



Designing a Rigorous Micro-Credential Assessment Process to Verify Mastery of Competencies: Key Considerations

JULY 2019

Background

Several grantees funded by the U.S. Department of Education Effective Educator Development (EED), formerly known as the Teacher Quality Programs (TQP) division, are implementing micro-credentials to support educator development. The TQP Technical Assistance (TQP TA) Center brought these grantees together in-person and virtually through a community of practice (CoP). Based on discussions with the grantees, the TQP TA Center developed two briefs to address their most pressing needs. This brief provides guidance on designing assessments for micro-credentials. A companion brief provides guidance on [communicating the purpose, value, and potential of micro-credentials](#) for educators.

To develop this brief, the TQP TA Center collaborated with five grantee organizations that are implementing micro-credentials. The brief includes specific illustrative examples from three of the grantee organizations. Although the brief is not based on an exhaustive or systematic search of the work of all organizations implementing micro-credential programs, it offers insights for educational organizations to consider as they design and implement their programs.

Introduction

State and district education leaders are increasingly interested in using micro-credentials to support the professional learning of educators and provide them with opportunities to demonstrate mastery of a skill or competency. Educators can benefit from linking the obtained micro-credential to opportunities for professional advancement, including professional development units, certification or licensure, a stipend, or even career progression. When linking micro-credentials to high stakes' human capital decisions such as career advancement, state and district leaders must ensure that each awarded micro-credential is an accurate representation of mastery of the competency. Accurate verification of a skill or competency requires that the micro-credential include a rigorous process for assessing mastery.

This brief provides key considerations for ensuring a rigorous assessment process for micro-credentials. After defining the term "assessment process," the brief focuses on two essential components for assessment accuracy, **quality evidence** and **accurate review and scoring**, and discusses how to achieve those essential components. The brief highlights grantee and micro-credential provider examples to illustrate what the components of a rigorous assessment process look like in practice. Links to relevant resources from these examples are provided within the brief and in an Appendix.



Importance of Rigorous Assessment Process

For the purposes of this brief, the **Assessment Process** refers to the process whereby a micro-credential provider determines whether the educator has achieved mastery of a given competency. The assessment process includes reviewing and scoring evidence submitted by the educator so that reviewers can determine whether a micro-credential will be awarded. While many micro-credentials include an assessment process that is formative (i.e., assessment that occurs during the professional learning experience), this brief focuses on the summative assessment process (i.e., assessment that occurs following the learning experience) as the “gateway” for verifying mastery of a competency and awarding a micro-credential. The summative assessment process occurs after all quality evidence has been submitted by the educator and/or those who have gathered evidence on the educator’s competency. For any assessment process, the review and scoring process can only be accurate if the evidence used for making the assessment of competency is itself high quality.

Importance of High-Quality Evidence in the Assessment Process

The two types of evidence typically used in the summative assessment process are: 1) **knowledge or reflective evidence** (i.e., evidence that measures knowledge of competency) and 2) **performance evidence** (i.e., evidence that measures applied skills).

Types of Evidence and Tools Used in Summative Assessment

Knowledge or reflective evidence.

Educators’ knowledge is tested through quizzes, written materials, reporting of facts based on learning, educator and student reflections, or peer- and self-evaluation reviews.

Performance evidence.

Educators submit evidence of their practice such as video recordings, written observations of instruction, lesson and unit plans, student work and assessment results, or some combination of these to form a portfolio of performance-based assessments.

Tools for assessing competencies.

A variety of tools are used to determine whether an educator has demonstrated competency, such as rubrics, panel review by a group of trained educators, and/or providing evidence of meeting standards related to the topic of the micro-credential.

Source: [Bite-Sized, Tailored, and Job-Embedded: Communicating the Value and Variety of Micro-Credentials in Education](#)

For both types of evidence, the most important consideration for micro-credential providers is whether the evidence is measuring what it intends to measure. This requires that the evidence is tightly aligned to the specific competency of focus and that the evidence source will provide an indication of whether the educator has obtained mastery of the competency. To achieve the necessary alignment, micro-credential providers should deconstruct the competency to determine the discrete knowledge and skills needed for mastery and determine how the educator will demonstrate mastery of the knowledge or practice required for competence.

The following examples from **Lindsay Unified School District**, **Harmony Public Schools**, and **Coppin State University** illustrate how to systematically align a priority competency to a specific evidence source.



LINDSAY UNIFIED SCHOOL DISTRICT

[Lindsay Unified School District](#)

administrators determined that the competency of focus for their micro-credentials would be the specific

“instructional look fors” or behaviors that are expected to influence student behaviors (See Lindsay’s competency-based framework within their [Instructional Look Fors: Resources to Personalize Learning](#), developed in partnership with Summit Public Schools and Transcend Learning). After prioritizing a competency for a micro-credential, Lindsay administrators began carefully considering which evidence sources best demonstrate the teacher’s action and the expected student behavior. In making these determinations the Lindsay team asked, “What evidence demonstrates the teacher’s planning of this competency?” (e.g., lesson plans); “What evidence will demonstrate implementation of this competency?” (e.g., student work, video); and “How can this evidence be designed to offer educators’ voice and choice in their evidence sources?”

An example of an evidence source for a micro-credential on Project Based Learning (PBL) is an observation protocol completed by an expert observer ([PBL Protocol](#)). This protocol identifies the specific “instructional look fors” for this competency and is the key evidence source used in the summative assessment process for determining the award of the micro-credential.

Location: Lindsay, CA
Size: 4,191 Students
Grantee Type: TSL

HARMONY PUBLIC SCHOOLS



[Harmony Public Schools](#) administrators determined that the highest leverage point for micro-credentials would be to support both new and veteran educators by identifying core teaching competencies for the new teacher induction program as well as key competencies for each teacher career ladder position. After establishing core competencies for these roles, existing teacher leaders and members of the senior leadership engaged in an intensive process to establish what these competencies look like in practice. Harmony collaborated with [BloomBoard](#), a micro-certification platform, to use the [ADDIE](#) instructional design model (i.e., Analyze, Develop, Design, Implement, Evaluate) to ensure competency alignment and determine evidence sources that capture the development of the competency over time. Harmony also engaged its external professional learning partners during micro-credentialing development to ensure training and professional development is aligned to these key competencies.

Examples of performance evidence for the [Curriculum Writer](#) role include unpacking standards using a graphic organizer, a lesson plan that outlines research-based strategies, a short video during implementation of the lesson, student work samples to demonstrate the competency over time, and [Selecting and Implementing Research-Driven Instructional Strategies](#).



Harmony's [*induction program*](#) for new teachers is created through a micro-credentialing pathway based on the organization's instructional playbook influenced heavily by [*Teach Like A Champion*](#) (TLAC) strategies. The micro-credentials are also aligned to [*Danielson's Framework for Teaching*](#), which allows Harmony principals and coaches to use micro-credentials when making learning recommendations and coaching decisions for teachers based on classroom observation data. An example of performance evidence for the [*Planning with Students in Mind with TLAC*](#) micro-credential from Harmony's [*Induction Role Card*](#) includes a lesson plan outlining the effective use of two TLAC strategies, **Plan for Error** and **Double Plan**, along with annotated short video clips demonstrating implementation of the strategies.

Location: Houston, TX
Size: 35,000 Students
Grantee Type: TIF 2016

COPPIN STATE UNIVERSITY



The [*Coppin State University*](#) team determined that one of the competencies of focus for their pre-service teacher micro-credentials would be [*Cultural Diversity and Growth Mindset*](#). The Coppin State team identified the key competency dimensions expected to support P-12 students in diverse school settings including: 1) engaging self, 2) engaging others, and 3) engaging in diverse communities. The Coppin State team aligned the competency dimensions with the core teaching standards from both the Interstate Teacher Assessment and Support Consortium (InTASC, 2011) and high leverage practices (HLP) from the Teaching Works (2013). After determining competency dimensions, the team identified evidence sources aligned to each of the dimensions of the competency including Self Reflection and Facilitator Feedback (i.e., Engaging Self); Formative Review and Feedback (i.e., Engaging Others), and Summative Evaluation (i.e., Engaging in Diverse Communities).

Finally, the team determined specific evidence that best reflects competency in these areas. For example, Engaging in Diverse Communities requires the pre-service teacher to design and lead a classroom activity as well as reflect on and summarize competencies demonstrated, goals achieved, and strategies for improvement. These two evidence sources are then included in a summative evaluation using a 4-point rubric to determine proficiency prior to awarding a micro-credential.

Location: Baltimore, MD
Size: 2,738 Students
Grantee Type: TQP 2016

Importance of Accurate Review and Scoring in the Assessment Process

Once all the requisite evidence sources have been submitted, the next step is to review and score the evidence to determine whether the educator has mastered the competency of focus. Two key considerations for ensuring the most rigorous review and scoring process are **effective rubric design** and **reviewer calibration**.

Effective rubric design is essential for a rigorous review and scoring process, as micro-credential providers must provide the reviewer with a clearly defined standard for mastery and an instrument to review and score evidence sources. The rubric should clearly identify which evidence sources are related to each aspect of the competency and the criteria for achieving mastery, similar to the rubrics developed by state and local education agencies implementing educator evaluation and support systems. An important



consideration in rubric design is determining the appropriate weight for each evidence source when determining mastery. For example, a micro-credential provider may determine that an observation of educator practice by a trained observer receives a higher weight than an educator self-reflection on the topic. The provider may even decide that only one or two evidence sources be included in the final summative review if they are the only evidence sources that achieve the level of quality required for determining whether an individual will receive the micro-credential. The example below from Lindsay Unified School District illustrates their approach to weighting evidence sources.

Lindsay Unified School District's Approach to Weighting Evidence Sources

One source of evidence collected by Lindsay Unified administrators for their micro-credential in Project Based Learning is an observation of educator practice ([PBL Protocol](#)). The Lindsay Unified team determined that observation of educator practice is the **ONLY** source of evidence that will be included in the final summative assessment process. While other evidence sources must be collected by the educator and included in a portfolio, the observation of educator practice is the only source that is reviewed and scored for quality to inform whether the micro-credential is awarded. Lindsay Unified administrators made this decision because the observation is the only evidence source they are confident has the level of quality needed to inform this micro-credential award. They have confidence in this observation tool because it was developed in collaboration with experts in Project Based Learning at the [Buck Institute for Education PBL Works](#), who also conduct the observation. After the observation is complete, the Buck Institute reviews and scores the observation to determine if the educator has obtained mastery of the competency.

The Lindsay Unified team's decision to include only one evidence source in the summative assessment process highlights the importance of using information on evidence quality to inform both decisions about which evidence sources to include and the weight given to each.

Reviewer calibration, or training on how to accurately apply the rubric to evidence sources, is essential for accurately reviewing and scoring mastery of the specific competency. Reviewer calibration includes training reviewers on the components of the rubric, illustrating how to effectively apply it to evidence sources, and providing opportunities for reviewers to practice applying the rubric and compare their score to a "true score" (i.e., the score given to the same set of evidence pieces by an expert reviewer). A reviewer should only be considered calibrated after her or his review and scoring of evidence sources consistently aligns to the true score. It is also important to develop an ongoing process, potentially annually, for reviewer calibration to ensure reviewers continue to effectively and consistently apply the rubric. The following example illustrates how one micro-credential provider, BloomBoard, calibrates reviewers.

Bloomboard's Certification and Calibration Process for Micro-Credential Reviewers

[BloomBoard](#) has created a two-step certification and calibration process for all reviewers of micro-credentials to ensure reliability. Reviewers must first pass a reviewer certification showing that they can provide targeted feedback on a submission against a rubric. When a reviewer is certified, he or she must also go through an inter-rater reliability-based calibration process for each micro-credential being reviewed to show the ability to score at an 80% reliability threshold against a master score.



Looking Forward

Ensuring a rigorous assessment process will become an increasingly important topic as educational organizations move towards linking the obtained micro-credential with higher stakes' human capital decisions. For example, a district may implement a “stack” (i.e., group) of micro-credentials that informs career progression, which would make the implications of inaccuracy – including legal implications of using inaccurate information to promote one educator over another – substantial. Micro-credentials with lower stakes (e.g., elective professional development) should also adhere to high standards of accuracy as educational organizations must have confidence that their educators have the necessary competencies to best serve students.

Balancing the need for a rigorous assessment process with the financial cost of implementing that process may become a concern for districts and states implementing micro-credentials. For example, reviewer calibration is essential to an effective review and scoring process but can be costly, particularly if it relies upon external experts. These tensions will push educational organizations to determine innovative solutions to maintain accuracy while controlling costs. Fortunately, these issues do not need to be addressed in isolation. While rigorous micro-credential assessment is a new and rapidly evolving topic, there are other organizations in the field, including those described in this brief, that can serve as resources.



Appendix: Additional Resources

Bite-Sized, Tailored, and Job-Embedded: Communicating the Value and Variety of Micro-Credentials in Education <https://eed.communities.ed.gov/#communities/pdc/documents/18136>

Coppin State University

Coppin State University: Cultural Diversity and Growth Mindset
<https://eed.communities.ed.gov/#communities/pdc/documents/18004>

Harmony Public Schools

ADDIE Instructional Design Process <https://www.instructionaldesign.org/models/addie/>

BloomBoard <https://bloomboard.com/>

Danielson's Framework for Teaching <https://danielsongroup.org/framework>

Harmony Public Schools: Curriculum Writer Role Card
<https://eed.communities.ed.gov/#communities/pdc/documents/18005>

Harmony Public Schools: Induction Teacher Role Card
<https://eed.communities.ed.gov/#communities/pdc/documents/18006>

Harmony Public Schools: Micro-Credential Programs 2018-19
<https://eed.communities.ed.gov/#communities/pdc/documents/18008>

Harmony Public Schools: Planning with Students in Mind with Micro-Credential
<https://eed.communities.ed.gov/#communities/pdc/documents/18010>

Harmony Public Schools: Selecting and Implementing Research-Driven Instructional Strategies Micro-credential <https://eed.communities.ed.gov/#communities/pdc/documents/18009>

Teach Like a Champion <https://teachlikeachampion.com/>

Lindsay Unified School District

Lindsay Unified School: District Project Based Learning Observation Protocol
<https://eed.communities.ed.gov/#communities/pdc/documents/18012>

Lindsay Unified District: Instructional Look Fors: Resources to enable personalized learning
<https://eed.communities.ed.gov/#communities/pdc/documents/18011>

