

Chapter 13:**Iterative Design and Implementation of Teacher Education: Refining our Work Moving****Forward**

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Teacher preparation program redesign continues across the nation as these programs strive to increase their rigor, relevance, and effectiveness in light of the need for skilled future educators. Complex and challenging as program redesign may be, such efforts do not occur in a vacuum; in fact, redesign often must occur within a context of ongoing numerous interconnected continuous improvement initiatives. In the case of the Teaching, Learning, and Leading with Schools and Community (TLLSC) program, the bulk of the design and initial implementation work occurred during the initial stages of this redesign effort; nevertheless, we recognize as a faculty the need to continuously improve our field-based program, curriculum, and instruction to sustain our work in the complex and dynamic contexts of schools and communities. In this way, we embrace the iterative nature of program design and implementation (Chang, Rak Neugebauer, Ellis, Ensminger, Ryan, & Kennedy, 2016), where we engage in continued data collection, analyses, reflection, and application.

This chapter explores the ways in which TLLSC faculty consistently utilize data to drive the iterative design and implementation of the field-based model. The chapter begins with an introduction to the various ways in which assessment has been integrated throughout TLLSC. An overview of methods used to ensure systematicity and rigor in our data collection and analysis is provided. This is followed by a brief survey of assessment initiatives which have sprung from the

needs and interests of faculty members both individually and in groups. Some of these address teacher candidates' knowledge, skills, and dispositions, while others address elements of the design and implementation of TLLSC. The chapter concludes with an examination of challenges in assessment in a program featuring iterative design where all elements of the model serve to identify and define criteria for program refinement to enhance candidate learning.

These processes are linked to and sustained by our accreditation review processes both at the micro and macro levels in ways describe in the sections to follow. Accreditation is a process of external peer review where specialized programs of study, depending on content area (e.g., early childhood special education, mathematics, science, etc.) must meet standards established by their respective Specialized Professional Associations, or SPAs (e.g., the Council for Exceptional Children for special education programs). Programs provide evidence of meeting these standards and submit required accreditation reports to their respective SPAs. Concurrent with this process is the overall program accreditation conducted by the Council for the Accreditation of Educator Preparation (CAEP), which encompasses all initial and advanced licensure programs. CAEP accreditation includes some features similar to those of SPAs, for instance the use of Initial and Advanced Level Standards, of which the program is accountable for providing evidence that it has addressed and met.

Use of Assessment within TLLSC

From the program's inception, TLLSC faculty have positioned assessment as a high priority in the larger scope of the program. Faculty set out to develop assessments so that candidate progress and growth could be measured and monitored for each developmental phase of the program: Exploration, Concentration, and Specialization. One example of programmatic

assessment design is the creation of a universal set of dispositions aimed at capturing the development of each candidate over the four-year program. As described in Chapter 6, dispositions include non-academic attitudes and behavior essential to candidates' success that are not necessarily covered by academic assessments (Schussler, Stooksberry, & Bercaw, 2010). In TLLSC, dispositions include professional behaviors, recognition of diverse learners, and engaging in advocacy. As candidates progress through the program, expected levels of dispositions increase in depth, complexity, and impact as candidates develop as professionals in service of social justice.

Numerous assessments address candidates' understandings, knowledge, and skills within their education majors, henceforth referred to as program areas (i.e., early childhood special education, elementary, secondary content areas, special education). Faculty developed these assessments to provide instructors with systematic tools to measure candidate learning and development, as well as to provide critical data for submission to the SPA. Faculty also developed specific benchmark assessments to determine if candidates indeed reach program objectives. The field-based nature of TLLSC lends itself to competency-focused, field-based assessment in the field from the first year. Data are collected on candidates beginning in their first field-based preparation experiences during freshman year. Collectively, these forms of assessment provide a rich picture of candidates' understandings, knowledge, skills, and dispositions as they move through the four-year continuum. Trends in these data help to inform faculty on candidate progress, as well as to identify areas for improvement to the overall TLLSC program and to specific aspects of curriculum and instruction.

Figure 13.1 displays the various forms of candidate, program area, and TLLSC assessment. *Individual candidate* assessment is continuous, occurring within field-based sequences and involving direct assessment of candidates’ work in communities and schools, including their collaboration, professionalism, and emerging instructional competencies. *Program area* assessment occurs frequently throughout the TLLSC continuum; much of this assessment focuses on candidates themselves, but as the model illustrates, TLLSC faculty and staff also engage in self-assessment and assessment of the partnerships upon which the program is built. Assessments are integrated across the TLLSC continuum to feed into the continuous improvement processes of TLLSC as a whole as well. Dispositions and sequence summative assessments are discussed across the TLLSC program for purposes such as candidate tracking and program improvement. These processes will be elaborated later in this chapter.

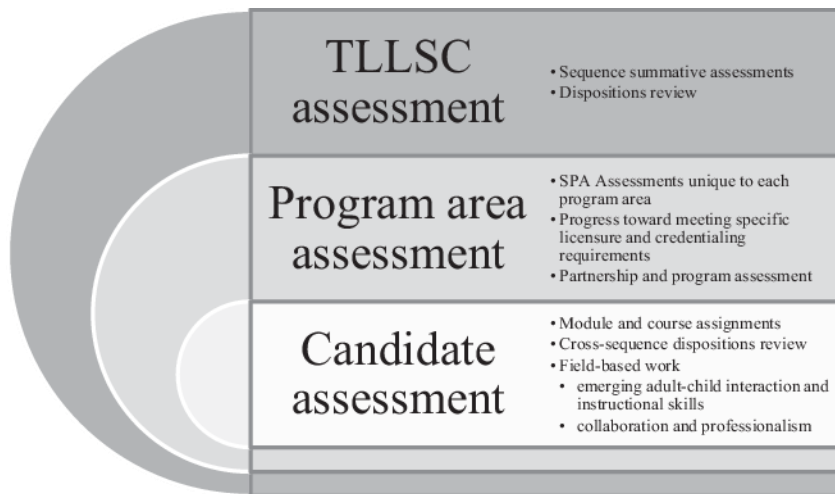


Figure 13.1 Assessment Model Within the TLLSC Program

At the candidate level, assessment addresses overarching understandings of teaching and learning, as well as mastery of the knowledge and skills of their chosen teaching profession (i.e., program areas) through a variety of program area-specific assessments. A key component

includes assessments developed within these diverse concentrations specifically to meet standards for each corresponding SPA. TLLSC faculty actively work to meet the standards and expectations for a range of SPAs through instruction and assignment designed to specifically address SPA standards. Table 1 indicates the SPAs represented by the current set of TLLSC program areas. In addition to the SPA assessments, candidates complete key benchmarks toward their licensure and credential areas (some of which are determined by SPAs, other professional organizations, and the Illinois State Board of Education (ISBE), and assessment of their professionalism and collaboration (some of which is also captured in dispositional assessment).

Table 13.1 TLLSC Program Areas and Corresponding SPAs

<i>Program</i>	<i>SPA</i>
Mathematics	National Council of Teachers of Mathematics—(NCTM)
Blended Early Childhood Special Education	National Association for the Education of Young Children—(NAEYC) Council for Exceptional Children—(CEC)
Special Education	Council for Exceptional Children—(CEC)
Science	National Science Teachers Association—(NSTA)
Social Studies	National Council for the Social Studies—(NCSS)
Education Leadership	National Educational Leadership Preparation—(NELP)
English	National Council of Teachers of English—(NCTE)
English Language Teaching	Teachers of English to Speakers of Other Languages (TESOL)
Language Arts	International Literacy Association (ILA)
Elementary Education	Association for Childhood Education International—(ACEI)
Foreign Language	American Council on the Teaching of Foreign Languages—(ACTFL)

Candidate assessment is facilitated primarily by instructors (including full-time clinical faculty and adjunct instructors) and tenured/tenure-track faculty (who represent each program area). This assessment not only drives the iterative redesign of programs, but in many cases, forms the basis of outcome studies conducted by individuals and teams consisting of faculty members and doctoral students (e.g., Kennedy & Lees, 2015; Lees & Kennedy, 2017). In this sense, TLLSC assessment involves the entire faculty (as well as staff members in supporting

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roles), who assess overall candidate knowledge, skills, and dispositions, and the development and deepening of the enduring understandings of TLLSC explored in Chapter 3.

Even when examining data at the TLLSC program level, the entire faculty discuss the implications of these data for individual candidates. The Annual Disposition Review, which will be discussed later, is an example of a process when TLLSC faculty discussions on dispositions include issues that span the entire TLLSC program as well as trends pertaining to individual candidates. Here, troubleshooting occurs on several levels: the overall TLLSC program/phases, program areas, and individual candidates. This serves as one example of efforts aimed at utilizing the work of instructors, program area faculty, and the TLLSC faculty and staff as a whole to share and interpret data. At each level – candidate, program area, and TLLSC – data serve to identify areas for discussion and potential redesign. These conversations have, for example, resulted in revisions and reinventions of such processes as reviewing candidate dispositions, intervening in cases where candidates struggle to make progress, and addressing the needs and interests of internal transfer students who decide to enter TLLSC after already having spent one to two semesters in other majors at Loyola.

Lending Systematicity and Rigor to Assessment Initiatives

Since long before the inception of the TLLSC program, all stakeholders in the School of Education have worked to collect all data into LiveText, a centralized assessment management web application. A common nomenclature and clearly outlined protocol to guide assessment development and editing has helped to build meaningfully sequenced and similarly organized assessments and rubrics across the four-year continuum. This serves to support a culture where data is not only valued, but actively used for program and candidate-related decisions in real

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time. For example, data from module assessments are accompanied in the online assessment system by actual candidate work. Teacher candidates upload assignments into LiveText that are tied directly to module, sequence, program, and SPA assessments. These then serve as permanent evidence for candidate ratings while supporting other interlaced TLLSC assessment initiatives and needs.

Continual candidate assessment has been integral to the development of TLLSC. Program faculty were careful to communicate guidelines for developing rubrics for all modules and courses so that a *universal rubric scoring template* was employed across all program areas. While the content may differ from one module, course, and licensure area to another, scoring (in the form of rubric performance levels) is essentially consistent across key assessments (Cargas, Williams, & Rosenberg, 2017). For example, in Sequence 6 when secondary teachers explore content-specific methodology for their particular licensure areas, rubrics for methods for teaching mathematics and methods for teaching science differ in content. But they share the same rubric levels by which candidates are measured: *Exceeds Standards*, *Meets Standards*, *Partially Meets Standards*, and *Does Not Meet Standards*. These same levels similarly guide the evaluation of candidates in elementary, bilingual, or special education program areas. This helps to serve the overall goal of measuring candidate performance systematically across these areas.

This was especially critical when most program area faculty needed to regularly collect data to meet SPA standard requirements. In these cases, a standard version of an assessment may be available that is altered slightly to fulfill SPA specifications. For example, the *Student Clinical Observation Form* is a critical universal assessment in TLLSC used by instructors to rate candidates in the classroom across different criteria. It is administered four times during

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teacher candidates' placement in their internship classroom as a means to provide formative data for the candidate, faculty supervisor, and classroom teacher. In addition, this form was modified with an addendum for every program area with a SPA affiliation to meet specific standard requirements. Here, clinical observation data collection is able to remain consistent while concurrently addressing individual program needs. Each program area engages in both parallel and distinct evaluation activities, allowing for diverse evaluation questions and methodologies designed to study them both individually and collectively.

Annual Disposition Review is an example of assessment standardization and data triangulation working at its best. Every semester, a disposition report is run across all modules and courses in TLLSC to identify candidates with multiple low ratings and determine needed supports and next steps for ensuring that these particular candidates' needs are communicated to, understood by, and addressed by all faculty who work with them. As previously mentioned, faculty developed dispositions within the context of the three major phases of growth within the TLLSC program: Exploration, Concentration, and Specialization. Because these assessments share the same rubric levels across programs, patterns of ratings are used to identify potential issues. For example, every semester all faculty across TLLSC gather to discuss candidates who demonstrate patterns of low ratings in their dispositions. During this Dispositions Review, instructors engage in deep conversations exploring these candidates, their ratings, and the modules and courses in which they were rated. It is important to note that disposition data is triangulated through faculty discussion and candidates' work. Program area faculty can then better determine the next steps, which might require groups of faculty to discuss possible candidate concerns, edits to disposition rubrics, or potential instructional issues to resolve.

Use of Data to Facilitate Program Change

Building a model for continuous improvement in a changing program has proven both challenging and informative. A specific example of this has been prompted through the SPA review process, as each program area was required to review their program in alignment with their specific SPA standards. Consistent review of data is an essential part of program review as well as a protocol for the SPA writing process. Regular and systematic opportunities to reflect on program data help to ensure that programs are up to date with specific SPA standards as well as tracking candidate performance and utility of course assessments. Reports required several iterations of data and analysis and discussions of program development and improvement so these activities are essential to maintain. In addition to obtaining accreditation by their respective SPA, program area faculty engage in these regular data review exercises as an opportunity for continuous improvement.

Another strategy to facilitate program change has been to equip faculty with regular opportunities for systematic data analysis. These involve a review of semester reports summarizing sequence assessments across instructors. Faculty can utilize these data for several purposes. First, they view candidate performance on these assessments, as patterns in these data reflect both candidate behavior and possible instructional issues (e.g., low or inconsistent ratings on a particular element within an assessment). Results may also indicate issues at the program level that need to be discussed, resulting in changes to the assessment, instruction, or otherwise. Program data is used within TLLSC to facilitate both program and program area change. These conversations can move outside of university-based faculty, involving school and community

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partners when necessary. Through these avenues, faculty work individually and collectively to understand the outcomes, impact, and iterative redesign needs of TLLSC.

Faculty-Generated Assessment Initiatives

In this section, selected examples of more targeted program assessment initiatives are presented. Each of these initiatives has sprung from the research interests and program area needs of faculty working both individually and collaboratively. These include efforts aimed at understanding the (a) nature, benefits, and challenges of forming the school and community partnerships on which TLLSC is based; (b) faculty self-study examining the impact of the design and implementation on faculty identity; (c) discipline-specific work outlining the ways various program areas have addressed critical competencies and established frameworks in the TLLSC continuum; and (d) candidate outcome studies demonstrating some of the knowledge and skills learned by TLLSC teacher candidates. While these research-based initiatives have not originated within the process of TLLSC assessment design, the work within these projects has served to inform and improve TLLSC as a whole through a variety of avenues.

Partnership-Focused Work

Faculty scholarship and ongoing collaborative initiatives have generated various forms of data focusing on the quality, experiences, and outcomes of the partnerships upon which TLLSC rests. This group of initiatives has focused on examining partner perceptions and experiences as TLLSC community members, including the impact of the TLLSC program on their practice and its significance for teachers, students, and families. Such work has served to identify avenues to strengthen and diversify communities of practice within community partnerships (Lees, Heineke, Ryan, & Roy, 2016; Smetana, Birmingham, Rouleau, Carlson, &

Phillips, 2017), and identified types and sources of meaningful mutual benefit, thus serving to dissolve traditional barriers between teacher candidates, practicing teachers, and families (Kennedy & Lees, 2015; Lees & Kennedy, 2017). Partnership initiatives are also discussed in Chapters 11 and 12 of this volume.

Faculty Self-Study

Self study conducted by Chang et al. (2016) has included perspectives and experiences of faculty who entered the development and implementation process at different points in time, revealing some of the many complexities of faculty experiences during the dramatic shift from traditional to field- and apprenticeship-based preparation. This research has helped reveal some of the ways in which faculty experiences informed (and were informed by) teacher educator identity. These shifts presented complex emotional responses, including fear, anxiety, exhilaration, and self-doubt. They paralleled professional challenges (e.g., to faculty role and self-efficacy) but tended to strengthen faculty identity through supporting emerging recognition of unique knowledges and abilities that were valued in this new model. New faculty entering the process at different points in time experienced these identity shifts in unique ways depending upon their positionality, role, and personal identities, experiences, and educational philosophies. Such findings from the faculty self-study have (a) provided insight into individual faculty experiences that informed subsequent collaborative relationships and (b) highlighted self-study as a worthwhile approach to employ in TLLSC program assessment.

Discipline-Specific and Candidate Outcomes Studies

Several studies have focused specifically on the experiences and outcomes of TLLSC candidates. In most cases, the faculty engaging in this work do so in diverse collaborative groups

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and examine both program structures and candidate outcomes. In this sense, the work focuses on program-wide concerns and themes while simultaneously examining individual, credential-specific candidates' competencies. These investigations have led to deeper understanding of the role of museum partners in Sequence 1 (Smetana et al., 2017; also discussed in Chapter 7 of this volume), the ways in which Sequence 3 experiences impact candidates' leaning and enacting of educational policy (Heineke, Ryan, and Tocci, 2015), and the effect of tiered instructional supports and video-based peer and instructor feedback on early childhood special education candidates' interaction and instructional activities in Sequence 4 (Kennedy & Lees, 2016; 2015; also discussed in Chapter 5 of this volume).

Challenges in Assessment and Evaluation

Consistent program assessment in a complex and fluid context presents certain challenges, making comprehensive assessment plan even more critical (Muñoz et al., 2012). For example, each program area in TLLSC has developed at a unique pace, therefore building their core assessments according with their needs and within widely differing professional contexts. As these programs evolve through interaction with and response to their programmatic and SPA requirements, so do their assessments. These changes may occur over a span of several semesters, and with program data being collected every semester – the resulting data can sometimes contain inconsistencies. With a large number of faculty working in the field, including both full-time and adjunct instructors, there is always the concern of fidelity of implementation of the program, and subsequently, the details, expectations, and eventual completion of assessments. Related to this are universal concerns of reliability and validity in candidate assessments and dispositions (Hee-sook et al., 2016; Moniz et al., 2015; & Wilkerson,

2015). To add credibility to the assessments used, programs are working on building reliability and validity protocols into the development of their rubrics. Content validity represents an initial area of strength, given that most assessments are developed around content theoretical framework in addition to SPA standards. Building consistent reliability protocols continues to be an area of challenge for TLLSC faculty to work on.

From the program's inception, assessment has been prioritized and addressed both within individual program areas and TLLSC as a whole. As with any developing program, changes to curriculum and assessments took place at a rapid pace, sometimes several within a semester. Not only was this challenging to manage, but it sometimes confused faculty in the field who complete these assessments. Assessment changes needed to be addressed and routinely monitored because the rapid ongoing redesign of assessments yielded inconsistent data that could not be systematically analyzed. While the need for adaptation was certainly clear, gradually the timing of these modifications became more methodical - accruing across the semester and actually occurring at the beginning of the following semester. The urgency to adapt to change eventually was replaced with a more thoughtful and consistent reaction to change. Sequence leads (faculty who organize and manage the work of full- and part-time instructors and field sites within particular TLLSC sequences) write, edit, and review these assessments prior to the semester, making any necessary changes due to standards or feedback from colleagues. As a result, changes are collaboratively determined and communicated more promptly and consistently across diverse instructors.

In addition to assessment modification, the complex and dynamic field-based program presented challenges in terms of program implementation and assessment completion. Both

involve a team effort, requiring communication between program area faculty, clinically-based adjunct faculty, and the assessment coordinator. Without observation in the field, checking in with colleagues, and frequent assessment review, it is difficult to determine to what extent program objectives are met. Field-based activity is complicated to systematically review because of the very characteristics that make field-based activity unique and important. For example, a Student Observation Form used across all content areas is completed by the classroom teachers in partner sites as well as program faculty assigned to those sites. These observations are meant to capture progress in candidate teaching behaviors during the course of student teaching, but they do not take into account various nuances within the classroom or school environment that may influence the observations. For example, a school with minimal resources may have limited opportunities for use of technology. An observation day may be significantly disrupted by a fire drill or other school emergency. While these can be noted in the form as comments, the ratings will not necessarily tell the whole story. But certain basic components within candidates' experience in the field can be consistently reviewed, not only to assess the quality of their instruction but to ensure that theoretical foundations are being applied in the field. These range from classroom management to facilitation of content within a curriculum unit. How these behaviors are observed, interpreted, and captured as assessment data may vary, but data collection protocols will only improve over time with training and continued review.

As with all locally-created assessments, the ever-present issues of reliability and validity must be addressed. In the TLLSC program, various sequence and module assessments were developed to represent each licensure/program area. Each of these assessments was developed using SPA standards or utilizing content area theory as a guideline. This reflects the varied

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purposes of the sequence and module assessments and their use across the sequences. What started as a SPA requirement has developed into a programmatic aspiration for continuous improvement and to support module, sequence, and ultimately program objectives. As a result, TLLSC assessments have a strong foundation of content validity (Douglas et al., 2016). Other disciplines, such as engineering, have demonstrated evidence of content validity through thoughtful and strategic assessment development. Because of the rate of growth and change, opportunities for formal reliability testing are not yet possible. Informal reliability checks in the form of group assessment reviews or data analysis have presented occasions to review for consistency of assessment performance.

Conclusions and Recommendations

TLLSC is fueled by a complex system of continual candidate review and iterative program redesign. This system is intentional, multi-layered, and collaborative, allowing TLLSC, program area, and individual candidate assessment to continually inform one another and for faculty to collaborate across programs. Through these diverse and intersecting groups of collaborating faculty employing a variety of methodologies, TLLSC has undergone extensive study and review both during its design and implementation. These efforts have served to provide deeper program- and partner-specific views of the operation and outcomes of this complex program than universal program assessment systems can provide.

To conclude, we share a set of recommendations for other teacher educators and teacher education programs based upon lessons we have learned in our continued work. First, it is essential to involve all stakeholders in the development and refinement of assessment in preparation programs. We also recommend that teacher educators involve partners and teacher

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candidates more directly in evaluation studies that focus on the settings where they are already doing the challenging work of meeting local educational and community needs. Next, we recommend self-study as a revealing tool for examining practice and deepening collaborative relationships and the effectiveness of redesign efforts. These activities contribute to progressive self-reflection across the program, including long-term candidate outcome studies as well as case studies to explore more salient issues. Through the collaboration of accreditation efforts and continuous improvement momentum, this work is underway within the different TLLSC program areas and includes a combination of self-reported graduate data and case studies that will evaluate candidate teaching practices and impact on students.

References

- Cargas, S., Williams, S., & Rosenberg, M. (2017). An approach to teaching critical thinking across disciplines using performance tasks with a common rubric. *Thinking Skills & Creativity*, (26)24-37.
- Chang, A., Rak Neugebauer, S., Ellis, A., Ensminger, D., Ryan, A., & Kennedy, A. (2016). Teacher educator identity in a culture of iterative teacher education program design: A collaborative self-study. *Studying Teacher Education*, 12(2), 152-169.
- Douglas, K. A., Rynearson, A., Purzer, S., & Strobel, J. (2016). Reliability, validity, and fairness: A content analysis of assessment development publications in major engineering education journals. *International Journal of Engineering Education*, 32(5A), 1960-1971
- Hee-sook, C., Benson, N. F., & Shudak, N. J. (2016). Assessment of teacher candidate dispositions. *Teacher Education Quarterly*, 43(3), 71-89.

Heineke, A. J., Ryan, A. M., & Tocci, C. (2015). Teaching, learning, and leading: Preparing teachers as educational policy actors. *Journal of Teacher Education*, 66(4), 382-394.

Kennedy, A. S., & Lees, A. T. (2015). Outcomes of a community-based birth-to-three preparation sequence for undergraduate early childhood teacher candidates. *American Journal of Educational Research*, 2(6), 770-782.

Kennedy, A. S., & Lees, A. T. (2016). Preparing undergraduate pre-service teachers through direct and video-based performance feedback and tiered supports in Early Head Start. *Early Childhood Education Journal*, 44(4), 369-379.

Lees, A., Heineke, A. J., Ryan, A. M., & Roy, G. (2016). Partnering to prepare teachers for urban Native American communities: Kateri Center of Chicago and Loyola University Chicago. *Journal of Multicultural Education*, 23, 13-21.

Lees, A.T., & Kennedy, A. (2017). Community-based collaboration for early childhood teacher education: Partner experiences and perspectives as co-teacher educators. *Journal of Early Childhood Teacher Education*, 38(1), 52-78. Smetana, L.K., Birmingham, D.,

Rouleau, H., Carlson, J., & Phillips, S. (2017). Cultural institutions as partners in initial elementary science teacher preparation. *Innovations in Science Teacher Education*, 2(2).

Retrieved from <http://innovations.theaste.org/cultural-institutions-as-partners-in-initial-elementary-science-teacher-preparation/>

Moniz, T., Arntfield, S., Miller, K., Lingard, L., Watling, C., & Regehr, G. (2015).

Considerations in the use of reflective writing for student assessment: issues of reliability and validity. *Medical Education*, 49(9), 901-908.

Muñoz, E. A., Jaime, A. M., McGriff, D. L., & Molina, A. H. (2012). Assessment of student learning: Estudios Chicana/o cultivating critical cultural thinking. *Teaching Sociology*, 40(1), 34-49.

Schussler, D., Stooksberry, L., & Bercaw, L. (2010). Understanding teacher candidate dispositions: Reflecting to build self-awareness. *Journal of Teacher Education*, 61(4), 350-363.

Wilkerson, J. R. (2015). The need for instructional sensitivity and construct clarity in PACT: A commentary on “Examining the internal structure evidence for the performance assessment for California teachers”. *Journal Of Teacher Education*, 66(2), 184-192.