



TUNING THE ASSESSMENT PROCESS:

STREAMLINING FOR EFFICIENCY

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Definition of Assessment Tuning

- An assessment method emerging from competency-based assessment
 - Identify subject-matter reference points from introduction to mastery.
 - Relevant for clinical training program where knowledge, skills, and professional dispositions must be developed.
- Work backward from graduating competent professionals
 - What should students be able to do upon completion of the program?
 - Develop outcome measures that illustrate a formative process.

Adelman, 2015

Examples from Academic Literature

- Physician Assistant Program (Contreras, et al., 2021)
 - Recruit highly qualified applicants promoting diversity and inclusion
 - Prepare entry level practitioners to provide quality patient centered care and function as members of a health care team
 - Use objective 5-point Likert Scale Questions to measure the level of competence
 - Limitation – inter-rater reliability and subjectivity

Examples from Academic Literature

- Competency-based Medical Education (Virk, et al., 2020)
 - Explored the rigor and validity of subjective assessment
 - Based on direct observation by supervisors, peers, and patients.
 - Assessment is criterion-focused, providing feedback loop
 - Encourages student self-reflection
 - Empowers faculty to apply criterion in fair, precise, and justifiable ways to facilitate learner-centered decisions
- Impact Theory (Corwyn, 2008)
 - Utilize stakeholders, advisory committees, faculty, students in assessment
 - Rely upon external accreditors for acceptable outcomes

Purpose of Tuning

- Tuning is used for quality improvement of the assessment protocol
 - Ties to mission for continuous improvement
 - Seeks to improve efficacy and efficiency of assessment
 - Makes sure each step is tied to what students should be able to do upon completion of the program (mastery of competencies)
 - Content experts and curriculum develops advised regarding competencies, and developmental measures (Introduced, Reinforced, Mastered)
 - Scaffolding knowledge, skills, and dispositions built in

School of Counseling Process

- Conducted an Academic Program Review
- Reviewed current program learning outcomes (PLOs)
- Identified specific questions relevant to profession
 - What do we expect counseling graduates to know? (Knowledge)
 - What do we expect counseling graduates to be able to do? (Skills)
 - What do we expect counseling graduates to value? (Dispositions)
- Assembled focus groups
- Sorted and coded descriptions from focus groups
- Developed draft PLOs
- Reviewed and approved through university governance

Clinical Mental Health Counseling – Learning Outcomes

- Synthesize counseling knowledge into evidence-based treatment plans for promoting wellness. (*Knowledge*)
- Construct therapeutic relationships with diverse populations to promote social change. (*Skills*)
- Develop professional counselor behaviors in clinical settings to foster growth and wellness. (*Dispositions*)

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Abstract

Focusing on quality improvement, the authors conducted a tuning process of the program assessment protocol based in action research and program evaluation design. Tuning is an assessment method to determine what students should be able to do upon completion of a program. Working backward from graduating a competent professional, the project team consulted content experts and curriculum developers to devise and map learning outcomes through the curriculum, demonstrating a formative process. Students will scaffold from demonstrating basic content knowledge, clinical skill, and professional disposition through demonstration of proficiency. Recommendations are made for future evidence-based program evaluation.

Tuning the Assessment Process: Streamlining for Efficiency

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What is Assessment?

Assessment applied to our Counseling Programs refers to a recurring process used by faculty to determine whether graduates have mastered the necessary learning outcomes to function as an entry-level professional in their field meeting requirements for a degree (Baker, 2021). Assessment occurs within the curriculum and in co-curricular assessments (learning outside the classroom). Course assessment is used to inform us the extent to which students have mastered course learning outcomes that are associated with program level outcomes. General education assessment occurs over the entire curriculum and is used to inform us the extent to which students have mastered institutional learning outcomes (scholarly writing, critical thinking, etc.). Co-curricular assessment is used to inform us how well students have mastered the co-curricular learning outcomes (like application of skills, and professional dispositions) through experiences outside of the classroom like residencies and fieldwork (Baker, 2021). Further types of assessment required include *non-academic assessment* and *Program Review*. Non-academic assessment is used by leadership and student support units to determine whether they are effectively and efficiently supporting student success and ultimately the University mission. Program review consists of a comprehensive evaluation of an academic department, related programs, an individual degree program, or student support units to determine the overall quality and effectiveness of the program or unit. A comprehensive assessment plan and program review are important components in measuring institutional effectiveness, systematic processes to determine how well the institution is achieving key performance indicators that support the institutional mission and goals (Baker, 2021).

These assessment processes are used to promote *continuous improvement* in student learning, at the same time in effectiveness, and in achieving institutional, and program outcomes which support student success (Baker, 2021). The results of these processes are then used to support *strategic planning and decision making* at the program, college, and institutional levels. Assessment is an ongoing activity, a cyclical process, in which data obtained from each cycle then informs planning, and actions taken in following cycles. The data obtained from assessment and program evaluation assists the program to better prepares graduates for their next steps like licensure and employment. Additionally, the institution can plan, budget, and allocate resources where most needed to ensure institutional outcomes are met.

In the School of Counseling, we assess four programs: Counselor Education and Supervision Ph.D., Clinical Mental Health Counseling, M.S., and School Counseling, M.S. as well as Dual Degree Masters. Our programs have specialized accreditation from the Council of Accreditation for Counseling and Related Educational Programs

(CACREP). These specialized accreditors require that our programs engage in program assessment. The purpose of comprehensive program assessment is to ensure that our graduates are mastering the knowledge, skills, and dispositions required to function as entry-level professionals. To do so, we will continue to improve student learning.

How We Currently Assess

In the current Comprehensive Assessment Plan for the School of Counseling, ten student learning outcomes were adopted for all the master level counseling programs based upon CACREP requirements. Then program specific learning outcomes were added to address specialty accreditation standards. Four were adopted for School Counseling (SC) and another four were adopted for Clinical Mental Health Counseling (CMHC). Nine student learning outcomes were adopted for the Counselor Education and Supervision (CES) doctoral program addressing the five CACREP core areas. Adopting student learning outcomes directly from accreditation standards is a common practice and allows program evaluators to determine whether the program is meeting all required areas for accreditation.

Aggregate data are collected throughout the year and are reviewed, analyzed, and reported annually. At that time, an action plan is created to address any deficits. Assessment instruments include

Indirect Evidence of Student Learning

Form	When Collected of whom
New Student Orientation Agreement Form	Completion of Orientation-all quarters
Student Satisfaction Survey	Annually – Fall
Graduation Survey	Monthly of recent graduates
Alumni Survey	Annually of graduates
Employer Survey	Annually
Professional Practice Assessment	Quarterly – Student Self-Evaluation
Cultural Competency Assessment	Quarterly – Student Self-Evaluation
Practicum and Internship Application	Quarterly – degree audit -satisfactory progress
Student Evaluation of Field Experience	Quarterly – Student Self-Evaluation

Direct Evidence of Student Learning

Learning Outcomes Report (EAC)	Annually – Student achievement of PLOs
Student Learning Outcomes Assessments	Quarterly – Student knowledge and skill assessment
Dissertation Quality Rubric (CES Students only)	Quarterly – Student overall doctoral quality and contribution on dissertation
Student Developmental Assessment	Quarterly – Student demonstration of professional dispositions

MS Techniques Course Skills Assessment	Quarterly – Student skills assessment
MS Residency/Pre-Practicum Skills Assessment	Quarterly – Student basic skills development and mastery
MS Residency-Pre-Practicum II Skills Assessment	Quarterly – Student advanced skills development and mastery
MS Residency/Pre-Practicum II Group Skills Assessment	Quarterly – Student group leadership and facilitation skill development and mastery
CES Teaching Skills Assessment	Quarterly- Student teaching skill in COUN 8125 & Residency
CES Supervision Skills Assessment	Quarterly – Student supervision skill in COUN 8135 where students supervise COUN 6671 MS level practicum students
CES Research Skills Assessment	Quarterly – Uses CES Teaching Skills Assessment to assess students in COUN 8203 Survey Research and CES Residency/Pre-Practicum III Skills assessment
CES Residency II/Pre-Practicum I Skills Assessment	Quarterly – 2 nd CES Student teaching and supervision skill assessment -uses questions from CES Teaching Skills Assessment and CES Supervision Skills Assessment
CES Residency III/Pre-Practicum II Skills Assessment	Quarterly – 3 rd CES student evaluation of teaching, research, and supervision skill-uses questions from CES Teaching, Supervision, and Research Skills Assessments.
Field Experience Mid-Quarter Evaluation	Quarterly – Student skills and performance at field site by site supervisor - Formative
Field Experience End-of-Quarter Evaluation MS	Quarterly – Student skills and performance at end of field experience course by faculty and site supervisor - summative
Field Experience End-of-Quarter Evaluation: PH.D.	Quarterly – Student skills and performance at end of doctoral practicum course by faculty and site supervisor - summative
CES Internship Self-Assessment	Quarterly – Students self-assessment of achievement of internship goals

Other Data Sources for Continuous Improvement

Program Applicant Data	Annually
Course Passing Rate Report	Annually
Cohort Retention Report	Annually
Course Characteristics Report	Quarterly
National Counselor Exam-licensure/certification	Annually
Praxis Series® Exam-licensure/certification	Annually

Individual Student Data Evaluation

Currently, our program also conducts individual student assessment throughout the time a student is completing their program of study. This evaluation coincides with the program level assessments reported above and for the purpose of this refinement process will not be addressed.

When Do We Assess? Example:

Fall Quarter	Winter Quarter	Spring Quarter	Summer Quarter
Assessment plan finalized	Continue to collect data	Continue to collect data	Continue to collect data
Implement action plans from previous cycle	Analyze/interpret data	Submit reports	PLO Report
Collect data	Identify action plans		Submit Report to Faculty

Updating the Assessment Process

To begin to streamline the exhaustive process described above, a review of best practices and trends in assessment was undertaken. The programs in the School of Counseling are training professionals to take their place as School Counselors, Mental Health Counselors, or Counselor Educators. Therefore, the review of trends focused on assessment practices for similar professions. Competency assessment was the first trend that emerged. Competency-based assessment is thought to be more objective (Contreras, et al., 2021). Programs were assessing the level of mastery demonstrated by students in demonstrating the knowledge, skills, and professional identity necessary to enter their profession.

For example, to move to competency-based assessment for a medical school, one program for physician assistant studies conducted a review developing six program outcomes (Contreras, et al., 2021). They began by recruiting highly qualified applicants; promoted diversity and inclusion from recruitment through curriculum design and clinical

placement; educated students for entry-level practice to provide quality patient-centered care which would be culturally competent and sensitive to the communities served; prepared students to be collaborative and effective members of a health care team; and prepared them for critical analysis and evidence-based decision-making (Conteras, et al., 2021).

Competencies in each area were measured by specific 5-point Likert Scale questions regarding the stages of competence (Contreras, et al., 2021). They analyzed inter-rater reliability to determine whether it was increased by the revision to their process. This process was carried out over all domains (history and physical taking, medical knowledge, creating a differential [diagnosis], management, recognizing social determinants, oral presentation, written documentation, interaction with patients and families, interaction with members of health care team, and general professionalism). Using Fleiss' Kappa, Contreras, et al. (2021) indicated scores ranged from fair to moderate with 9 scores demonstrating fair Inter-rater reliability, and only 1 score (on differential diagnosis) demonstrating moderate Inter-rater reliability. The researchers realized there were many confounding factors for this study and recommended creating subsets of raters by speciality and/or by competency.

They also decided to do a test with a control "student" to see how these more specialized raters compared (Contreras, et al., 2021). Questions arising from this study addressed student strength. For example, are more competent (strong) students likely to have greater inter-rater reliability? Is survey exhaustion a factor (is the same rater more or less likely to just check similar ratings for all, particularly if they have multiple surveys to complete)? Further, while competency-based assessment may be more objective, how objective can evaluators be in a clinical setting? This led us to consider whether subjectivity plays a role in competency-based assessment.

In a study of competency-based medical education (Virk, et al., 2020) explored the validity and rigor of subjective assessment. Certain domains like professionalism, ethical behavior, altruism, and communication can only be assessed developmentally and over time using subjective means. Competency-based assessment is inherently continuous, based on direct observation, focused on criterion, and has built in feedback loops to allow for development. That provides many opportunities for students to learn and develop competency before graduation. To increase validity, expert subjective assessment is needed. This occurs as students are provided learning opportunities which can also serve as assessment opportunities, especially for professional skill development, self-awareness, professional identity, etc. The assessment opportunities must include meaningful feedback to provide students the opportunity to value their learning and competency development over time. This encourages students to self-reflect and self-direct their own learning. Subjective assessment also empowers faculty to apply criterion in fair, precise, and justifiable ways to allow learner-centered decisions.

To increase rigor in subjective assessment, several modalities have been developed. One such is Workplace Based Assessment (WPBA) for assessing students' performance in clinical settings (Singh & Sood, as cited in Virk, et al., 2020). This model allows for assessment of competencies like teamwork, professional behavior, and organizational skills needed for workflow management. Feedback is solicited on routine performance from experts like supervisors and other health professionals, peers, and patients. Meaningful interactions are developed between students and teachers through periodic group sessions and individual supervision sessions with clinical supervisors. These interactions build trust and reinforce social interactions that provide a feedback loop that fosters self-directed learning. Adding this assessment at the site of clinical work adds to the university centered feedback between faculty and student. We have learned that students value rich descriptive feedback where strictly number scores may not help them be aware of what can be done to improve (Govaerts, et al., 2005, as cited in Virk, et al., 2020).

One way to include rigor in subjective assessment is through the use of rubrics with detailed qualitative descriptions about each rating. This type of scoring tool contains criteria for performance with descriptions of levels of development toward competency. Rubrics are generally developed by curriculum experts with a deep understanding of the competency being measured and scaffolding of student learning. This method allows differentiation between whether a student has mastered the domain, needs improvement, or is at the level of needing remediation to be able to develop the competence. By using subjective assessment in the field and utilizing rubrics in an online environment we can increase the rigor of this method. Then through thematic analysis and triangulation of multiple points of data, the strength of our findings will be more apparent. As our program includes both online delivery and fieldwork placement, these recommendations make sense.

The need for competency-based assessment occurring in an online environment was explored due to the impact of COVID-19 on higher education (Mahajan, et al., 2021). They recognized that effective assessment must include measures of knowledge, communication (and clinical) skills, and professional attributes. Yet faculty teaching in an online environment do not get to directly observe to rate these domains as in the previous study. This data must be collected, analyzed, and acted upon strategically and longitudinally. This study explores the possibilities for online competency-based program assessment.

Recommendation was made to delink assessment and decision moments from the continuous data collection points (Mahajan, et al., 2021). Criterion-based measures were integrated into the assessment plan with a developmental approach where students received feedback and mentoring along the continuum of assessment. Robust work-based assessments were built into the curricula like case-based learning. These served as data points along the way to summative assessment, but individual

assessments were not used for high-stake decisions. This allows for the use of measures with a lower rate of reliability but a higher educational impact (Mahajan, et al., 2021, p.19). These multiple low-stake assessment were built into online courses in case studies, skill simulations, and collaborative projects, etc. Both quantitative and qualitative data were collected. Each assessment was followed with developmental feedback that was timely, specific, and informative to support student learning. This method can be blended with a high-stakes assessment near the end of a program, like a comprehensive examination. It is important that stakeholders are informed and buy in to the system. Common definitions need to be shared to increase inter-rater reliability. For example, orientations are needed so that all stakeholders see where the assessment data is collected, how it is collected, and when developmental feedback is given to improve both programmatic quality and individual learning.

We can see from this critical review of competency-based assessment many questions are left unanswered. Earlier studies of program evaluation resulted in the emergence of program impact theory (Corwyn, 2008). It is recommended to work with stakeholders when devising assessment targets (Donaldson, 2007 as cited in Corwyn, 2008). For example, advisory committees may be made up of community as well as other outside stakeholders. This aligns with requirements of many accreditors like HLC and CACREP. Due to the history of evaluating counseling programs, CACREP has established recognized core areas that link to program graduates being prepared for professional licensure or certification and work in their field. Standards like these aid programs to formulate, prioritize, and evaluate desired outcomes for program impact. Limitations of program impact theory application were practical often based in factors like time, resources, or feasibility. Other challenges were determining what is defined as credible evidence and how to measure program evaluation versatility.

To update and tune our assessment process, we followed Baker's (2021) recommendations to determine what program graduates should know and be able to do; how we will know they can know and do these things; whether student performance meets criterion; how we can improve student learning; and what will it take for that to happen. We want graduates to be demonstrate the knowledge, skills, and dispositions of an entry level professional counselor. These should be the Program Learning Outcomes (PLOs) and University Learning Outcomes (ULOs). We will use already existing instruments, measures, and cut scores to determine whether competencies were achieved. We will determine whether students met performance expectations after our updated assessment plan is implemented. We can then determine how we can improve student learning and what we need to do so.

Tuning the Assessment Process

After reviewing our current process in depth and conducting a review of current trends and practices in program evaluation, we began to explore how to streamline our process. Quality improvement of our assessment protocol required conducting action

research and focus on program evaluation design. Tuning is an assessment method emerging from competency-based assessment to identify subject-matter reference points (Adelman, 2015 February). That begins with what students should be able to do upon completion of a program. Working backward from graduating competent professionals, the project team consulted content experts and curriculum developers to revise and map learning outcomes through the curriculum, illustrating a formative process.

Initially, the project team gathered all current assessment measures and reviewed the current curriculum map. Then, program directors were called upon to help identify faculty who were content experts in each area. A summit was called for each identified program group to brainstorm exactly what students should be able to know, do, and be professionally upon completion of the respective programs.

Content analysis was conducted on ideas and terms that emerged from these focus groups that were used to describe competent graduates. For example, within content knowledge the groups identified evidence-based theories and practices from 8 common core areas required by accreditors and licensure boards for masters' programs and 5 domains recognized for competent doctoral graduates who will be Counselor Educators. Also identified was the need for consideration of context, evidential support, theory, and promotion of social change when students were selecting and implementing interventions and techniques. They recognized that these factors helped graduates improve lives across an individual and global community.

Also, from these summits, it was determined that students need to be able to demonstrate progression from basic content knowledge, clinical skill, and professional dispositions or behaviors early in the program to a level of proficiency in these areas by the end of the program. The program leaders referred to this as scaffolding the knowledge, skills, and dispositions through the program. For developing proficiency in clinical skill and professional dispositions, themes that emerged were regarding behaviors that would be demonstrated, upholding professional ethics, accreditation standards, legal requirements, and institutional standards. These would be measured through evaluations of clinical skill development and identified key professional dispositions, which in turn would foster growth and wellness in students and advance the counseling profession. Doctoral graduates in Counselor Education would need to demonstrate competency of how to meet the needs of diverse counselor-in-training and counselors across professional settings while addressing unique needs and promoting individual strengths, identifying resources. Another important need identified was fostering growth and wellness in self and others. The same process was followed to identify themes for development of specialty areas within programs and how to evaluate competency in those areas.

Honing Program Learning Outcomes

After categorizing input from the summits into themes regarding what our experts recognized as required knowledge, clinical skill, and professional dispositions, our project team began working to streamline the information into program learning outcomes. This is the tuning process in action. We determined to write short and concise goals that could be measured across either knowledge, skills, or behaviors (dispositional). These goals would be observable and measurable and would not have multiple outcomes. Further, we considered our external accreditors and whether they had prescriptive language regarding program learning outcomes (PLOs). We determine that we would use three measures across the program so that we could track development. We would first measure when the PLO related course learning outcome was first introduced, when it was reinforced, and a final measure that would demonstrate competency or mastery. We would not use course grades or course completions as a measure of competency. Rather we would look for the specific course in which the PLO was first taught. We would find the course learning outcome that addresses that PLO. Then, we would find the assignment that was used to teach the course learning outcome and look within the grading rubric to determine the specific line of the rubric that addressed the knowledge being measured by the PLO. The rubrics were developed by the Subject Matter Experts that built the course in conjunction with the program leadership. Thus, in most cases, there is only one element where knowledge mastery is assessed. The other elements address issues such as following directions, quality of writing, and engagement in the forum. The specific content mastery lines from the rubric were placed into our Curriculum Map to the PLOs.

Program Learning Outcome -> Course Learning Outcome -> Course Assignment -> Assignment Rubric -> Specific Rubric Line

For example, for our Counseling master's program, the first PLO is to

Synthesize counseling knowledge into evidence-based plans promoting wellness.

This PLO links to course learning outcomes (CLOs) across 8 core areas of counseling knowledge taught in eight different courses. One of those is ethics. Within the ethics course, students are taught the American Counseling Association (ACA) *Code of Ethics* and an ethical decision-making model. Then they complete an assignment applying the ethical codes to a case study. The grading rubric was then reviewed to determine which line measured mastery of the knowledge. We are then able yearly to download the de-identified data for that rubric line across multiple sections, quarters, and students to evaluate how well students were able to make ethical decisions. This is the introductory assessment for this PLO following our developmental model. The PLO is then reinforced in the Crisis Counseling course with a case study on interpersonal violence and finally measured for mastery in Internship in discussion of ethical issues in a client case conceptualization. Our program has set benchmarks (like 90% of students will demonstrate competence in that outcome) to determine how well we are doing. After

reviewing this data yearly, recommendations are made for changes that may be needed for continual improvement. This process is duplicated for all PLOs across the program.

Recommendations

We recommend starting with your Institutional Mission Statement. Consider how that links to your program's mission. This provides the foundation for developing the program learning outcomes. Utilize stakeholders to provide input on what students should be able to competently demonstrate upon completion of the program. We used focus groups with stakeholder participants, analyzed themes, and came up with the important competencies that needed to be assessed. The experience of applying this process from start to finish needs to be recorded over the first year of implementation. It would be helpful to identify various clinical programs that are using competency-based assessment to determine whether this process improves student outcomes like their passing scores on a National Exam or finding employment. It would be helpful to compare multiple programs using this methodology to see if this method yields successful outcomes. This experience so far has been insightful and helpful in tuning our comprehensive assessment plan. We have yet to see how it will do after implementation.

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