The team drafted a detailed report of the project that included the assessment plan, the results, and recommendations for revision of the requirement informed by the results of the assessment. The assessment coordinator provided feedback on the report and the final draft was shared with the Provost

who forwards the document to the Academic Policy Committee. The committee is currently reviewing the recommendations and will be organizing sessions with faculty to discuss the findings and recommendations to inform curricular revision.

Human Diversity and Global Engagement Assessment

As part of the recent curricular revision, Muhlenberg's Human Diversity and Global Engagement (HDGE) requirement was strengthened from one to two courses and with the development of new learning goals. These objectives of this curricular element are:

1. That students demonstrate insight into understudied and/or misrepresented histories, cultures, and/or belief systems.
2. That students recognize that multiple contexts (e.g. cultural, racial, national, international, socioeconomic, religious, biological, etc.) shape constructions of human differences.
3. That students can critique hierarchies and disparities that shape and are shaped by institutional systems and social relations.
4. That students develop self-awareness of one's own cultural rules and biases.
5. That students identify implications of course content for developing a framework of civic engagement.

The assessment team for this project included three faculty members who regularly teach courses that meet the HDGE requirement. In this case, the instructors were from the departments/programs in Film Studies, Political Science, and Theater. The team reviewed the AAC&U rubrics for Global Learning (AAC&U, 2014) and for Intercultural Knowledge and Competence (AAC&U, 2009) and developed a multi-method assessment plan with three components. Those components included a student survey, an online rubric that faculty used to evaluate student learning in HDGE courses, and a faculty survey.

Student Survey. All students who took a HDGE class in the Spring of 2017 were asked to complete an anonymous survey related to the learning outcomes for the requirement.

Online Rubric to Assess Student Learning. Faculty who taught a HDGE class in Spring 2017 were asked to assess one item of student work in relation to the learning goals articulated above.

Faculty Survey. All faculty who taught a HDGE course in Spring 2017 or Fall 2018 were asked to complete an anonymous survey assessing their perceptions of the current learning goals and content of HDGE courses.

The team began their work by organizing a forum with faculty who taught courses that fulfilled the requirement. At this meeting, the team shared the first drafts of the materials to be used in the assessment. Based on feedback from the forum, the team revised the original instruments.

The student survey was administered at the end of the semester in which they took a course that met the requirement. Using a 5-point agreement scale, students responded to five statements related to the learning outcomes of HDGE courses. For example, the first statement was: *This course helped me develop insight into histories, cultures, and/or belief systems understudied and undervalued within the United States education system.* Students were invited to provide additional comments for each prompt. The students' comments turned out to be quite valuable for understanding their learning experiences and highlighting the variability

in experience across courses. In general, the results showed students perceived high rates of development for some of the learning goals, but much lower skill/knowledge development for other objectives.

The faculty survey was administered to instructors who taught a HDGE course in either of two semesters. The survey contained six questions addressing issues related to the content and pedagogy of the requirement. As with the student survey, respondents had opportunities to provide comments. The survey development was informed by numerous discussions with other instructors teaching HDGE courses and a careful review of documents from faculty committees which outlined the requirement and learning goals. The team also held a second forum to get additional feedback on the survey.

A rubric addressing the five learning goals for the HDGE requirement was designed to directly assess of student work. Instructors chose a specific writing assignment from their course that best reflected a majority of the stated HDGE learning goals and evaluated student work using the assessment rubric. It is important to note that HDGE course are not required to address all learning goals. To take this into consideration, instructors could indicate that a learning goal was not applicable to their course as they completed the assessment for students in their course. These data provided valuable information about the distribution of HDGE courses that met the primary goals of the requirement compared to all five objectives.

The assessment team completed a comprehensive report of the findings of the three different assessments. Currently, the report is being vetted by the Academic Policy Committee, but preliminary discussions point to the need to revise the HDGE learning goals and provide opportunities for the faculty who teach these courses to share pedagogical strategies for developing student learning in the areas of diversity and global engagement.

Natural Science Distribution Requirement Assessment

The revised general education program integrated various perspective requirements (e.g., literature, philosophy, behavior and institutions) into four divisional elements which provide students more flexibility in the courses they choose to gain intellectual breadth across the curriculum. Under the current model, students take courses designated as Art, Humanities, Natural Science, and Social Science. While the faculty approved general descriptions of the focus of courses that fulfill these requirements, we did not develop clear student learning goals. Consequently, one goal of the projects that assessed the effectiveness of these requirements was to use the findings to inform the creation of student learning outcomes.

The two faculty (a biology and a physics professor) who oversaw the assessment of the Natural Science (SC) components of our curriculum developed a pre-post instrument that included direct and indirect measures of student learning. After researching several tests and surveys of science literacy, they selected items that best aligned with the SC description and that did not require disciplinary-specific knowledge. The SC description was as follows. Students explore biological, computational, mathematical, and physical theories and paradigms. They use quantitative and scientific problem-solving skills to investigate natural phenomena.

Over the four-semester project, the assessment team piloted their 20-question instrument in five SC courses. The pilot provided information about how long it took students to complete the assessment and strategies for ensuring that students were motivated to provide authentic responses. The team shared a report of the findings with faculty and departments that teach SC courses and organized discussions to solicit feedback on the instrument and assessment methodology. Information from faculty stakeholders informed revisions to the instrument.

Pre-Post Assessment

During fall 2015, all students enrolled in SC courses received the pre-test assessment at the beginning of the semester and a comparable post-test version at the end of the semester. Instructors reminded students to complete the assessment and reinforced the importance of student responses in shaping curricular requirements.

The assessment team drafted a comprehensive report that included descriptions and findings of the pilot project and the pre-post assessment. Results were disaggregated by major (science vs. nonscience) since the team viewed that variable as a possible confounding factor. The report included a list of recommendations, foremost among these was the need to develop student-focused learning outcomes for this curricular element. As outlined in the general education assessment plan, the report was sent to the provost and the Academic Policy Committee who organized several meetings with faculty who teach SC courses, as well as sessions open to all faculty. These discussions informed the development of new learning goals for the requirement that were approved by the faculty in spring 2018.

Lessons Learned

The implementation of our general education assessment plan has been a learning experience, not just for the faculty assessment teams but also for those who provide support and guidance for this work. We've learned that the first round of assessment projects may not be perfect, but that if we wait to collect data until we've developed the most valid or reliable instrument or a methodology with no confounds, we may never conduct the assessment project. We've focused on helping faculty design projects that are meaningful and informed by models from other institutions or from disciplinary conventions. Sharing the comprehensive assessment reports with teams provides models for new projects, but also allows us to note weaknesses in designs. Each team is learning from the successes and challenges of the earlier projects.

We've found that placing responsibility for assessment with the instructors who teach the courses that fulfill the requirement has been the key to our success in implementing the assessment plan. The faculty serving on the assessment teams are deeply invested in their work. They are motivated to support and improve student learning regarding their curricular element. Moreover, they are more successful in engaging their faculty colleagues in collecting assessment data from students than if the request came from an administrator who oversaw the work. Projects are framed as more collaborative and scholarly inquiry into student learning, instead of bureaucratic busywork.

We've also seen the value of providing dedicated support and guidance from a knowledgeable peer, the general education assessment coordinator, who has expertise in survey design and program evaluation. The coordinator provides valuable guidance and resources that allow the assessment teams to complete their work on schedule. The coordinator also partners with the two coordinators who support academic program assessment to organize the annual workshops which provide additional assessment resources and training. Through the focused support that assessment teams receive and the annual faculty development programs, a broad swath of the faculty have acquired assessment training and experience. This has also sparked interest in attendance at discipline specific assessment workshops.

The broad faculty involvement in general education assessment at the institution has created a deeper understanding of the role of assessment in creating a "living curriculum," a curriculum that prioritizes

student learning and that is open to revision to fulfill that priority. Our recent curricular revisions have been informed by the evidence from our general education assessment projects. So, faculty, even those not involved in the projects, see how assessment can directly inform changes in requirements.

After this academic year, we will have completed the first round of assessment of all curricular elements but the humanities requirement. The faculty on our assessment teams show deep investment in the process and appear to enjoy the challenge of designing their projects. Looking forward, we plan to evaluate their experiences to improve the level of support provided for their work. As we move into a second cycle of curricular assessment, the past reports and assessment instruments will serve as the starting point for the projects that new teams develop. For our institution, engaging faculty stakeholders in meaningful scholarly inquiry into student learning has led to a deeper culture of assessment across the curriculum.

References

Association of American Colleges and Universities. (2009). Intercultural knowledge and competence VALUE Rubric. Retrieved from <https://www.aacu.org/value/rubrics/intercultural-knowledge>.

Association of American Colleges and Universities. (2014). Global learning VALUE Rubric. Retrieved from <https://www.aacu.org/value/rubrics/global>

Astin, A.W., Banta, T.W., Cross, K. P., El-Khawas, Ewell, P.T., Hutchings, P, Marchese, T.J., McClenney, K.M., Mentkowski, M. Miller, M.A., Moran, E.T., & Wright, B.D. (1992). American Association for Higher Education (AAHE) Principles of Good Practice for Assessing Student Learning 9 Principles of Good Practice for Assessing Student Learning. Retrieved from <https://www.researchgate.net/publication/268399482/download>.



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LEARNING FROM THE ASSESSED: STUDENT-LED FOCUS GROUPS FOR HOLISTIC ASSESSMENT ON CAMPUS

ABSTRACT

This chapter argues that assessment efforts within higher education today fail to account for the perceptions and experiences of a key constituency: the students assessed. While campuses dedicate tremendous resources to assessment efforts—ranging from stipends for faculty involvement to technologies to develop more efficient and effective practices to hours of professional development workshops covering best practices and approaches—they only include students as providers of data to be assessed at some level. Yet, in an era of higher education marked by learning outcomes, curriculum maps, and an enhanced focus on student success, it seems more relevant than ever to assure our efforts in intentionality are noticed, and hopefully effective, for students as they progress through their chosen academic programs. Within this chapter, we discuss ways to involve students in intentional, meaningful ways within the assessment process to provide a full feedback loop. After all, if students completed a program and cannot articulate what they learned or map learning outcomes to relevant courses, have we really fulfilled our mission of articulating an intentionally designed experience geared toward producing successful, satisfied alumni?

INTRODUCTION

Students are the heart of higher education; they are the lifeblood of our teaching, learning, and service initiatives. Yet, when we think about assessment efforts, student success, and accreditation (whether regional or disciplinary-specific), we almost entirely remove students from our consideration. There are end-of-semester course evaluations, a multitude of student surveys, the tracking of co-curricular activities and engagement, and assigned grades but no real opportunities for students to offer more than a passing comment about the way their programs have been designed or areas where they believe opportunities exist to improve learning.

Recent efforts within higher education have pushed faculty and staff to collaborate with students in innovative ways. Most of these are designed to enrich the participating students experience (such as service learning or undergraduate research), but there are options that can enrich students while also providing an invaluable series of services to the larger campus community. The Scholarship of Teaching and Learning community has especially pushed these innovative methods. Healey, Flint, and Harrington (2014) provide a conceptual model that looks at multiple forms of partnerships between campus students and faculty. There are, in their eyes, four interrelated yet distinct partnership categories: 1. learning, teaching, and assessment; 2. subject-based research and inquiry; 3. scholarship of teaching and learning; and 4. curricular design and pedagogic consultancy. Further, they emphasize that relational dynamics play an

important role and more attention should be paid to the decision-making processes involved in faculty/staff-student partnerships rather than just focusing on activities that are conducted.

While many authors have discussed that faculty/staff-student partnerships are principles of good practice (Felten 2013) and thresholds for educational development (Werder, Thibou, and Kaufer 2012), there has been a lack of discussion regarding how student experiences within academic programs should be considered—if not required—as part of programmatic review and assessment efforts. Multiple scholars suggest students are partners in the study of teaching and learning (Werder and Otis 2010; Healey, Flint, and Harrington 2014; Cook-Sather, Bovill, and Felten 2014), but the assessment and curricular design area is lacking.

Focus Groups as a Tool

Prior to the late 1930s, interviews were the preferred qualitative research method option. Stuart Rice (1931) carefully explains, however, why the individual interview fails to capture all of the possible information from respondents: “A defect of the interview for the purposes of fact-finding in scientific research, then, is that the questioner takes the lead. That is, the subject plays a more or less passive role. Information or points of view of the highest value may not be disclosed because the direction given to the interview by the questioner leads away from them. In short, data obtained from an interview are as likely to embody the preconceived ideas of the interviewer as the attitude of the subject interviewed.” Thus, the data pulled from an interview is as likely to embody whatever preconceived notions the interviewer has as the attitudes of the subject being interviewed.

With this in mind, it is not particularly surprising that nondirective interviewing became a focal point for researchers. Focus groups, as we know them today, really bloomed with Robert Merton’s efforts to examine morale in the U.S. Military during World War II, which became the basis for *The Focused Interview*. Despite Merton’s solid approach, qualitative work was still largely ignored by academics who were preoccupied with quantitative methods and data during this era. Without the ability to show similar perceived rigor, focus groups were used almost exclusively by market researchers. But, around the early 1980s, academics began to notice the richness and depth of data available from qualitative research and reengaged with the methodology.

The 1990s proved to be the key time for a rapid reversal of academic researcher attitudes towards focus groups. As Berg (1995) notes, focus groups had traditionally been dismissed as part of the “vulgar world of marketing research.” As more and more research were being conducted in the realm of focus groups, however, they increasingly became appreciated for the advantages offered to researchers in specific data collection situations (Morgan 1993; Gibbs 1997; Barbour and Kitzinger 1998). As Barbour and Kitzinger (1998) stress, focus groups were becoming an “established part of the methodological tool kit” within the social sciences. But how researchers adopted them remained a matter of crucial concern.

Whether focus groups were to be simply added to a shopping list of potential methods or deployed in a more challenging manner than is promoted by traditional market research practices depended exclusively on the ability to critically examine focus groups as a method and their potential within a given discipline (Barbour and Kitzinger 1998). It has therefore been considered best to approach focus groups with a healthy dose of skepticism, constantly questioning issues of practice, politics, and theory, while still

attempting to establish innovative ways to use this method to challenge traditional channels of knowledge production.

A variety of definitions exist within the literature regarding focus groups (see Lewis 1995; Gibbs 1997; Marczak and Sewell 1998). Broadly speaking, a focus group is defined as a small gathering of individuals who have a common interest or characteristic, assembled by a moderator, who uses the group and its interactions as a way to gain information about a particular issue. As Krueger and Casey (2000) note, the purpose of focus groups is to promote a comfortable atmosphere of disclosure in which people can share their ideas, experiences, and attitudes about a topic. Participants “influence and are influenced,” while researchers play various roles, including that of moderator, listener, observer, and eventually inductive analyst.

A number of key characteristics led to the increased use of focus groups in the last twenty years. Generally, as is the case for most qualitative methods, it is the focus group’s ability to access the “knowledge, ideas, story-telling, self-presentation, and linguistic exchanges within a given cultural context” (Barbour and Kitzinger 1998) that makes it a refreshing challenge to traditional quantitative approaches. Quantitative work (such as the collection of survey data) through a process of “measurement, experimentation, variables, and operationalization, transfers the original voices of its research subjects into statistical data, mathematical relations, or other abstract parameters,” leaving little understanding of the context in which particular social practices occur (Schatz 1993). In contrast, qualitative methods such as focus groups, participant observation, case studies, and individual interviews pay more attention to the original voices of actors in their everyday life, allowing researchers the possibility of observing and presenting a broader view of social reality within their research practices (Schatz 1993; Hoepfl 1997). Stated simply, focus groups help to capture those experiences that cannot be “meaningfully expressed by numbers” (Berg 1995).

Specifically, focus groups are unique in their explicit use of group interaction to produce data (Barbour and Kitzinger 1998). As a method, focus groups are based on two fundamental assumptions: the first is that individuals can provide a rich source of information about a topic, while the second is that the collective and individual responses encouraged by the focus group setting will generate material that differs from other methods (Glitz 1998). The key elements that contribute to focus groups being an effective tool are the levels of “synergy, snowballing, stimulation, and spontaneity” that a group dynamic can generate (Catterall and Maclaran 1997). For instance, within a focus group discussion, a comment may encourage a train of thought in another, people may develop new ideas and ways of connecting their personal stories to specific situations, and it is research participants who primarily guide the flow and direction of questioning (Panyan, Hillman, and Liggett 1997).

Additionally, researchers describe the data they attain from focus groups as “extremely rich” and “high quality” (Ashar and Lane 1991). Krueger and Casey (2000) suggest that focus groups effectively tap into the multiple realities of people’s experiences and often provide researchers with “tiny glimpses of the world” they would not normally experience. Along with the benefits focus groups offer to researchers, it has also been suggested that research subjects are empowered as part of this research process. This sense of empowerment comes from being valued as experts (Byron 1995), having the opportunity to work collaboratively with researchers and interact with other participants (Gibbs 1997), and having

the experience of being able to speak in public and articulate their views (Panyan, Hillman, and Liggett 1997). The group dynamics and the benefits that focus groups offer to researcher and research participants illustrate some of the major reasons why assessment professionals should consider using focus groups as a strategy for examining campus.

Nevertheless, focus groups are not suitable for every data collection situation. Focus groups are not designed to provide statistical projections, to help participants reach a consensus on a given issue, to resolve personnel issues, or to change people's attitudes (Glitz 1998; Krueger and Casey 2000). There are also some topics in which a focus group setting is not the best approach. Topics such as sexuality or abuse can elicit some powerful responses from focus group members that may be better addressed in a forum where confidentiality and privacy are easier to maintain (Morgan and Krueger 1993).

Focus Groups in Education: Historical Examples

Since focus groups reemerged as preferred research tools, we have seen focus groups used throughout higher education for various purposes, including: developing learning tools, evaluating student knowledge about the curriculum, formulating marketing strategies for programs, and enhancing survey results.

Researchers have been cautious about using focus group research for decision-making (Morgan and Krueger 1993). However, Krueger and Casey (2000) clarify this warning by noting that while decisions should never be made within an actual focus group itself, the input received from a focus group can be extremely useful when trying to make decisions before, during, or after a particular planning process, such as for a needs assessment, a pilot test, or an outcome evaluation. For instance, Ashar and Lane (1993) describe their success in using focus groups to develop an effective marketing plan for incoming students at an institution. Accordingly, schools (or researchers) hoping to make decisions about how to allocate funds or attempting to create policies that reflect the desires and ideas of students, parents, or staff, might find conducting a series of focus groups to be a fruitful endeavor.

Determining the needs, evaluating programs, and determining the effectiveness of a particular curriculum topic are some of the possibilities that may be well suited to a focus group study. As an example, James, Rienzo, and Frazee (1997) supply a detailed description of how student input generated from a series of focus group studies provided the basis for creating instructional videos and developing learning units on nutritional issues. As well, Pugsley (1996) recounts some of the benefits and difficulties she encountered when using focus groups to discuss a K-12 sexual health curriculum with a group of adolescents. Thus, if researchers or educators want to create learning tools that appeal to students and faculty, identify the sort of information students are attaining and retaining from their classes, or measure how teachers feel about curriculum sensitive issues, focus groups may be a helpful departure point.

As was mentioned earlier, focus groups have the potential to generate data that may not surface in individual interviews or survey research. For instance, Michell (1998) highlights the different sort of data on peer group structures that she generated by employing both interviews and focus groups, suggesting that the combined application of these methods allowed for a more detailed understanding of her research topic. As well, Panyan, Hillman, and Liggett (1997) use both questionnaires and focus groups to provide a complete picture for evaluating and revising a teacher education program. Those researchers, or educators, who wish to enrich the results from interview or survey questions might gain a great deal of information from asking the same questions within a focus group setting. Additionally, focus groups can be

of tremendous value if investigators are trying to generate new hypotheses, study the relevance of particular concepts, or understand new terminology from the perspective of various groups within a school community (parents, teachers, administrators, and students).

Why Involve Students in Assessment?

Assessment efforts within higher education today fail to account for the perceptions and experiences of a key constituency: the students assessed. While campuses dedicate tremendous resources to assessment efforts—ranging from stipends for faculty involvement to technologies to develop more efficient and effective practices to hours of professional development workshops covering best practices and approaches—they only include students as providers of data to be assessed at some level. Yet, in an era of higher education marked by learning outcomes, curriculum maps, and an enhanced focus on student success, it seems more relevant than ever to assure our efforts in intentionality are noticed, and hopefully effective, for students as they progress through their chosen academic programs. After all, if students completed a program and cannot articulate what they learned or map learning outcomes to relevant courses, have we really fulfilled our mission of articulating an intentionally designed experience geared toward producing successful, satisfied alumni?

So, how best can assessment professional on campus begin to discover student attitudes toward issues relevant to their work? How can we determine if student perceptions of outcome achievement align with faculty direct assessment? How do we see if a student's curriculum map matches the one programs have designed and implemented? How do we know if we are even effectively portraying learning expectations to students through meaningful outcomes? The only way to dig into the true answers to these questions is to talk with students. Faculty members sitting around a table and attempting to think like students fails to capture the sentiments we so badly need to have meaningful assessment. Likewise, administrators rubber stamping a curriculum map because it properly develops learning outcomes throughout a student's academic program does little to see if students experience that growth the way we envision. Only by directly speaking to students—and not just successful ones—can we gather the information we want and need.

Beyond needing to speak with students, there are intrinsic benefits to helping to train students to facilitate these conversations themselves. Imagine a scenario where a group of graduating students are invited to a focus group to discuss their experience within their program. Who hosts this focus group? If a program coordinator or faculty member from the program, it would be too easy to guide the discussion or influence students through an assumed prestige bias. Likewise, a professional moderator or assessment staff member may be able to serve a neutral role, but they also might lack the requisite knowledge and experience to be well-prepared for appropriate probes and clarifications. Who has the experience and could be trained to have the requisite skills to facilitate focus groups on campus? Students. Beyond the ability to assist in holistic assessment efforts, students would develop skills applicable to any field: research design, data collection (through both focus groups and surveys), analysis techniques, report writing, and presentation skills.

Across campus there are numerous compelling reasons why we should engage students in assessment. First, students are considerably more likely to feel comfortable discussing sensitive topics with peers rather than faculty and staff. We can help them move beyond what Jourard (1964) refers to as our "public self."

Participants will likely disclose more about themselves to people who resemble them in various ways than people who differ from them. Moreover, student leaders—or hopefully moderators—are more in tune with campus culture and the authenticity of their peers’ responses. Likewise, involved stakeholders will be biased, at least unintentionally, about areas they have direct relationships with making their involvement problematic. Thus, overall, a campus benefits when students are directly involved in assessment beyond providing artifacts to be assessed. A well-designed effort will provide indirect evidence and qualitative assessment data to necessary individuals on campus. By providing faculty and staff with holistic assessment data, they are able to undergo discernment and reflection, which will help improve three key areas of campus: student success, programmatic effectiveness, and institutional progress. And students can see how their suggestions and ideas are used while building—or strengthening—a culture of evidence-driven improvement on campus.

Flagler Insight Scholars: Capturing the Student Voice in Assessment

Recognizing that student opinions were only superficially being considered on campus and students in no academic programs were being trained as general researchers, Flagler College created Flagler Insight Scholars in spring 2016. After attending a workshop at the Center of Inquiry at Wabash College, I returned from campus fully understanding the power of enlisting students as researchers and participants in holistic assessment efforts on campus. Our faculty had spent the previous year re-writing programmatic mission statements and learning outcomes, crafting curriculum maps, and thinking about student success. Yet they had never been asked to consult with their students. My two-person institutional effectiveness office did not have the requisite staff to carry out the necessary conversations. And, perhaps most importantly, as a traditional liberal arts college, students—despite our efforts to be cross-disciplinary—were only exposed to research methods within their chosen major. Learning how to ask the right questions, synthesize information, present relevant results, and present to interested constituencies was not part of any program’s curriculum.

Two freshmen students that had attended the Wabash training started our initial outreach efforts to put together a team of students that would become the inaugural Flagler Insight Scholars after gaining support from both our Vice President for Academic Affairs and President. Our initial hope was to find five or six interested students that would want to participate in this meaningful campus engagement effort. Everything was to be based on a co-inquiry model through which students would actively determine what questions to ask, how to analyze results, and where and how to share the data publicly (Werder, Thibou, Simkins, Hornsby, Legg, and Franklin 2016). Between my teaching numerous first year seminars, ability to reach out to the entire campus, and previous efforts to involve students in data interpretations and research projects, we ultimately ended up with a significant applicant pool.

To gauge student interest, they were asked to complete a basic interest form. The form asked them to rank their interest in being a moderator, note taker, survey architect, data analyst, report writer, or graphic designer—with a clear understanding that all participants would be cross-trained and exposed to all areas. We also asked two open-ended questions regarding what was working and not working at Flagler in their eyes and what they believed they could bring to Flagler Insight Scholars. They also were exposed to our confidentiality agreement at this point to assure they were comfortable with the parameters of conducting research within the group. What had started as just an interest form quickly morphed into a formal

application. In the end, 58 students applied to be Insight Scholars with 30 selected to form the initial group. The selection criteria focused on a few factors: 1) assuring a diverse mix of students—including by class, major, and area of interest; 2) assuring selected students were representative of the entire institution; and 3) assuring students could be trusted to work independently and as members of a team that would be dealing with potentially sensitive information. Ultimately, we wanted to assure that the Insight Scholars looked and felt like the Flagler student body culture in every way possible.

With the initial group formed and larger than expected, I opted to run the organization as an elective course rather than a club or student group. This was done for multiple reasons. First, it helped gain additional student buy-in as it counted for a grade (albeit a pass/fail in a one credit hour course). Second, given the unanticipated size of the group, it built in a mechanism for oversight. By having an assigned class time, I could assure continual training and the opportunity to weekly discuss informed consent, confidentiality, and legal responsibilities—which were the concerns mostly raised by senior leadership before signing off on the group’s creation. The curriculum for the course was geared at providing all students with the base knowledge they needed to be successful researchers. Since we wanted to begin projects early in the semester, much of the textbook training occurred in the first few weeks. The Scholars read, discussed, and practiced: basic focus group skills, moderating techniques, notetaking capabilities, data analysis, infographic design, report writing, presentation skills (including PowerPoint design), survey building, and question analysis. Moreover, we emphasized privacy concerns and ethical considerations—with special attention paid to Institutional Review Boards and their roles in research approval. Students were both quizzed on relevant topics and exposed to mock focus groups before being internally certified.

When it came time to actually design research topics, the students were tasked with making key decisions. They were split into six teams of five based on topics of interest and areas of perceived strength and tasked with finding a topic of interest to the campus community that could help improve the student experience at Flagler. Topics ultimately included: Flagler’s poor response to Hurricane Matthew, causes of retention issues (especially focused on male students and high performing females), student life concerns, college choice decision-making, interpreting benchmarked survey results, and curricular understandings. Insight Scholars were expected to facilitate all meetings, determine where and when they should occur (hint: convenience and comfort matters to students—late night focus groups around the dorms should be expected), how many students they wanted to include across how many focus groups, how they would incentivize participation, and ultimately recruit and communicate with possible focus group attendees. In short, they were on their own. And the results were even better than expected. Over fifty focus groups with more than four hundred unique students were held during the initial semester. Interest from faculty, staff, administrators, and students piqued. Requests for new topics were made. Departments were even asking if the group could be hired to conduct various research projects on their behalf. Even Board of Trustees members were inquiring about the group, its function, and how they could best support its continued development.

Two of the initial topics are worth exploring in more detail for how they directly relate to assessment efforts on campus. First, one group of Flagler Insight Scholars set out to gain additional understanding for how students on campus responded to two regularly administered benchmark surveys: Ruffalo Noel Levitz’s Student Satisfaction Inventory (SSI) and the National Survey of Student Engagement (NSSE) administered through the University of Indiana. On the SSI, students are asked to rate their satisfaction with various

aspects of the campus experience and then subsequently how important they perceive each aspect to be. While being able to calculate an interaction of these two distinct questions provides valuable insights, focus groups can still let us dig deeper. Beyond knowing simply what was and wasn't important and satisfactory to students, we were able to dive deeper into why students felt the way they did. Likewise, with NSSE's measures of engagement by students in various aspects of campus, we were able to dig a layer deeper. Through the focus groups, various departments—from Cabinet-level down—received information that was actionable and able to be addressed. Further, it allowed for a campus conversation, led by the Insight Scholars, on how administrators were responding to student opinions.

The second topic of special interest to assessment efforts involved meeting with graduating seniors in various academic programs. In these focus groups, students were asked to largely assess their program's assessments. First, students were asked to write what they believe the mission statement of their program should be. Then, using Flagler's learning outcomes framework, they were asked to write five-seven program learning outcomes they believe were reflected within their program with one each relating to content knowledge, critical thinking, and communication. Participants were then provided with the programs' approved learning outcomes and a list of required courses. From this information, students were asked to create what they perceived the curriculum map of their program to be. Data regarding student perceptions were then passed back to the program faculty to determine how well participant performance aligned with approved program structures. When discrepancies existed, faculty were expected to discuss why and report back in annual institutional effectiveness reports what they were going to do to improve.

Ultimately, the Flagler Insight Scholars were a complete success. The program continued to grow with continual training each semester. As new students joined and were brought up to speed, existing members experienced an advanced curriculum—many even became formally certified through Qualtrics for online survey building and results interpretation. No Flagler Insight Scholars ever transferred from the institution nor failed to graduate on-time. They graduated with a skillset that was marketable regardless of their specialized major. And, perhaps most importantly, they helped Flagler best leverage available data while also demonstrating how important the student voice was to our decision-making process.

Involving Students in Focus Groups on Campus

So, one might ask, how do I involve students in focus groups more effectively on campus? Or, how do I begin a student-led focus group program? If anyone on your campus is asking questions like why did students choose to attend here?, how do students view success?, do program graduates understand the curriculum they have been exposed to?, how can I help students grow academically within the classroom?, or what types of activities would help students want to remain on campus?, you have an environment that could benefit from focus groups. All of these questions are likely pondered regularly by faculty, staff, and administrators. We hypothesize what students are likely to feel or perceive, yet they are all around us, oftentimes having the exact conversations we wish we knew about. If we invite students—the ones we assess—to the table, we end up with a richer, more authentic assessment experience that provides the holistic data we need to make decisions aimed at helping students succeed.

Bibliography

- Ashar, H., & Lane, M. (1993). Focus groups: An effective tool for continuing higher education. *Journal of Continuing Higher Education*, 41(3), 9-13.
- Barbour, R., & Kitzinger, J. (1998). Introduction: The challenge and promise of focus groups. In R. Barbour & J. Kitzinger (Eds.), *Developing focus group research*. London: Sage.
- Berg, B. (1995) *Qualitative research methods for the social sciences*. Boston: Allyn and Bacon.
- Byron, S. (1995). Computing and other instructional technologies: Faculty perceptions of current practices and views of future challenges. Conducted for Information Resources Council and the Office of Provost.
- Catterall, M., & Maclaran, P. (1997). Focus group data and qualitative analysis. *Sociological Research Online*.
- Cook-Sather, A., Bovill, C., & Felten, P. (2014). *Engaging students as partners in learning and teaching: A guide for faculty*. San Francisco, CA: Jossey-Bass.
- Felten, P. (2013). Principles of good practice in SoTL. *Teaching & Learning Inquiry*, 1(1), 121-125.
- Gibbs, A. (1997). Focus groups. *Social Research Update*. Issue Nineteen. University of Surrey.
- Glitz, B. (1998). *Focus groups for libraries and librarians*. New York: Forbes Custom Publishing.
- Healey, M., Flint, A., & Harrington, K. (2014). Students as partners in learning and teaching in higher education. *The Higher Education Academy*, 12-74.
- Hoepfl, M. (1997). Choosing qualitative research: A primer for technology education researchers. *Journal of Technology Education*. Volume 9.
- James, D., Rienzo, B., & Frazee, C. (1997). Using focus groups to develop a nutrition education video for high school students. *Journal of School Health*, 67(9), 376-379.
- Jourard, S.M. (1964). *The transparent self. Self-disclosure and well-being*. New York: Van Nostrand Reinhold.
- Krueger, R., & Casey, M. (2000). *Focus groups: A practical guide for applied research* (3rd ed.). Newbury Park, CA: Sage.
- Lewis, M. (1995). Focus group interviews in qualitative research: A review of the literature. *Action Research Electronic Reader*.
- Marczak, M., & Sewell, M. (1998). Using focus groups for evaluation. *Cybernet Evaluation*.
- Merton, R.K, Fiske, M., & Kendall, P.L. (1956). *The focused interview*. Glencoe, IL: The Free Press.
- Morgan, D. (1993). *Successful focus groups: Advancing the state of the art*. Newbury Park, CA: Sage.
- Morgan, D. and Krueger, R. (1993). When to use focus groups and why. In D. Morgan (Ed.), *Successful focus groups: Advancing the state of the art*. Newbury Park, CA: Sage.
- Panyan, M., Hillman, S., & Liggett, A. (1997). The role of focus groups in evaluating and revising teacher education programs. *Teacher Education and Special Education*, 20(1), 37-46.
- Pugsley, L. (1996). Focus groups, young people and sex education. In J. Pilcher & A. Coffey (Eds.), *Gender and qualitative research*. Aldershot: Avebury Press.
- Rice, S.A. (1931). *Methods in social science: A case book*. Philadelphia, PA: University of Pennsylvania Press.
- Schatz, M. (1993) *Qualitative voices in educational research*. London: Falmer Press.
- Werder, C., & Otis, M. M. (Eds.) (2009). *Engaging student voices in the study of teaching and learning*. Sterling, VA: Stylus.
- Werder, C., Thibou, S., & Kaufer, B. (2012). Students as co-inquirers: A requisite threshold concept in educational development? *The Journal of Faculty Development*, 26(3), 34-38.
- Werder, C., Thibou, S., Simkins, S., Hornsby, K., Legg, K., & Franklin, T. (2016). Co-inquiry with students: When shared questions lead the way. *Teaching & Learning Inquiry*, 4(2).



Will Miller

Whether analyzing public opinion data from central Asian nations for the U.S. Department of State or assessing the role of the Tea Party in recent U.S. elections, Will Miller, an unabashed data wonk, indulges his fascination for analytics and political science. As Assistant Vice President, Campus Adoption, he leverages data best practices to help campuses make strategic decisions. As a teacher, he draws on his perspective as a public intellectual to engage students in courses on political science, public policy, program evaluation, and organizational behavior.

Will joined the Campus Labs team in late 2016, after serving for four years as both a faculty member and senior administrator at Flagler College in Florida. There, as Executive Director of Institutional Analytics, Effectiveness, and Planning, he helped transform the campus-wide outcomes assessment process. He also served as the college's Accreditation Liaison to the Commission on Colleges of the Southern Association of Colleges and Schools (SACSCOC). Before joining Flagler, he held faculty positions at Southeast Missouri State University, Notre Dame College, and Ohio University.

A prolific author and dynamic speaker, Will regularly presents at professional conferences for both higher education and political science. He has also advised elected officials, agency administrators, and social service agencies. His scholarly pursuits focus on assessment, campaigns and elections, polling, political psychology, and the pedagogy of political science and public administration. He received a Master of Applied Politics from the Ray C. Bliss Institute at The University of Akron, where he also earned his Doctor of Philosophy in Urban Studies and Public Affairs. He holds both a Master of Arts in Political Science and Bachelor of Arts from Ohio University."

CONTINUOUS IMPROVEMENT, ONE COURSE AT A TIME

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ABSTRACT

Efficiency is critical for assessment compliance in academics. If one course and its learning artifacts can be used for course-level through institutional-level assessment, all involved in the assessment of learning benefit. A process that emphasizes quality of reflection rather than quantity of results enriches the profession and its practitioners. The goal of assessment practices is continuous improvement. The heart of an institution's learning mission is the classroom. The immediacy of actions taken to improve classroom learning should not be impeded by remote assessment practices. Practitioner reflection on course learning puts assessment actions in the hands of the classroom instructor. This paper examines the process of reflective practice applied to individual course assessment that yields continuous improvement at the course level while providing important data applicable to university-wide assessment.

Keywords: assessment, faculty development, reflective praxis, student learning

Continuous Improvement, One Course at a Time

Brookfield's reflexive practice (1995) formed the pedagogical framework for continuous improvement through course assessment and evaluation used by this practitioner at two universities. Three key questions formed the basis of the reflection: What do you wish to keep, to change, or to delete when you teach this course again? In addition, integration with assessment practices and mission, along with demographic inquiry, completed the reflection process. Collection of response data was aided by use of a survey instrument, and faculty choice of course and even choice of compliance fulfilled the aspects of academic freedom even while this was an exercise in academic responsibility.

Praxis of Critical Reflection

"One of the hardest things teachers have to learn is that the sincerity of their intentions does not guarantee the purity of their practice" (Brookfield, 1995, p. 1). Using the practice of critical reflection increases the chance of taking informed actions. Researched experiences underpinned by clear rationale increases the chance of achieving desired outcomes. The process of reflecting on one course immediately upon the conclusion of the semester or term allows the teacher to engage in continuous improvement, with sufficient time to implement changes prior to the next iteration of the course (Brookfield, 2000). Using the data of student performance, reviewing intended results or expected benchmarks of achievement, and determining the nuances and resources of the course framework to achieve the desired results, makes

the reflective process beneficial to the practitioner. Enacting incremental changes in pedagogy, course assignments, and course resources over time deepens the quality of course instruction and student learning.

In addition to the use of Brookfield's critical reflection praxis, the process of course reflection for continuous improvement embodies Suskie's Five Dimensions of Quality in assessment practices (2015). The cultures of relevance, community, focus and aspiration, evidence, and betterment are woven into the process. Faculty choose the course to be assessed, determine what needs to remain, change, or be removed to improve student learning, give evidence that learning outcomes have been achieved (or not), and determine an action plan to implement the changes. The results of these reflections are shared within departments, schools and the university itself.

End of Course (EOC) Reflection Structure and Process

Toward the last week of the academic term, faculty are invited to reflect upon one course that they are teaching. The questionnaire is available as a pdf file and attached to an email of invitation that includes a survey link for the actual response (Georgian Court University, 2016, Appendix A). Faculty are given about three weeks to respond, with frequent reminders, and a deadline! Any course may be selected and the reflection takes about 15 minutes to upload and complete. At the end of the allotted time, results are gathered via survey software, analyzed by the Office of Assessment, and shared via an executive report (Georgian Court University, 2016-2018). Individuals are given a copy of their response for reference and to add as documentation for promotion and tenure. The individual responses are also shared with the school's deans. The executive report is posted on the university's website, and discussed at various academic meetings as appropriate. The faculty are responsible to implement any course changes as prompted by the reflection praxis. The university considers the requested resources for this implementation, be that in the areas of technology, updated library resources, or faculty development. Normally, the requested resources are no more than time and effort!

EOC Results

Participation

All teaching faculty are invited to participate in the End of Course (EOC) Reflection. Faculty self-identify as full-time, adjunct or per course, part-time, or full-time staff. When this practice was initiated at this practitioner's current university in fall 2016, faculty were required to assess all courses taught each semester. Many admitted to doing a lot of cutting and pasting, and few believed that anyone was really reading their postings. This practice at a previous institution yielded about a 60% overall participation rate after 4 semesters of practice. Participation rates from the past four semesters at a different university varied from a high of 96% of full-time instructors to a low of 30% of per course faculty. However, more than 50% of full-time faculty have responded every semester, and more than 70% have responded at least 3 out of 4 semesters. Most credibly, over 190 courses have been chosen for reflection more than once, allowing the participating instructor to continuously develop the course and to deepen the learning experiences of the students enrolled.

Key Questions

The key questions of the reflection center on what the instructor intends to keep doing, change, or stop doing to enhance student learning in the course. Faculty select from a list of topics for this selection, then is asked to express their response as an open ended prompt. While faculty can choose to select “no change” or “keep everything the same”, choosing no change is mainly the option for the question of “deletion” or is chosen by those who have taught the course multiple times. The options for course improvement include course content, course assignments, course assessment, use of technology, teaching strategy, real-life examples, use of external resources, and adaptation of the course to meet current students’ needs. There is space for “other” as well as the no change selection.

In *How Learning Works* (2010, pp. 83-90), research suggests the following key strategies to establish value in course directed learning: connect material to student’s interests, provide real-world tasks. To produce positive expectancies, it is suggested that instructors provide an appropriate level of challenge through assignments and rubrics. These motivating factors are made explicit within the options stated for course stability, change, or deletion.

Assessment of Student Learning

In addition to describing how they intend to change the course, faculty are asked for evidence of student learning aligned with a course learning outcome. The Director of Assessment aligns the learning outcomes with Bloom’s taxonomy, and analyzes the evidence of student learning presented by the faculty responders.

The spring 2018 results show that 45% of the stated outcomes align with the lower two levels of Bloom’s taxonomy at remembering and understanding. An additional 42% of outcomes were judged to be at the application level. With only 26% of courses aligned with the general education category, one would expect the outcomes to be expressed at the higher cognitive level of the taxonomy. Applied knowledge does align with the university’s high percentage of professional majors: business, nursing, education, and social work.

The evidence of student learning is categorized by class percent of accomplishments, testing results, rubric results, course assignment or activity, grading – final, standard, or mean, observation of students, or other. The class percentage of accomplishment was cited by 62% of the spring 2018 responders. This may have been influenced by the prompt included with the question, but is also guides the faculty to report results with tangible evidence aligned with benchmarks.

It is also to be noted that course assessment results are being filtered into the academic program assessment reports at this university. The care and attention that the learning embedded in discrete courses is of importance within the overall analysis of students’ accomplishments of program and university learning outcomes. Where student learning falls short of expectations, course changes can quickly address areas of remediation.

Mission Integration

The university for this practice of EOC reflection is a faith-based institution. Great care is taken to integrate its mission and values university-wide. This integration is most effective at the course level. To that end, faculty are asked to cite a value that is emphasized in their course, and to give an example of its practice. The values for this university are justice, compassion, integrity, respect, and service. Integrity and respect were cited by 50% of the spring 2018 responders. This clearly aligns with the mission of offering students a liberal arts education in an environment that is grounded in the above values. At the same time, 15% of responders in spring 2018 did not cite a given value as integrated in their course. Composite results from these queries are shared with the university's mission integration office.

Demographic Data and Analysis

Types of Courses: Level and Modality

The demographic questions of this survey ask for course level (undergraduate, graduate, general education, required, elective, or non-credit) as well as modality of delivery (face-to-face, hybrid, online, or laboratory). The school affiliation is also required. Overall, there is a variety of course levels and modalities chosen by the responders, and these statistics match the overall demographics of the institution.

Continuous Improvement

Faculty are asked how often they have taught the course. A later question asks how they have implemented previous improvements, and the results of these changes. As stated above, almost 200 courses have been selected for repeat reflection and analysis, and the body of information about continuous improvement in these courses is growing. Further analysis of this data is now warranted.

Resources Required for Improvement

Lastly, the faculty are asked to name the resources they will need to implement their intended changes. The most frequent response was "none" or the question had no response. Some noted time and effort. About 14% of faculty who responded to this question in the spring 2018 survey cited technology infrastructure or training as a needed resource. The information about needed resources is shared with the Office of the Provost as well as the Center for Teaching and Learning.

Conclusion

Critical reflection, applied to one course at a time, can yield continuous improvement for overall instruction, give evidence of student learning, and assist the university in planning for instructional resources and faculty development. Thoughtful reflection, based upon data and benchmarked evidence, can lead to incremental change to the core of university teaching and learning: its offered course selections. According to Angelo and Cross (1993, p. 9), "the type of assessment most likely to improve teaching and learning is that conducted by faculty to answer questions they themselves have formulated in response to issues or problems in their own teaching". The use of an end of course reflection provides just such an opportunity for connecting valid assessment to teaching and learning.

References

- Ambrose, S. A., Bridges, M.W., DiPietro, M., Lovett, M.C., & Norman, M.K. (2010). *How learning works: Seven research-based principles for smart teaching*. San Francisco: Jossey-Bass.
- Angelo, T. A. & Cross, K. P. (1993). *Classroom assessment techniques: A handbook for college teachers*, 2nd ed. San Francisco: Jossey-Bass.
- Bloom, B.S. (Ed.). Engelhart, M.D., Furst, E.J., Hill, W.H., Krathwohl, D.R. (1956). *Taxonomy of educational objectives, Handbook I: The cognitive domain*. New York: David McKay Co Inc.
- Brookfield, S. D. (1995). *Becoming a critically reflective teacher*. San Francisco: Jossey-Bass.
- Brookfield, S. D. (2000). The concept of critically reflective practice. In A.L. Wilson & E.R. Hayes, (Eds.). *Handbook of adult and continuing education* (New ed., pp.30-55). San Francisco: Jossey-Bass.
- Georgian Court University. (2016). *Assessment plan for student learning*. Retrieved from <https://georgian.edu/assessment-of-student-learning/assessment-plan-for-student-learning/>
- Georgian Court University. (2016-2018). *End of course reflections*. Retrieved from <https://georgian.edu/assessment-of-student-learning/annual-assessment-reports/#institutional-reports>
- Suskie, L. (2015). *Five dimensions of quality: A common sense guide to accreditation and accountability*. San Francisco: Jossey-Bass.



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THE AMERICAN IDOL OF PROGRAM EVALUATION: THE EXTERNAL REVIEWER

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ABSTRACT

Since the external review is an essential aspect of program review/assessment, the act of reviewing is a helpful service to external colleagues and helps the reviewer see their program(s) more objectively. In this chapter the authors use their experience as reviewers to provide the dos and don'ts to faculty who would like to take on the valuable assessment role of external reviewer, specifically detailing the expectations for preparation, site visit, and reporting. The external reviewer brings their knowledge, skills, and experience to evaluate program(s) and offer constructive feedback. Not only will they be able to take on the role of an external reviewer, but through that role, they will bring their experience to their own review practices, further enhancing their assessment practices.

Engaging with other academic institutions as an external program evaluator has many benefits to both the reviewer and the institution. Specifically, the institutions employ external reviewers to ensure programs are high quality. The external review process is a quality review process, and it invites innovative ideas. Dana Dunn and Jane Halonen, in an article in the *Chronicle of Higher Education*, point out, the program review process is a "rare opportunity when the administration may well invest in your program's improvement, based on the results of the evaluation." Investment can come in the form of resources, such as additional, highly coveted, faculty lines (Halonen & Dunn, 2017). Aside from curriculum enhancement and assessment, in our experience senior leadership often encourage program evaluation to identify ways to boost enrollment. In addition to supporting the academic institution, there are benefits for the external reviewer as well. First, it is a rewarding form of professional development. It is also considered service to the academic discipline and to the higher education industry. In a more direct way, the process often opens the reviewer's eyes to the best practices being employed by their colleagues. It also provides a context to think about their own program(s) in a different way.

Program review occurs on a cyclical basis, often based on the accreditation process. While it is beneficial, it is not completed on an annual basis because it is cost prohibitive. To bring in external reviewer(s) requires financial resources. External reviewers need to be paid for their time and reimbursed for their travel expenses, and many schools do not have budgets dedicated to bringing external reviewers on campus at regular intervals for every program offered.

The goal from the academic institution is to bring professionals with discipline-specific experience in assessment, curriculum development and reform, and space management (Halonen, 2017). What happens when the qualified professionals are not available within a specific discipline? In some instances, schools must turn to professionals within a discipline, who do not have program review experience. In this case, the novice reviewers learn as they go, which could impact the efficacy, efficiency, and integrity of the program

review process, and the program reviewer may have to give up financial incentives and authorship due to their inexperience. By providing a roadmap to those who are interested in becoming external reviewers, faculty and staff members can move forward confidently to participate in the external review process.

There are six key considerations for anyone looking to take on an external evaluator role. These considerations essentially provide a roadmap for the program evaluation process.

Marketing Yourself

Unfortunately, there is no platform to market oneself as an external reviewer. If there were, it would make the search for one, and the ability to market oneself, much easier. Since there is not such a platform to connect institutions with potential candidates, those interested in participating in program review as an external reviewer must make themselves visible and appealing through two common pathways: LinkedIn and their home college website via their curriculum vitae (CV).

It is hard to believe any professor or staff member focused on assessment does not have a LinkedIn profile, but the profile might not employ the right terminology to attract a program director, dean, or provost looking to hire an external reviewer. There are key buzzwords that signal skills in assessment and program review, even if one does not have specific skills and experience with the entire program review process. These words include:

Assessment	Program Review	Performance Measurement
Expert	Evaluator	Curriculum Development
Analysis	Consultant	Systematic Review
Effectiveness		

Examine your skills and experience to see which of these buzzwords apply. For example, if you developed several courses for one program, you can use “curriculum development.” If you participate in assessment in any capacity, such as assessing your own courses, compiling assessment reports, analyzing assessment data, then include those skills in your LinkedIn profile. Do not include any of the buzzwords if they do not apply.

If one has related certifications, those should be highlighted on the LinkedIn profile as well. Quality Matters is one that is widely recognized. Quality Matters is a process developed by the MarylandOnline (MOL) consortium. The group developed a rubric of course design standards which course developers apply to ensure courses meet high delivery standards. Furthermore, the Quality Matters process is also a peer-review process (Quality Matters).

There are other certifications, such as the Assessment Certification Program (ACP) housed jointly at DePaul University and Loyola University Chicago. The program is designed to train faculty and staff who are responsible for assessing student learning. At the end of the program, which consists of four courses plus a final project, successful candidates receive certification (ACP: Assessment Certification Program). SUNY Center for Professional Development also offers one entitled, Assessment of Learning Outcomes Certificate, which consists of three courses (SUNY Center for Professional Development). Any type of certification will make a faculty or staff member attractive to an institution hiring an external reviewer.

Along with curating your LinkedIn page, your CV should also be updated to reflect skills relevant to

the program review process. The same buzz words above, should be added to your CV. Think beyond your current position, you may have utilized some of these skills in previous positions. Some college and university program websites link the faculty CVs. If this is the case at your institution, then ensure your CV is up-to-date and you have added any relevant buzz words. Others do not link to a CV, but they post a short bio about the faculty or staff member. Since a college/university program webpage is one of the two places program directors, deans and provosts look to create a list of potential external reviewers, keeping your CV up-to-date and ensuring your bio reflects any related experience is an important step in standing out as a potential external reviewer.

Accepting the Role

Even if you have no formal experience with program review, you should not participate in that process without being compensated financially, or reputationally compensated. In our experience, depending on the inviting institution, you should expect to be offered between \$750 and \$1500 for your times. For tax purposes, understand whether a 1099 will be issued. You should also understand when you will be paid. When negotiating the compensation, ensure you will be reimbursed for all expenses, by understanding what the inviting institution considers reimbursable. Will non-campus meals be included? What about transportation to and from your home airport? If you are booking your flight, is there a cap on the flight expense? Another important question is who will make the travel arrangements? Some institutions prefer reviewers make all their own travel arrangements and will reimburse them, while others use their own travel services to book flights and hotel arrangements.

The final important aspect of accepting the role is understanding the expectations of the inviting institution. Upon accepting the role, you should know the following:

- Inviting institution's initial goals
- Timeline for the entire program review process
- General idea who you will be meeting with
- General idea how the final report is expected to be disseminated

Pinning down elements of your contract, payment terms, point of contact, and expectations will make the site visit and the reporting process a smoother process.

Preparation

The first task in preparation for the site visit, is to sign and return your contract. Then you are ready to begin the review process. The inviting institution will likely share a wide variety of materials with you, but it may be incomplete. Here is a list of common materials you should have access to for the review process. Should any of these items not be included, then ask your point of contact for them and understand how those documents will be made accessible to you.

Assessment Information:

- Accreditation Reports
- Copy of the last program review
- Discipline-specific accreditation
- Structure
- Governance structure
- Program and Course Information
- Program handbook
- Class schedule
- Course catalog
- Resource list
- Syllabi for classes
- Faculty Information
- Faculty list and status of each appointment
- Faculty meeting minutes
- Student Information
- Demographics
- Career services data
- Advising information

In addition to reviewing these documents, you should also submit a list of stakeholders you would like to meet with during your site visit. This list should include:

- Faculty without administration
- Students without faculty
- Advisors without administration or faculty
- Provost
- Career & Student Services representatives

An important element of program review is the unencumbered voice of the stakeholders, thus meet privately with each stakeholder group. If administration officials are in the room when talking with faculty, or faculty are in the room with students, you will not get honest answers, specific details, or ideas about improvement. Keeping these meetings open to all will inhibit the program review process.

One last request should be to get access to online courses. This can easily be an oversight when visiting the inviting institution, but the online courses, whether they represent a large portion of offered classes or a small portion, are an important element of the program and should be considered in the review. This can only be done if the reviewer(s) have access to these online courses. Typically, the inviting institution will provide a temporary account for the reviewers to access current courses running. Some things reviewers look for in online courses are course designs, engagement levels, and student services provided.

The Site Visit

Your first meeting will likely be with your point of contact, and if that person is not the provost, you will likely meet with them next. This is an opportunity to revisit their goals. If you have overarching questions after reviewing the documents, ask. You should ask for a campus tour to get a sense of where things are in relation to the building, or buildings, where students and faculty spend the bulk of their time. You may get straight to work with stakeholder meetings or there may be a social gathering of a variety of stakeholders, such as a reception or dinner.

Once the stakeholder meetings begin, there will be little opportunity to reflect as you head from one meeting to the next. Thus, be prepared for these meetings with stakeholders with a list of questions. These are some typical questions per stakeholder-type:

Students

- What do you love about the program?
- Why did you choose this program?
- How do you interact with faculty?
- Describe academic and career support?
- What would you like to see changed?
- Describe internship opportunities.
- Do you feel the program is preparing you for a career in this field?

Faculty

- How are you supported?
- What would you like to see changed?
- Describe advancement opportunities.
- Why did you choose to work at this institution?

When the stakeholder meetings have concluded, you should schedule an exit interview with your point of contact (if it wasn't already on your schedule). At this point, you should be willing to discuss any themes or concerns raised from your stakeholder meetings. Be prepared to offer your initial recommendations. Your point of contact will want to be able to report, in a general manner, about the review process, in anticipation of the upcoming report. Also, set a deadline for the delivery and confirm how the report should be disseminated. It is unlikely, but not unheard of, the inviting institution will want a presentation. Most likely they will want a written report within two-to-three weeks. Confirm the audience as well to ensure you are writing the report with that audience in mind.

Finally, if you are a member of an evaluation team, meet with the team before you head back to your respective institutions to discuss any final details and divide up the reporting responsibilities.

Reporting

When writing the report, it is imperative that the report be written in one voice, even if three of you are writing it. For the reader, a report written in with multiple voices feels disjointed and imbalanced, which can impact the perceived validity of the findings (Wilkins, 2014). The report should be divided into

the following, separate and distinct sections: Cover page, table of contents, executive summary, program description, methods, data & interpretation, recommendations, and appendices.

Keep in mind the report is intended to supply the inviting institution with valuable and actionable information to improve the reviewed program. Recommending “pie in the sky” ideas, will be a waste of their time. Recommendations should be reasonable and doable. The report should be written in positive tone and it should be written in one voice. The report should be well-written and edited. Avoid generalized statements such as “Many students” or “some faculty.” When referencing materials submitted to you from the inviting institution, make note which ones, and cite all references according to APA style guidelines or whichever style the school prefers. Finally, the report should be signed by all of the external reviewers upon dissemination.

Professionalism

An external reviewer should, at all time, remain professional. This means your cell phone should be turned off during the visit, you should dress professionally, respect the visiting institution and its stakeholders, even if they make comments you disagree with or find shocking. You should remember, you are not there to make friends with other program directors or faculty members, you are there to review their program and make recommendations to help them improve the program. Also avoid making promises you cannot keep. For example, if a student asks you to send them a copy of the report, do not agree to do that. The Provost or the Program Director will make that decision. Not only are you at the visiting institution representing yourself, you are also representing your school or college, so ensure you are representing both well.

In conclusion, as you can see engaging with other academic institutions as an external program evaluator has many benefits, as described, but it also requires due diligence on both the institution and the program reviewer’s part. The reviewer brings knowledge, skills, and experience as an evaluator to help institutions make quality improvements to its programming. The American Idol of Program Evaluation.

References

- SUNY Center for Professional Development. (n.d.). Assessment of Learning Outcomes Certificate Program. Retrieved from <http://www.cvent/events/assessment-of-learning-outcomes-certificate-program/event-summary-93cce7e917c942f78ea6f947afda275f.aspx>
- Quality Matters. (n.d.). In Quality Matters: About. Retrieved from: <https://www.qualitymatters.org/about>
- ACP: Assessment Certificate Program (n.d.). In DepaulLa. Retrieved from: <http://acp.depaulia.org>
- Dunn, D. S. and Halonen, J. S. (2017). Choosing an External Reviewer. The Chronicle of Higher Education. Retrieved from <https://www.chronicle.com/article/Choosing-an-External-Reviewer/240271>
- Halonen, J. S. (2017). Making the Most of the Academic Program Review: Tips from an expert Reviewer on the program review process. American Psychological Association. Retrieved from <https://www.apa.org/ed/precollege/ptn/2017/09/academic-program-review.aspx>
- Halonen, J. S. and Dunn, D. S. (2017). Avoiding the Potholes of Program Review. The Chronicle of Higher Education. Retrieved from <https://www.chronicle.com/article/Avoiding-the-Potholes-of-/239330>
- Wilkins, S. (2014). Coauthors Writing with One Voice. Editing-Writing-Proofreading (Editing Network). Retrieved from <https://www.editing-writing.com/coauthors-writing-voice/>



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A BLUEPRINT ON HOW TO MAXIMIZE ASSESSMENT INFORMATION AND MINIMIZE CHEATING IN ONLINE MULTIPLE-CHOICE TESTS

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INTRODUCTION

The goal of assessment for a specific class or an entire program is to identify students' learning. It requires collecting and analyzing information. However, the information that is collected is useful only if truly representative of the knowledge and skills that the students have acquired during the class or the program that is being assessed.

The College Board (and National Merit Scholarship Corporation) indicates in its website that most Advanced Placements (AP) exams are a mix of multiple choice questions (MC) and free-response (FR) questions, also indicated as constructed-response (CR) questions or tasks. It further states that the MC questions, need to meet to the following requirements:

- The questions adhere to standard of quality and fairness
- The questions are of appropriate difficulty for the test-taking population
- Each exam will distinguish among students with different levels of knowledge and skills.

The above guidelines are fundamental and scalable; therefore reasonably consistent with the test development implemented by higher level educations in large size courses.

An assessor who wishes to use MC questions will need to implement a procedure to create an exam that satisfies in its content and administration the above quality and fairness requirements. To this end she can implement the following steps:

1. **Step 1** identify educational goals
1. **Step 2** identify groups of MC questions within each goal
1. **Step 3** create, or extrapolate from test banks, MC questions for each group.

The assessor in a higher education institution would ideally test students' performance for different skill levels within Bloom taxonomy, while also ensuring integrity.

A taxonomy is in practice a form of classification. Extensive literature exists both on the original 1956 Bloom's taxonomy of educational objectives and on its 2001 revision by Anderson, Krathwohl et al. Once the assessor has identified the educational objectives of her discipline, as they are embedded in her course, she can create "categories" or "groups" of questions by educational goal.

Consistent with Anderson and Krathwohl's (2001) revised cognitive taxonomy, an instructor could for example create the following groups of questions:

1. **Definitional and Factual.** These questions test a student's ability to recognize and recollect knowledge, definitions and facts.
1. **Interpretative/Inferential.** These questions test a student's ability to determine the meaning of the facts and knowledge acquired.
 - 2A. Interpretative/Inferential of Average Difficulty
 - 2B. Interpretative/Inferential of Higher Difficulty
1. **Applicative.** These questions test the student's ability to carry out or use in a specific situation the knowledge acquired.
 - 3A. Applicative of Average Difficulty
 - 3B. Applicative of Higher Difficulty
1. **Analytical.** To answer correctly these questions a student needs to examine, with methodology and in detail, the structure of the information acquired. Consistent with the topic of study, the student will possibly need to use spreadsheets, formulas, diagrams or any other analytical tools that allow her to detect how the parts relate to one another.
 - 4A. Analytic of Average Difficulty
 - 4B. Analytic of Higher Difficulty
1. **Evaluative.** The student will need to check critically information to form her own judgment.

We have used the first four groups indicated above in our testing setting using the BbLearn portal. How appropriate is a subdivision of the groups by level of difficulty will depend on the complexity and nature of the material tested, on the rubrics created and used by the instructor and on the vehicle used to administer the test (traditional pencil and paper exams in a face to face test or a web portal in an online test) The distinction in subgroups may be cumbersome to implement in an online exam; therefore, practicality may require to limit the number of subgroups, where possible, for such tests.

It is of note that in the above list we have not included a "creative" group consistent with the last revised Bloom taxonomy. It seems to us that, while the basic evaluation capacity of a student to make judgments could be tested using MC questions, a second and more complex stage of it that includes critiques and recommendations, and is precursory to creating, would be more difficult to test using MC questions. More so for the last mental function of creating in the taxonomy. It is likely however that, during the course, instructors will have encouraged learning and will have assessed the ultimate creative knowledge of their students with a series of tasks or methods complementary to the MC testing. For example, as Krathwohl (2002) indicates, open questions, essays or online discussions can induce students to learn the discipline by "Putting elements together to form a novel, coherent whole or make an original product".

Frequently textbooks' editors, especially at the introductory level of many disciplines, provide instructors with large multiple choice test banks for which the questions are classified by topic and difficulty. In some cases there may even be at the end of each question an "identifier" of which skill level is tested within the Bloom Taxonomy. In other cases, when the Bloom's goals are not explicitly mentioned, there will be at least an identifier of the nature of the question.

Once the assessor has identified the type of MC questions by educational objective, she will either create her own questions, extract them from test banks provided by her editor, or implement a combination of the two by modifying, enhancing and complementing the questions from a test bank.

Face to Face versus Online Courses

A large number of higher education institutions offers now a combination of traditional face to face, fully online and hybrid blended courses.

It is reasonable to assume that there may be individual students' differences in performance linked to the different composition of the student population in online versus traditional programs. For example, students whose primary language is not the language in which the course is taught, may find it easier to learn the lectures recorded asynchronously online. Similarly, students who, by personality or course load, find it difficult to "adjust" immediately to the pace of the class, can review the recorded lectures at any time later in the course. Also, introverted students may be more inclined to participate to an online discussion rather than an open verbal discussion in class. Similarly, a variety of anecdotes could highlight a rationale for better individual students' performance in face to face versus online classes.

Several studies compare qualitatively and quantitatively effectiveness and performance of face to face courses and online courses. (Refer for example to Bernard et al.'s 2004 and 2006 meta-analyses of the empirical literature; Tallent-Runnels et al. 2006, and Sun et al. 2016 qualitative literature research reviews). For the purpose of this chapter, we only note that for both vehicles of teaching, the principles of good teaching practice are the same: students' achievements are foremost linked to methodological quality and a pedagogy that insists on interaction, cooperation, active learning, timely feedback, communication, and respect of the diverse talents and ways of learning (Chickering and Gamson 1987). Whether the instructor is teaching face to face, online, or even both, the goal of the assessment will still consist in identifying, with fairness and rigor, a student's learning.

Integrity Concerns in Computer-Based Online Testing

The International Center for Academic Integrity (ICAI) defines academic integrity as a commitment to five fundamental values: honesty, trust, fairness, respect, and responsibility.

Extensive literature on academic dishonesty shows that ensuring integrity is a major challenge for all higher learning institutions. However, institutions that offer online programs, or simply assess students' performance using computer-based testing, face additional challenges. Within the existing literature there is, in fact, a perception that it is easier to cheat in unproctored online exams (D'Souza et al., 2017; Kennedy et al., 2000; King et al. 2009)

Hollister et al. (2009) and Fask et al. (2014) analyze the impact of online test taking environment and cheating on students' performance. Hollister et al. identify at least three possible discriminating factors that can cause differences in students' performance when online exams are proctored and administered in class versus non-proctored offsite: environmental differences, familiarity with a particular testing method, and cheating.

Hollister et al. (2009) suggest that the online testing environment can negatively impact performance because of distractions, computer issues, network connection and noise. However, Fask et al. (2014) argue that such environment can also give the advantage of greater comfort in less structured and more

familiar surroundings. Hollister et al. (2009), determined that, controlling for students' GPA, no statistical differences in mean overall course performance were found between students taking the proctored online exam in class and the students taking the non-proctored online exam offsite. Fask et al.'s study shows that, once the impact of the surrounding environment is accounted for, the students taking the non-proctored final exam online had significantly higher scores than the students taking the proctored test in-class. Fask et al. concluded that such differences were likely the result of cheating.

Daffin et al. (2018) refer to a group of studies that test the impact of proctoring and lock-down browsers on students' performance. They then add to the existing literature by using a sample of 1,700 online psychology students to test performance in closed book proctored exams (using ProctorU) and non-proctored exams. Most of the exams were in MC format. Consistent with previous literature, Daffin et al. found that students performed significantly better on non-proctored exams. The authors suggested that the differences in the non-proctored exams could be due to a variety of reasons: anxiety from being watched by the proctor, use of internet sources, help from another person, and accessing notes and the textbook.

Karkee et al. (2010) study exclusively the impact of the testing method by analyzing the comparability of computer-based online tests and paper and pencil tests. Karkee et al. (2010) analyze data from a large scale end-of-instruction statewide test in Social Studies using MC questions. Half of the data set of students took the test online while the other half took it using paper and pencil. The authors find evidence of similar performance between the two groups. Karkee et al.'s study appears to reflect assessment data gathered in the same proctored testing environment since the authors do not express concerns related to integrity and fairness and do not address the impact of environmental differences.

The Quest for Integrity in Online Testing

The first step towards integrity relies on the ability to create a culture of transparency and honesty. The ICAI identifies an organic list of seven institutional steps to establish a climate of integrity. Nevertheless, there is not a standardized formula to ensure integrity that fits all programs and institutions; each institution needs to formulate and promote a plan of action that respects and builds upon its own cultural and social environment.

Once an institution has established a positive culture of integrity; there are procedures that instructors and assessors can implement for online testing. We do not aim, of course, to provide a good-for-all recipe to resolve cheating for online remote testing. We only wish to share here some strategies that we have identified over the past few years teaching and testing online economic principles to on-campus and off-campus undergraduate students at Drexel University.

1. Promote Clarity and Transparency

Existing literature shows that peer influence within a group and the saliency of the dishonesty impacts unethical behavior (Gino et al., 2009). There is also evidence that signing to pledge honesty before, rather than after, the opportunity of cheating increases the saliency of ethics and reduces dishonesty (Shu et al., 2012)

At the onset of the course the instructor should positively but firmly refer students to her institution's Honor Code. It should be at all time clear to a student what constitutes a dishonorable behavior and what the repercussions are.

The final test in a course is only the final moment of a semester long relationship between the instructor

and the students and between students. If the instructor succeeds in creating a climate of respect and care, she may be able to more positively address cheating and deter student from dishonesty.

2. Structure the variety and size of taxonomy groups wisely

As we indicated earlier, an instructor can create “groups” of questions by educational goal and difficulty; for example (1) definitional, (2) interpretative of average difficulty (average), (3) interpretative of high difficulty (high), (4) applicative average, (5) applicative high, (6) analytical average, (7) analytical high and possibly (8) evaluative. At Drexel University we have used the Blackboard Vista online course management system first and then the Blackboard Learn (BbLearn) system. For the economic principles classes taught by one of us the technology team imported into BbLearn the questions submitted in separate word files by taxonomy and difficulty groups (several questions included tables and graphs).

The instructor should determine efficiently how many groups are needed to calibrate the difficulty of the test and distinguish effectively among students with different levels of knowledge and skills. The greater the number of group, the more time and coordination efforts it will take to write the questions, create the exam and import it on an online management system. The instructor should also determine wisely how many questions should be included in the test from each group.

Given the nature of distant learning and online testing, it is best to give students the opportunity to take the exam over a window of time that encompasses a few days. This however, can raise questions on integrity: if there is only one, or very few versions of the exam it is possible for one student to take the exam early and share information with a fellow student providing her with an unfair advantage.

A solution to the above integrity issue consists in creating a reasonable number of distinct questions for each group. So, for example, if the instructor has determined that each student should have to answer four questions from a specific taxonomy groups, then the pool size of that taxonomy group should be a multiple of four (we used overall five as a multiple). The testing program will then draw randomly four questions from the taxonomy group for each student’s exam.

The technology team can configure the test so students see the full exam without discontinuity on their screen. However, the testing program draws for all eight groups the number of questions set by the instructor for each of them. Therefore, for each student the resulting test is only one of the many combinations that the computer creates from the eight groups pooled.

It is of note that having a high numbers of combinations for a test in the online setting helps resolve the integrity issues that could arise from having only a limited number of versions in face to face testing (as a result of students using concealed small devices to communicate online during the test).

3. Time the exam appropriately

Timing the exam appropriately helps distinguish the different levels of skills among students. It also helps minimize cheating behaviors (like trying to browse inconspicuously on a hidden device on the web to find if there is somewhere the answer to a question in the exam). That said, determining how much time to give per question and for the entire exam is a skill that requires experience. Having divided the “bank” of questions into taxonomy groups should help significantly. An instructor can in fact not only decide to allocate a set time per question for all the questions, but also, alternatively, allocate different time by taxonomy and level of difficulty of each group. For example the instructor can allocate the least time for the definitional questions and the most time for the analytic questions of high difficulty and then take the sum of those per-questions limits for the entire test.

4. Make sure that the definition of cheating is not all-inclusive and unnecessarily comprehensive.

It is expensive and cumbersome to track every single facial expression, eye motion and body posture of students taking the exam in the attempt to preclude their access to notes, the book or even the internet with a hidden device. With the appropriate structuring of the exam (a variety of taxonomy groups of large size, a variety of well calibrated levels of difficulty, and thoughtful time constraints) there should be no need to administer a closed book exam.

Daffin et al.(2018) state at the end of their publication that one possibility to resolve the unexplained performance differences between proctored and non-proctored exams is to make online exams open notes and open book but to increase the difficulty of the tests.

In truth even in face to face assessments we are (or should be) moving away from a world where “closed book” is the norm. With the pervasive presence of more and more advanced electronic resources and gadgets it is hard, in a face to face class that is of medium to large size, to ensure that no student has any access to her virtual notes or even the internet. In an online class ensuring integrity for a “closed book” test is even more challenging. Confining to using closed books exams in online tests imposes a dissipation of institutional resources and instructors’ time which would ultimately cause an increase in costs for the students.

5. Authenticate the identity of a student who takes the test.

One possible option consists in asking online students to go to a physical testing center for high stake tests; this however may require significant resources and would undermine the spatial and temporal flexibility that virtual learning environments offer to distant learners.

There are a variety of technology solutions available on the market that require the use of a webcam and a microphone to authenticate the student’s identity and ensure that the student takes the test alone without visibly communicating with other subjects. Some of these solutions include live proctoring by third parties, while others rely exclusively on facial recognition technology and provide the assessor with recordings and a list of thumbnails. Irrespective of the system used, at enrollment students should be informed of what technology is required for the course and if tests will be proctored and recorded.

While many platforms exist for authenticating identity and ensuring exam integrity, they share several similarities. First is a comparison of the current test taker with another identity point for each student. The identity point can be the photo on a government-issued identification such as a driver’s license, or a school-issued photo ID. In either case, the test taker holds the card up to the camera to be captured and saved as part of the test session. While a person could falsify the ID for a specific exam, comparison with other photos would make such attempts easy to identify. Some systems also incorporate a comparison of biometric data such as the person’s hand or the rate and rhythm of typing out a predetermined phrase – both of which are very unique to each person. However, the use of biometric data can be seen as more intrusive by students and may not be necessary if other precautions and strategies are employed.

A second characteristic of authenticating platforms involves the restriction of or monitoring of the computer used to complete the test. This may be in the form of a special web browser that restricts access to other sites and materials or it could be that screen captures of the on-screen activity are taken every few seconds. The third component to ensure test integrity is the use of the computer’s webcam to facilitate a live proctor or a recording that can be reviewed later. Recordings are also typically run through an algorithm that seeks to detect if the student looks away or gets up from the computer.

While these systems endeavor to eliminate cheating, they serve primarily to mitigate the common forms of cheating that would not otherwise be detected in an online test. Coupled with the aforementioned strategies of imposing time limits and randomizing question section, they serve to achieve a testing environment on par with a face-to-face proctored exam.

Webcam proctoring is not without its critics, however. Students have mentioned an increased level of anxiety when being recorded – even if only from the additional technology hurdles required. Privacy is also another common objection with some students concerned about installing software on their computer that has access to the webcam or that they are being recorded in their residence during the exam. However, without assurance of the integrity during the actual test session, none of the other mitigation strategies can in themselves guarantee a valid assessment.

Conclusion

A major challenge in online exams is the implementation of a setup that tests students' performance for different skill levels within Bloom taxonomy, while also ensuring fairness and integrity. Unlike the traditional randomization, the setting and procedures that we have proposed addresses some major integrity concerns, while allowing instructors to target students' performance by assessment goals. We hope that this will contribute to the advancement of the ongoing open dialog between academic institutions, instructors, students and higher education accrediting agencies.

References

- Anderson, L.W. (Ed.), Krathwohl, D.R. (Ed.), Airasian, P.W., Cruikshank, K.A., Mayer, R.E., Pintrich, P.R., Raths, J., & Wittrock, M.C. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's Taxonomy of Educational Objectives (Complete edition)*. New York: Longman
- Bernard, R., Abrami, P., Lou, Y., Borokhovski, E., Wade, A., Wozney, L., Walseth, P., Fiset M., Huang, B. (2004). How Does Distance Education Compare with Classroom Instruction? A Meta-Analysis of the Empirical Literature. *Review of Educational Research*, 74(3), 379-439. Retrieved from <http://www.jstor.org/stable/3516028>
- Chan, N., & Kennedy, P. (2002). Are Multiple-Choice Exams Easier for Economics Students? A Comparison of Multiple-Choice and "Equivalent" Constructed-Response Exam Questions. *Southern Economic Journal*, 68(4), 957-971.
- Chickering A., Gamson, Z. (1987). Seven principles for good practice in undergraduate education. *American Association of Higher Education Bulletin*, vol.39 no.7 pp.3-7
- Daffin Jr., L., & Jones, A. (2018). Comparing Student Performance on Proctored and Non-Proctored Exams in Online Psychology Courses. *Online Learning*, 22(1). doi:<http://dx.doi.org/10.24059/olj.v22i1.1079>
- D'Souza K. & Siegfeldt D. (2017). A Conceptual Framework for Detecting Cheating in Online and Take-Home Exams. *Decision Sciences Journal of Innovative Education*, 15(4), 370-391.
- Fask, A., Englander, F. & Wang, Z. (2014). Do Online Exams Facilitate Cheating? An Experiment Designed to Separate Possible Cheating from the Effect of the Online Test Taking Environment. *Journal of Academic Ethics*, 12 (2):101-112.
- Figlio, D., Rush, M., & Yin, L. (2013). Is It Live or Is It Internet? Experimental Estimates of the

Effects of Online Instruction on Student Learning. *Journal of Labor Economics*, 31(4), 763-784.
doi:10.1086/669930

Gino, F., Ayal, S., & Ariely, D. (2009). Contagion and differentiation in unethical behavior the effect of one bad apple on the barrel. *Psychological Science*, 20(3), 393–398.

Gratton-Lavoie, C., & Stanley, D. (2009). Teaching and Learning Principles of Microeconomics Online: An Empirical Assessment. *The Journal of Economic Education*, 40(1), 3-25. Retrieved from <http://www.jstor.org/stable/25765985>

Haladyna, T. M., Downing, S. M., & Rodriguez, M. C. (2002). A Review of Multiple-Choice Item-Writing Guidelines for Classroom Assessment. *Applied Measurement in Education*, 15(3), 309-334.

Hollister, K. K., & Berenson, M. L. (2009) Proctored versus un-proctored online exams: Studying the impact of exam environment on student performance.

Decision Sciences Journal of Innovative Education, 7(1), 271–294.

Holtzman, M. (2008). Demystifying Application-Based Multiple-Choice Questions. *College Teaching*, 56(2), 114-120. Retrieved from <http://www.jstor.org/stable/20695189>

International Center for Academic Integrity (2014). *The Fundamental Values of Academic Integrity*. Second Edition 2014. T. Fishman Editor. Clemson University. <https://academicintegrity.org/wp-content/uploads/2017/12/Fundamental-Values-2014.pdf>

Karkee T., Kim D., Fatica K. (2010). Comparability Study of Online and Paper and Pencil Tests Using Modified Internally and Externally Matched Criteria. Presented at the Annual Meeting of the American Educational Research Association (AERA), Denver, CO, April 29 – May 4, 2010

Kemp, N., & Grieve, R. (2014). Face-to-face or face-to-screen? Undergraduates' opinions and test performance in classroom vs. online learning. *Frontiers in Psychology*, 5, 1278. <http://doi.org/10.3389/fpsyg.2014.01278>

Kennedy, K., Nowak, S., Raghuraman, R., Thomas, J., & Davis, S. F. (2000) Academic dishonesty and distance learning: Student and faculty views. *College Student Journal*, 34(2), 309–314.

King, C. G., Guyette, R. W. Jr., & Piotrowski, C. (2009) Online exams and cheating: An empirical analysis of business students' views. *The Journal of Educators Online*, 6(1), 1–11.

Krathwohl, David R. "A Revision of Bloom's Taxonomy: An Overview." (2002). *Theory Into Practice*, vol. 41, no. 4, 2002, pp. 212–218. Retrieved from <http://www.jstor.org/stable/1477405>

Lou, Y., Bernard, R., & Abrami, P. (2006). Media and Pedagogy in Undergraduate Distance Education: A Theory-Based Meta-Analysis of Empirical Literature. *Educational Technology Research and Development*, 54(2), 141-176. Retrieved from <http://www.jstor.org/stable/30221319>

Luecht, R.M. (2001). Challenges of Web-Based Assessment. Presented at Annual Meeting of the National Council on Measurement in Education (NCME) 2001. Retrieved August 9, 2018 from <https://www.learntechlib.org/p/93364/>

Marzano R., Kendall J. (2007). *The New Taxonomy of Educational Objectives*. Second Edition. Corwin Press.

Mazar, N., Amir, O., & Ariely, D. (2008). The dishonesty of honest people: A theory of self-concept maintenance. *Journal of Marketing Research*, 45(6), 633–644.

Patterson, D. (2006). A Large-Scale, Asynchronous, Web-Based MSW Comprehensive Exam Administration: Outcomes and Lessons Learned. *Journal of Social Work Education*, 42(3), 655-668. Retrieved from <http://www.jstor.org/stable/23044200>

Shu, L. L., Mazar, N., Gino, F., Ariely, D., & Bazerman, M. H. (2012). Signing at the beginning makes ethics salient and decreases dishonest self-reports in comparison to signing at the end. *Proceedings of the National Academy of Sciences*, 109(38), 15197–15200. .

Stern, B.S. (2004). A comparison of online and face-to-face instruction in an undergraduate foundations of American education course. *Contemporary Issues in Technology and Teacher Education* [Online serial], 4(2). Retrieved from <http://www.citejournal.org/volume-4/issue-2-04/general/a-comparison-of-online-and-face-to-face-instruction-in-an-undergraduate-foundations-of-american-education-course>

Sun, A., & Chen, X. (2016). Online education and its effective practice: A research review. *Journal of Information Technology Education: Research*, 15, 157-190. Retrieved from <http://www.informingscience.org/Publications/3502>

Tallent-Runnels, M., Thomas, J., Lan, W., Cooper, S., Ahern, T., Shaw, S., & Liu, X. (2006). Teaching Courses Online: A Review of the Research. *Review of Educational Research*, 76(1), 93-135. Retrieved from <http://www.jstor.org/stable/3700584>

Velliariis, D. M. (2017). *Handbook of Research on Academic Misconduct in Higher Education* (pp. 1-440). Hershey, PA: IGI Global. doi:10.4018/978-1-5225-1610-1



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