

PREPARING TEACHER CANDIDATES TO SUCCESSFULLY COMPLETE A HIGH-STAKES LICENSURE ASSESSMENT

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This design case describes the creation, implementation, and refinement of an online asynchronous teacher education course that supports elementary education teacher candidates in their design of learning segments in preparation for the high-stakes teacher education assessment, edTPA. edTPA is a performance-based assessment that is a requirement for teacher candidates to successfully complete to graduate and earn their initial teacher license. This design case will focus on the instructional design and assessment aspects of the edTPA assessment, in which candidates must design and implement a learning segment focused on a specific reading skill. The design case will include screen captures of the course, and describe the iterative design of developing the online course, as well as two cycles of revising the course based on data that includes feedback from candidates, input from faculty experts, as well as learning outcomes from the course and the high-stakes assessment. Data from teacher candidates who completed the course will be included to provide readers with a vicarious experience about the design case.

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INTRODUCTION

This case describes the original design, and iterative modifications, of a course for future elementary school teachers (hereafter called teacher candidates) that was offered in a 100% online asynchronous format. The design takes place in a high-stakes context in two ways. First, candidates must independently successfully pass the edTPA performance-based assessment during their final semester in order to graduate and earn their teacher license. Second, based on state legislation passed in North Carolina teacher candidates who earn above a certain cut score on the edTPA assessment and have a high enough GPA earn a few thousand dollars more than their peers during the first three years of their career. In the context of this high-stakes climate, we aim to describe a design case about how one teacher education program made decisions and has iteratively designed and refined a course aimed to support teacher candidates' development of knowledge and skills related to the edTPA assessment. Polly completed the initial design, while Byker modified the course in 2017. In the spirit of recommendations for design cases (e.g. Boling, 2010; Smith, 2010), we provide a description of the context, critical design decisions and experiences, examples of learning activities, and a reflection of the overall design experience.

CRITICAL DESIGN DECISIONS

The critical design decisions for creating this online course focused on how to best develop asynchronous online learning experiences to support teacher candidates' development of knowledge and skills related to planning and teaching units of instruction and their preparation for the high-stakes assessment. Since this course had already been taught for a few years in a face-to-face setting the course's objectives were already pre-determined. The first objective was to prepare teacher candidates for the high-stakes edTPA literacy project, which they would complete during their full-time internship within a year of the course.

When Polly first created the course to be facilitated in a 100% online asynchronous format in 2012 initial design decisions had to be made about a) the selection and development

CONTEXT	CRITICAL DESIGN DECISION
Polly was told to create an asynchronous online version of a face-to-face course to be taught over 5 weeks in the summer.	Polly modified existing learning activities and designed other activities that can effectively be implemented in an online asynchronous setting.
Polly wanted to use instructional materials that were relevant to learners and aligned with research-based pedagogies and frameworks emphasized in partner districts related to literacy.	Polly consulted with school leaders about research-based pedagogies and frameworks related to literacy instruction. A decision was made by Polly, Byker, and others who teach the course to adopt <i>The Daily Five</i> text. Other resources were Open Educational Resources (OERs) to keep costs down for candidates.
Faculty had previously determined that this course would include a practice of the Planning part of a high-stakes edTPA assessment required for teacher licensure.	Polly and colleagues consulted with other universities and school leaders about frameworks to design literacy units. The faculty decided to use the Understanding by Design (UbD) framework.
	Polly incorporated multiple course activities, scaffolds, and opportunities for candidates to receive feedback on the high-stakes edTPA assessment.

TABLE 1. Critical design decisions.

STAGE	WHAT IS INCLUDED	DESCRIPTION
1	Learning Goals and Essential Understandings and Standards	Candidates identify learning goals, essential standards, and choose standards that will be included in the unit. In education, instructional design often begins by identifying the Standards first and then going from there. Candidates' common misconceptions include starting with learning goals and essential understandings but not having a Standard that aligns to the unit.
2	Evidence of Student Understanding and Assessments	Candidates determine what evidence students will provide to demonstrate their understanding of concepts. These include culminating projects, assessments, or other checks for understanding throughout the unit.
3	Learning Activities	Candidates determine daily learning activities they will design and use to build students' understanding. This stage also includes details about how candidates will support learners who need extra support or who have already demonstrated understanding of the content and are ready for more challenging activities.

TABLE 2. Stages of Understanding by Design (Wiggins & McTighe, 2005).

of course resources, b) specific course activities, and c) the process to provide support and feedback to candidates. We describe them in detail in this section.

Selection and Development of Resources

In order to meet the course objectives, specifically preparing candidates to design literacy lesson plans and unit plans for elementary school learners, a variety of resources were needed. Prior to course design, Polly asked for input and feedback from the Elementary Education Directors and various teachers in the 10 nearby districts to the university. As they discussed the nuances and district-specific features of their literacy programs, all of them included elements of whole class teaching, guided reading groups, and independent literacy activities. Polly consulted with other faculty who teach face-to-face sections of the course and they recommended, *The Daily Five* (Boushey & Moser, 2006, 2014), which aligned broadly to schools where teacher candidates would complete their internships.

Polly also found Open Educational Resources (OERs) that included videos about literacy teaching, sample lesson plans, and other video-based and text-based resources. Since each district that candidates will intern in teaches literacy in slightly different ways, *The Daily Five* and other OER's provided candidates with a general foundation of literacy pedagogies which could easily be applied into the various types of contexts and nuances of how to teach literacy in the various local districts.

Design of Specific Learning Activities

Another set of critical design decisions were the design and development of specific learning activities for the online asynchronous format of the course. As stated earlier, the two major objectives were supporting elementary education teacher candidates' completion of the edTPA literacy project and an interdisciplinary unit. For each, candidates completed a series of structured planning activities in which they were given an elementary literacy concept and then brainstormed

ideas on how to teach the literacy concepts and activities. Polly, as the instructor, and peers provided feedback to candidates who refined their ideas for their project during the course. In addition, candidates also examined lesson plans from previous candidates and OERs provided by the North Carolina Department of Education and other groups in order to critically evaluate elements of the lesson plan and determine the extent to which the lesson plans included elements of effective literacy instruction.

Another critical decision that was made was to use the Understanding by Design (UbD) framework (Wiggins & McTighe, 2005). UbD includes 3 specific stages: 1) determining essential standards and expectations for learners at the end of the unit, 2) determining ways to assess learners' progress and understanding, and 3) the specific learning tasks and activities that will be used to support learning.

We decided to use only the UbD framework for the entire course so candidates would know one framework well instead of using multiple frameworks in a limited capacity. From an instructional design perspective, UbD is a robust

framework and includes broad learning goals as well as specific assessments and learning experiences to help scaffold the learners' progress towards the broad goals (see Table 2). Candidates also spent time examining an example of a unit planning map which was made by a former student using the Understanding by Design process (see Figure 1).

Providing Support and Feedback

There was also a need for Polly to make critical design decisions on how to provide candidates with support and feedback in a 100% online asynchronous format. Our Learning Management System (LMS) was Moodle until 2016, and then the university adopted Canvas. Both systems included discussion boards, grade books, quiz and formal assessment opportunities, and structures to provide content in modules.

Since edTPA is a high-stakes assessment and is required for teacher candidates to earn their license, faculty were required to provide written feedback on multiple drafts of the edTPA project. With the course's asynchronous format both authors leveraged the use of quizzes to assess candidates'

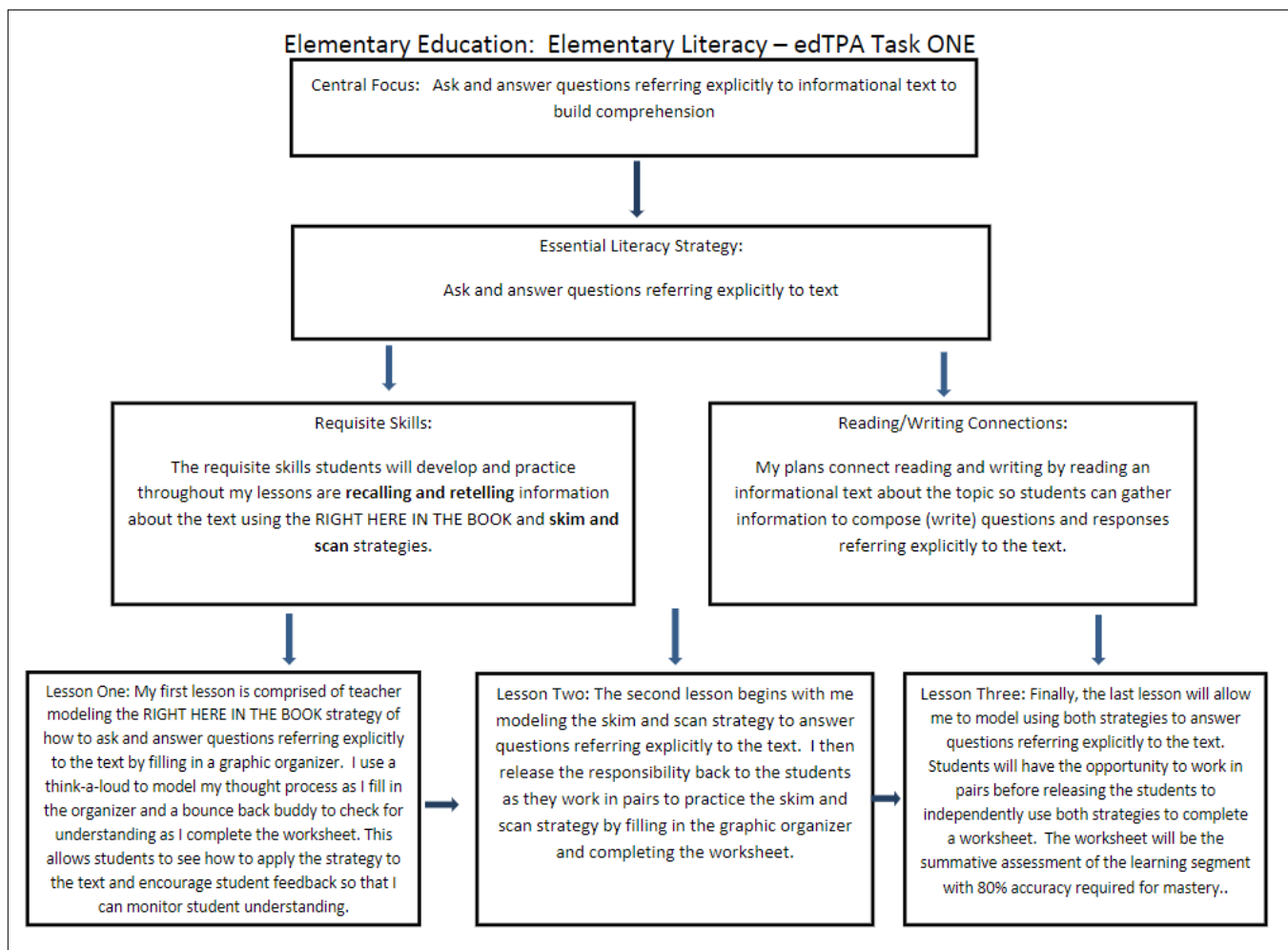


FIGURE 1. Example of a planning map.

basic understanding of the project, discussion boards as opportunities for collaborative dialogue, and multiple drafts of the edTPA project where faculty provided detailed feedback on the various aspects of the project. The designed collaborative planning activities provided opportunities for candidates to work in pairs or groups of three to choose how they will teach a literacy concept. Rather than submitting their work as an assignment in the LMS, candidates posted their work to the course discussion board in the LMS. In the following module, both candidates and the instructor provided “glows and grows,” which included at least one positive comment and at least one question or suggestion to think related to their proposed instructional activities.

Candidates also received detailed feedback from Polly on a completed draft of the edTPA project. Research on edTPA cites candidates’ struggle with writing the commentary more than the lesson plans. Therefore, Polly focused on making sure candidates felt supported with the commentary by providing guiding questions, sentence starters for the first draft, and ample feedback to help them with the final draft.

PEDAGOGICAL DECISIONS DURING COURSE REVISION

The course was revised prior to Summer 2017 by Polly and Byker in order to incorporate suggestions from previous teacher candidates as well as from edTPA program data that show areas that teacher candidates struggle within the context of completing their high-stakes edTPA portfolio for teacher license. Byker also took over as the primary course instructor of the course. Table 4 describes the revisions that were made in the course.

From these edTPA program data and the suggestions of previous teacher candidates, the course revision included in-depth modules on the components of academic language as described in the edTPA Handbook (SCALE, 2017). Academic language is discipline specific oral and written language used for academic purposes. Many teacher candidates reported being confused by edTPA’s focus on academic language and national data shows they score lower on those aspects (SCALE, 2017). For teacher candidates, academic language is confusing. Our course revision included more direct and transparent definitional support for understanding the contours of academic language. The support included quizzes and discussion board activities where teacher candidates would identify and define academic language. We further revised the course to support the teacher candidates in their understanding and design implementation—in lesson plans and pedagogical practices—of academic language.

The revisions focused on the four components of academic language, which include: 1) language function; 2) vocabulary; 3) syntax; and 4) discourse. To be successful on

edTPA—especially on Tasks 1 and Tasks 2—it is important that teacher candidates have a strong mastery of how to plan and implement ways to support their learners through all four of these components.

At the start of the second week of course modules, the teacher candidates are introduced to vocabulary and specialized terms of the high-stakes assessment. They apply the concepts in these resources on specific activities, including the outlining and planning of lessons and the creation of instructional activities and assessments.

The teacher candidates utilize these academic language resources throughout the second week’s modules of the revised course. For example, the teacher candidates use the chart to complete a practicum activity, which further augments the UbD mapping exercise, which we described earlier in the manuscript. For the edTPA Planning Analysis Summary, teacher candidates create a descriptive summary of their assignment

The teacher candidates are further reminded to refer back to the second module’s academic language resources if they need a refresher about any of the terms within the directions for the edTPA Planning Analysis Summary practicum assignment.

Other areas of course revision included a deeper emphasis on assets or strengths-based education and the inclusion of accommodations for student populations like English Language Learners (ELLs). The focus on assets or strengths-based education reflects the terminology used in much of edTPA’s narrative prompts. For example, in the project’s narrative, teacher candidates are prompted to explain how their planned lesson segment connects to the personal, cultural, and community assets represented in the classroom. By assets, edTPA means the funds of knowledge—including cultural backgrounds—that students in the classroom possess and that teacher candidates can draw upon (SCALE, 2017). Assets are synonymous with strengths. This is a critical feature of edTPA for teacher candidates to embrace as edTPA rejects deficit views about young learners. A deficit view of learners focuses on a learner’s weaknesses and what the learner cannot do rather than what the learner can do. Teacher candidates will score an automatic 1—the lowest score—on many of the edTPA rubrics if their narrative responses represent a deficit view of students and their backgrounds. In the revised course, we put a greater emphasis on recognizing the personal, cultural, and community assets that are represented among the learners in a classroom. Readings from culturally responsive scholars like Geneva Gay and Gloria Ladson-Billings are especially helpful in supporting the teacher candidates’ understanding of recognizing these assets. Additionally, in the Week 2 module (See Table 3), we have included a greater emphasis on ways to accommodate the learners represented in the classroom.

INDIVIDUAL	CONTENT OF POST ON DISCUSSION BOARD
Candidates' post	In order to teach first grade children to determine the beginning, middle, and end of a story I will model with a think aloud about how to identify events at the beginning and at the end of the book Llama Llama Home with Mama. Students will complete a 3-column chart after we read the book where they will have to write a detailed phrase to describe the beginning, middle, and end of the story.
Example of feedback	Your modeling and idea of a think aloud will help students see what they are expected to do. I love the idea of a 3 column chart and having students write phrases about the story.

TABLE 3. Example of collaborative planning and feedback in the discussion board.

WEEK	ORIGINAL DESIGN	REVISED COURSE
1	<ul style="list-style-type: none"> Understanding by Design review Review of effective literacy instruction and lesson planning 	<ul style="list-style-type: none"> Understanding by Design review and important considerations for planning literacy Review of effective literacy instruction including balanced literacy and components of Daily 5
2	<ul style="list-style-type: none"> Designing a literacy assessment Planning 3 lessons around a concept Culturally responsive pedagogies (as it relates to community assets and providing language supports in responsive ways) 	<ul style="list-style-type: none"> Designing a literacy assessment Planning 3 lessons around a concept Culturally responsive pedagogies Academic language components, definitions, and examples Focus on assets based education and lesson accommodations including SIOP Strategies
3	<ul style="list-style-type: none"> Differentiation and supporting learners 	<ul style="list-style-type: none"> Differentiation and supporting learners Specific language supports
4	<ul style="list-style-type: none"> Finish edTPA Project Interdisciplinary unit 	<ul style="list-style-type: none"> Finish edTPA Project Interdisciplinary unit
5	<ul style="list-style-type: none"> Interdisciplinary unit development 	<ul style="list-style-type: none"> Interdisciplinary unit development focused on project-based learning

TABLE 4. Description of course revisions.

In particular, teacher candidates investigate the Sheltered Instruction Observation Protocol or SIOP model for teaching English Language Learners. After investigating the SIOP model in the Week 2 course modules, the teacher candidates incorporate many of the SIOP principles into their edTPA planning and narrative commentary. For example, teacher candidates will utilize pictures and images of vocabulary words as part of their comprehensible input to connect with their learners. In their narrative commentary, they explain how the use of images is not only a Syntax support for young learners to master the lesson vocabulary. The vocabulary images are also a SIOP strategy to accommodate ELLs in the classroom, as well.

A Process to Support Candidates: edPASR

Our design of learning activities for the high-stakes edTPA project has led us to consider processes to support candidates during the practice aspects of the project during their senior year, and during the actual completion of the project in their final semester. Byker, Good, Putman, and Polly (2017) came up with a process referred to as edPASR (see Table 5).

The edPASR process begins by having teacher candidates study the edTPA project, including the directions and other supporting documents. In the course, the authors check this through the use of open book online quizzes that assess how familiar a candidate is with the project. The decision for these to be open book was based off the premise that candidates do not need to memorize the information but should be able to quickly locate and find the directions and details of the projects.

The next step of the project is practice. The teacher candidates practice the entire planning task in this course. Throughout the practice round, the teacher candidates monitor and keep track of the time it takes them to complete the project. While candidates had extensive experiences planning and teaching lessons in literacy prior to this semester, edTPA historically is challenging to candidates since it requires written commentaries about the planning, teaching, and assessing of students in the literacy unit. To this end, we designed a series of learning activities to support the writing of the edTPA commentaries during the practice phase of edPASR. The writing activities include dividing the five sections

ASPECT OF EDPASR	DESCRIPTION
ed: Educate yourself	Candidates review the edTPA handbook, the overview of each aspect of the project, the specific requirements, and how they will be graded.
P: Practice	In the first semester of their senior year, candidates complete a practice edTPA project; they get specific feedback from faculty on the different components for the project.
AS: Assess yourself	Candidates spend time reviewing the rubrics and the process of scoring edTPA samples. After they complete their practice project, candidates complete a self-assessment where they score their own work and provide a rationale and justification for the score that they earned.
R: Review/read	The final step in the process is for candidates to review the various aspects of the edTPA practice project and reflect on what they should do differently when they do the actual project during their internship in their final semester before graduation.

TABLE 5. edPASR Framework (Byker et al., 2017).

of the project into separate due dates, having the teacher candidates submit rough drafts of their lesson plans within the lesson segment as well as the narrative commentary, and providing extensive feedback on their rough drafts. Teacher candidates revise base on this feedback.

Not only do we as course instructors provide feedback, we also assess the teacher candidates' edTPA assignment. We also have the teacher candidates assess their own lesson segment and narrative commentary. The value of assessing self means that teacher candidates have another opportunity to read over and digest the rubrics that will be used for evaluating their project. For many of the teacher candidates, the aspect of edPASR that involves a detailed self-assessment of their work is the most eye-opening and helpful. To self-assess, teacher candidates analyze the edTPA rubrics as described in the *edTPA Rubric Progression Guide* (SCALE, 2016). Then, the teacher candidates go back and read through their entire edTPA project. After that, they create a word document self-assess their project with a numerical score using the edTPA scores from 1 to 5. Candidates also write a justification statement in which they explain and justify the rating based on the rubric.

The final step of edPASR is to review. During the actual course, the teacher candidates review their scores and feedback on the practice task in order to make a plan for completing the edTPA portfolio during their student teaching semester. The review part of edPASR also includes actual review sessions, which happens after the course is finished. During these review sessions, teacher candidates are often organized in small groups to review all three tasks and the specific directions for each task. Many times, the review sessions also includes a discussion of the time they should expect to budget in order to successfully complete and submit their edTPA portfolio for it to be evaluated by the national edTPA evaluators.

Interdisciplinary Unit After edTPA

The second goal of the course was to support candidates' completion of an interdisciplinary unit. Candidates applied their knowledge of the Understanding by Design framework to develop a 5-lesson unit that focused on science, social studies, or mathematics with another content area and literacy skills included in the unit. Prior to the high-stakes edTPA project, the interdisciplinary unit was the focal point of the entire course; candidates learned about educational philosophies and determined the educational philosophy that most closely aligns to their viewpoint and designed a 10-lesson interdisciplinary unit. When the edTPA literacy unit was added to the program and the course, faculty made the decision to still include the unit, but on a smaller scale.

In the revised versions of the course, faculty decided to design learning activities and the interdisciplinary unit with a focus on project-based learning using resources from the Buck Institute for Education (<http://www.bie.org/>). While the unit still includes content from science, social studies, or mathematics with literacy skills included, the context of the unit is a real-world context or problem that teacher candidates identify and design their unit on. In order to prepare teacher candidates to do this work, faculty have designed a few learning experiences to prepare them.

One such activity that faculty have designed requires candidates to design and build a structure made of toothpicks and marshmallows that is tall and will withstand slight shaking, which is meant to simulate a small earthquake. Another activity includes candidates using technology to create a product, such as a digital book or Prezi presentation to provide an example of something elementary school students may complete as a culminating activity or project at the end of the unit.

Similar to the process of the edTPA literacy unit, faculty provide a considerable amount of support and feedback to candidates during the creation of the interdisciplinary

unit. Due to the high-stakes nature of edTPA though, the interdisciplinary unit only gets a week and a half of time of the five-week online course. In many cases candidates are so fatigued and burnt out from the edTPA project that they do not put as much effort into their interdisciplinary unit. Faculty made the decision to require less written work on this project based on candidates' feedback and feedback from educational leaders in local partner school districts. At the time of this chapter, candidates complete a unit overview template.

REFLECTION ON THE DESIGN EXPERIENCE

The design of a 100% online asynchronous course to prepare elementary education teacher candidates to design a learning segment focused on literacy. Throughout the various iterations that the course has been taught by both of us, teacher candidates' desired learning outcomes were met and candidates reported feeling prepared to complete the high-stakes edTPA performance-based assessment (Byker, Good, Putman, & Polly, 2017; Polly, Binns, & Putman, 2017). In light of our experiences we offer the following suggestions for teacher educators looking to design similar experiences.

Utilizing Understanding by Design

We started with the two primary learning goals of 1) preparing teacher candidates for the planning and writing of the edTPA learning segment, and 2) designing an interdisciplinary unit. With those two primary goals in mind we worked backwards thinking about what the assessments of those goals would be, and then developed the learning activities. The specific learning activities were then refined ensuring that they aligned to the assessments as well as the goals that were established.

As the design was constrained to the limitations of a college course and the objectives and policies established in course outlines and syllabi, we found flexibility in the specific learning activities that we would use to facilitate students' learning. By focusing on the design of effective learning experiences as well as ways to provide support and feedback, Understanding by Design worked as a framework for learners.

Power in Collaborative Data-Driven Design

While Polly designed the course initially based on the university guidelines and my own individual understanding of edTPA and interdisciplinary units, Byker found that it was beneficial to refine the course and bounce ideas off of each other. Faculty who taught the senior level courses met formally once a semester to discuss the courses and preparation for the high-stakes edTPA project. Those faculty who taught this course shared resources, instructional activities, and worked together to identify topics and concepts that needed more time and attention in the course.

In addition to faculty collaborating to discuss the course and share resources with each other, faculty also examined the data from the high-stakes edTPA project from program completers. After reviewing the data as a group of faculty, those of us who teach the course made design decisions to make sure that the areas they scored lowest on were addressed in various activities. Table 4 earlier in this article includes data-driven revisions related to academic language and efforts to develop candidates' ability to provide literacy supports, including differentiation strategies and Sheltered Instruction Observation Protocol or the SIOP model.

Meeting Learners' (Candidates') Needs

In nearly every design process or framework there is a place for a needs analysis that informs the design and development of learning experiences. Since this design was for a 5-week online asynchronous summer course there was little time and opportunity to collect the backgrounds and needs of teacher candidates and personalize the entire course for them. However, as stated earlier a few modifications were made based on common needs of teacher candidates. First, since candidates were designing a literacy segment, we noticed over time that candidates struggled writing about how they would provide explicit instruction and modeling for students on their specific literacy strategy. Second, candidates reported that they wanted more ideas on how to support struggling students who were below grade level in literacy skills. As stated earlier, in both cases we provided early experiences in the course for learners to examine a concept, plan brief instructional segments focused on how they would model or teach the literacy concept, and what supports they could provide struggling learners.

One of our suggestions for future designers of high-stakes courses, such as the one described here, is to provide multiple pathways and opportunities for differentiation. Based on candidates' performance on their first module candidates may be assigned to one of two possible paths: one which would provide more support and scaffolding for those who need it, and one which would provide opportunities for candidates to apply their knowledge and understanding immediately and receive support during the process if needed. Regardless of the structure of support, without a formal needs analysis, there is a need for course instructors to ensure that they are providing adequate support and have processes in place with designed activities that address candidates' knowledge, skills, and possible misconceptions.

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