IES Institute of Education Sciences

APPENDIXES
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Regional Educational Laboratory Central
At Marzano Research

Examination of the Validity and Reliability of the Kansas Clinical Assessment Tool

See https://go.usa.gov/x6npK for the full report.

Appendix A. Brief literature review

In recent years there has been an increased focus on evaluating educator preparation programs (EPPs), with an emphasis on examining the performance of teacher candidates and beginning teachers (Meyer et al., 2014). Because of changes to national standards, new state requirements for data collection and reporting, and proposed changes to reporting requirements associated with Title II of the Higher Education Act, educators, researchers, and policymakers have increased their focus on how to best measure teacher candidate performance (Allen & Coble, 2016; Council for the Accreditation of Educator Preparation [CAEP], 2019; Teacher Preparation Issues, 2016). Changes to national and state requirements speak to a need to better understand the design, implementation, and utility of assessments for teacher candidates, particularly locally developed assessments. CAEP (2017) has developed a set of requirements for locally developed assessments against which EPPs are evaluated during the accreditation process.

Various assessments are used to evaluate teacher candidates' performance. These assessments involve data collected through observations of teacher candidates as they teach and reviews of the materials they have developed, such as lesson plans, assessments, and reflective statements about teaching and learning. The purposes of these assessments include judging the preparedness of teacher candidates to enter the profession and providing information about areas in which teacher candidates excel or underperform. EPP administrators can also use aggregated information about candidate performance to identify program strengths and weaknesses and to guide program improvement.

Although state education agencies (SEAs) and EPPs can adopt one of several widely administered, vendor-developed national assessments, they can choose instead to develop their own assessments that better align to their local contexts. However, these local assessments generally lack evidence of validity and reliability. A recent summary of CAEP accreditation decisions showed that failure to meet validity and reliability expectations for locally developed assessments was a common concern (Railsback, 2018).

Nearly all SEAs require that teacher candidates pass tests to demonstrate proficiency in basic skills, subject matter, and professional knowledge as a condition of certification or licensure (Hoogstra, 2011). Assessments of teacher candidate performance are typically administered during the student-teaching component of clinical experiences. The assessments examine performance on several dimensions, such as lesson planning, content knowledge, management of instructional time, management of student behavior, instructional presentation, instructional monitoring and feedback, and dispositions (Henry et al., 2013). To complement these written assessments, several SEAs have recently begun to encourage or require the use of performance assessments of teacher candidates. A review of publicly available information from SEA websites in early 2017 showed that 23 SEAs either required or planned to require a teacher candidate performance assessment as part of completing an EPP or as a condition of certification or licensure (Meyer et al., 2018). Goals identified by SEAs for teacher candidate performance assessments varied and included the following:

- Demonstrate that candidates are ready for the profession.
- Provide targeted feedback to candidates.
- Prepare candidates to collect and present evidence of effective teaching and learning.
- Help schools identify the professional learning needs of new teachers and direct induction and mentoring activities.
- Strengthen partnerships among EPPs and partner school systems.
- Provide a source of evidence for licensure and certification decisions, program review, and accreditation.

The review of SEA websites also revealed that SEAs vary in the performance assessments they use and in their approaches for collecting and using the data. As of early 2017 the most prevalent assessment used by SEAs was the Educative Teacher Performance Assessment (edTPA; Meyer et al., 2018). Of the 23 SEAs that posted requirements for teacher candidate performance assessments on their websites in 2017, 10 required or planned to require the edTPA, and 6 required or planned to require either the edTPA or an alternative assessment. The remaining seven SEAs either required or planned to require a state-specific assessment, which all EPPs in the state would use. In addition to these efforts to adopt statewide teacher candidate performance assessments, EPPs also frequently implement their own locally developed assessments, designed to serve many of the same purposes as those identified by SEAs.

Several widely administered teacher candidate assessments have evidence of strong validity and reliability. For example, several validation studies have suggested that the edTPA aligns well to the professional standards it seeks to measure, reflects the actual work of teaching, measures a primary characteristic of effective teaching, and demonstrates high reliability (Stanford Center for Assessment, Learning and Equity, 2013). EPPs also have the option to develop their own assessments, perhaps to reduce costs and reliance on external assessment providers or to use an assessment that is more closely aligned to state standards and the local context (Bastian et al., 2016). However, EPP-developed assessments have been criticized for their lack of evidence of validity and reliability as measures of teacher candidate effectiveness associated with student learning (Darling-Hammond, 2010; Darling-Hammond & Bransford, 2005; Tanguay, 2018). For example, a study of locally developed teacher candidate assessments at one large EPP found limited evidence of predictive validity (Henry et al., 2013). The study examined the extent to which measures of teacher candidates' progress and performance from locally developed assessments were related to measures of K–12 student learning in the teacher candidates' classrooms after they graduated from their EPP. The study found that these assessments, including student-teaching evaluations, did not measure multiple constructs as intended and that none produced measures that predicted teacher

candidates' later influence on student achievement in reading or math. This finding indicates a possible area for future research.

Concerns about the validity and reliability of locally developed assessments are also reflected in CAEP (2017) guidance, which includes an evaluation framework for assessing the quality of evidence generated by EPP-developed assessments. The framework describes attributes of assessments associated with three levels of sufficiency (below, at, or above sufficiency) and related to administration and purpose, content, scoring, data reliability, and data validity. Additional criteria are specified for survey instruments. During CAEP accreditation reviews site teams assess the sufficiency of EPP-developed assessments, including evidence to address the concern that locally developed instruments might lack validity and reliability (Railsback, 2018).

The Kansas Clinical Assessment Tool (K-CAT) is a teacher candidate assessment developed by several private EPPs with the support of the Kansas State Department of Education. The current study was a collaboration between the Regional Educational Laboratory Central and the Kansas EPPs to identify evidence of validity and reliability. Because the K-CAT is used by Kansas EPPs that have or are seeking CAEP accreditation, this study was designed to align with CAEP (2017) requirements for the validity and reliability of EPP-developed assessments. CAEP describes several types of evidence of validity (for example, content validity and predictive validity, of which criterion-related validity is a component) and reliability (for example, internal consistency) that could be submitted to meet or exceed the CAEP sufficiency requirements. Generally, CAEP requires that EPPs either provide evidence of the various forms of validity and reliability of the assessment data or describe plans to collect such data. If the EPPs do not have the relevant data during an accreditation review, they are expected to present the data at the next review.

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Appendix B. Data and methods

This appendix contains information about the study setting, data sources, sample, and analysis methods.

Study setting

The study involved educator preparation programs (EPPs) at seven private institutions of higher education in Kansas: Baker University, Bethel College, Haskell Indian Nations University, Kansas Wesleyan University, McPherson College, Southwestern College, and Sterling College. At a meeting of the Kansas Association of Private Colleges of Teacher Education, these institutions began a discussion about the need for a tool to meet Council for the Accreditation of Educator Preparation (CAEP, 2017) and Kansas State Department of Education criteria for validity and reliability. Each institution offers semester-long student-teaching experiences in which teacher candidates are placed in cooperating teachers' classrooms. Each teacher candidate's clinical experience is overseen by a supervising faculty member in the candidate's EPP. The Kansas Clinical Assessment Tool (K-CAT) is completed by the cooperating teacher (or teachers if the teacher candidate has multiple placements) and supervising EPP faculty at the midpoint and end of their clinical experience.

The seven EPPs were part of a pilot implementation of the K-CAT during the 2017/18 school year. Except for Sterling College, which stopped using the K-CAT after the spring 2019 semester, each EPP continued to implement the assessment during the 2018/19 and 2019/20 school years. Study data were collected during the spring 2019, fall 2019, and spring 2020 semesters.

Data sources

The study team used a combination of program documents, qualitative data, and quantitative data to address the research questions. The data drew on existing documents, including K-CAT assessment content, Interstate Teacher Assessment and Support Consortium (InTASC) performance standards, Kansas Educator Preparation Program Standards (KEPPS) for Professional Education, cooperating teacher interviews, K-CAT scores, Praxis Principles of Learning and Teaching (Praxis PLT) scores, and Kansas Performance Teaching Portfolio (KPTP) scores. The data sources and data collection periods used to address each research question are in table B1. A description of each data source follows.

Table B1. Data sources and data collection periods by research question

Research question	Data source	Data collection period
1. To what extent does the K-CAT demonstrate evidence of the following types of validity?		
a. **Face validity**: To what extent do the interviewed cooperating teachers believe that the assessment scores accurately represent the knowledge, skills, and abilities of teacher candidates?	Cooperating teacher interviews	Spring 2020
b. **Content validity**: How does the K-CAT align to the InTASC standards and KEPPS that it is designed to measure?	K-CAT content InTASC standards KEPPS	Spring 2020
c. **Convergent validity**: To what extent are K-CAT scores for the same teacher candidate, provided by cooperating teachers and supervising faculty and based on different sources of evidence, related?	K-CAT scores (cooperating teacher and supervising faculty scores)	Spring 2019 Fall 2019 Spring 2020
d. **Criterion-related validity**: To what extent are K-CAT scores related to scores from other measures of the knowledge, skills, and abilities of teacher candidates, such as the Praxis PLT and the KPTP?	K-CAT scores Praxis PLT scores KPTP scores	Spring 2019 Fall 2019 Spring 2020
2. To what extent does the K-CAT demonstrate evidence of reliability?		
How internally consistent are the K-CAT indicators?	K-CAT scores	Spring 2019 Fall 2019 Spring 2020

InTASC is Interstate Teacher Assessment and Support Consortium. K-CAT is Kansas Clinical Assessment Tool. KEPPS is Kansas Educator Preparation Program Standards for Professional Education. KPTP is Kansas Performance Teaching Portfolio. PLT is Praxis Principles of Learning and Teaching.
Source: Authors' compilation.

Program documents. Program documents examined in the study included the K-CAT content, the InTASC standards, and KEPPS.

Kansas Clinical Assessment Tool. The K-CAT is a rubric-based, comprehensive assessment tool designed to be used by personnel who supervise teacher candidates (cooperating teachers and supervising faculty) during candidates' semester-long student-teaching experiences (see appendix D for the complete tool). The K-CAT assesses 10 standards that align to the InTASC standards (Council of Chief State School Officers, 2013) and to the KEPPS (Kansas State Department of Education [KSDE], n.d.-a). The K-CAT is composed of four or five indicators for each standard, for a total of 45 indicators. Each indicator specifies the knowledge, skills, and abilities teacher candidates must display for each of the four performance categories: novice, apprentice-developing, accomplished candidate practitioner, and exemplary. To develop the K-CAT, the instrument developers first grouped the InTASC and KEPPS indicators, based on their common content, and then created the content of the K-CAT to align to these groupings. Several KEPPS indicators were relocated from their original KEPPS standard to another standard because their content had more in common with indicators associated with that standard. (See appendix E for a crosswalk showing the intended alignment between each K-CAT standard and the indicators from the InTASC standards and KEPPS.)

InTASC performance standards and KEPPS. InTASC has 10 performance standards, each with 3–10 indicators, for a total of 75 indicators (Council of Chief State School Officers, 2013). Similarly, KEPPS has 10 professional education standards, each with 9–16 indicators, for a total of 129 indicators (Kansas State Department of Education, n.d.-a). The K-CAT standards crosswalk shows the InTASC and KEPPS indicators each K-CAT standard was designed to address (see appendix E).

Qualitative data. Qualitative data used in the study consisted of interviews with cooperating teachers.

Cooperating teacher interviews. During the spring 2020 semester the study team conducted an interview with one randomly selected cooperating teacher (hosting classroom teacher) from each of six of the seven participating EPPs (see appendix G for an excerpt from the interview protocol). Sterling College was not represented in the interviews because it stopped using the K-CAT after the spring 2019 semester. The interviews were conducted after the cooperating teachers had provided midterm K-CAT scores for each teacher candidate in their classroom. The midterm K-CAT was completed before Kansas schools closed to in-person learning in response to the COVID-19 pandemic. The interviews were conducted via videoconferencing following the school closures. Cooperating teachers were asked to refer to the teacher candidate for whom they most recently provided K-CAT scores. The cooperating teachers had access to the K-CAT scores for the teacher candidate during the interviews. Cooperating teachers were asked to review the K-CAT content, the relevant K-CAT scores, and the InTASC performance standards and KEPPS addressed by each K-CAT standard. They were also asked to describe the areas in which they believed the K-CAT content and the scores did or did not accurately represent the knowledge, skills, and abilities addressed in the InTASC standards and KEPPS.

Quantitative data. Quantitative data used in the study included data collected with the K-CAT, the Praxis PLT, and the KPTP. Data were provided by the participating EPPs for all teacher candidates who participated in a student-teaching experience during the spring 2019, fall 2019, or spring 2020 semester. Final K-CAT, Praxis PLT, and KPTP data were not available for spring 2020 teacher candidates because Kansas schools closed to in-person learning during the spring 2020 semester in response to the COVID-19 pandemic.

Kansas Clinical Assessment Tool. Raters provide a score for each of the 45 K-CAT indicators, using a 4-point scale in which 1 is "novice," 2 is "apprentice–developing," 3 is "accomplished candidate practitioner–target level," and 4 is "exemplary." Cooperating teachers and supervising faculty provide ratings based on observations, conferences with teacher candidates, and document reviews at the midterm and end of the teacher candidates' clinical experience. The sources of information on which cooperating teachers and supervising faculty base their ratings are not identical. For example, cooperating teachers draw on their cumulative, ongoing classroom observations when providing ratings, whereas supervising faculty ratings are based on fewer classroom observations and on direct conversations with the teacher candidates outside of the placement. Most teacher candidates have four sets of scores, called "records" in this section: a midterm and final (end-of-term) K-CAT record from both their cooperating teacher and their supervising faculty. Some candidates in specialty areas could have additional records.[1] For example, special education teacher candidates spend half a semester in a general education classroom and half a semester in a special education classroom, so they could have records from two cooperating teachers.

Each K-CAT indicator includes language describing the expected knowledge, skills, and abilities associated with each performance level. Scores for each K-CAT standard are computed by averaging the relevant indicator-level scores for each standard (the average of four or five indicator-level scores was used to compute each standard-level score). Standard-level scores were calculated only if a teacher candidate had scores for more than 50 percent of the indicators for a given standard. K-CAT overall scores were calculated by averaging across all available K-CAT indicators. K-CAT overall scores were computed only if a teacher candidate had standard-level scores for all 10 standards. At the time of the study, no cutscore had been established for the K-CAT. The study team was able to calculate K-CAT overall scores for 92 percent of all K-CAT records (that is, across all cooperating teacher ratings, including those for teacher candidates with multiple placements, and all supervising faculty ratings). Table B2 shows the total number of records available for analysis, the number of records for which an overall or standard-level score could be calculated, and the number of records that had complete data for each standard (in other words, the number of records that had a score for each of the indicators in a standard).

[1] Cases in which teacher candidates had scores provided by more than two raters were treated as separate records and included in all analyses. As a result, the sample sizes differed across the analyses.

Table B2. Number of Kansas Clinical Assessment Tool standard records and complete records, overall and by standard

K-CAT record type	Midterm administration (*n* = 233)		Final administration (*n* = 156)		Both administrations (*n* = 389)	
	Number	Percent	Number	Percent	Number	Percent
K-CAT overall score						
Number of standard records	214	91.8	144	92.3	358	92.0
Number complete	155	66.5	96	61.5	251	64.5
Standard 1 (Learner Development) score						
Number of standard records	233	100.0	156	100.0	389	100.0
Number complete	179	76.8	102	65.4	281	72.2
Standard 2 (Learning Differences) score						
Number of standard records	230	98.7	152	97.4	382	98.2
Number complete	226	97.0	151	96.8	377	96.9
Standard 3 (Learning Environments) score						
Number of standard records	233	100.0	156	100.0	389	100.0
Number complete	224	96.1	153	98.1	377	96.9
Standard 4 (Content Knowledge) score						
Number of standard records	231	99.1	155	99.4	386	99.2
Number complete	223	95.7	150	96.2	373	95.6
Standard 5 (Application of Content) score						
Number of standard records	228	97.9	154	98.7	382	98.2
Number complete	221	94.8	150	96.2	371	95.4
Standard 6 (Student Assessment) score						
Number of standard records	230	98.7	153	98.1	383	98.5
Number complete	223	95.7	151	96.8	374	96.1
Standard 7 (Planning for Instruction) score						
Number of standard records	232	99.6	156	100.0	388	99.7
Number complete	221	94.8	150	96.2	371	95.4
Standard 8 (Instructional Strategies) score						
Number of standard records	231	99.1	156	100.0	387	99.5
Number complete	229	98.3	155	99.4	384	98.7
Standard 9 (Professional Learning and Ethical Practice) score						
Number of standard records	220	94.4	148	94.9	368	94.6
Number complete	217	93.1	147	94.2	364	93.6
Standard 10 (Leadership and Collaboration) score						
Number of standard records	218	93.6	146	93.6	364	93.6
Number complete	207	88.8	142	91.0	349	89.7

K-CAT is Kansas Clinical Assessment Tool.

Note: A record is a set of cooperating teacher or supervising faculty K-CAT scores provided for a teacher candidate. Standard records are those for which an overall or standard-level score could be calculated. Complete records are those that had scores for all the relevant K-CAT indicators.

Source: Authors' analysis of data collected during the 2018/19 and 2019/20 school years and provided by Kansas educator preparation programs.

Praxis Principles of Learning and Teaching (Praxis PLT). The Praxis PLT is a timed, computer-administered test of educator ability, developed by the Educational Testing Service (ETS, 2019). The assessment focuses on pedagogy rather than on content-specific knowledge and is used along with other sources of data to inform teacher licensure and certification decisions in Kansas. The Praxis PLT has four versions (early childhood education, grades K–6, grades 5–9, and grades 7–12). Each version includes 70 selected-response questions and four constructed-response questions. The assessment is designed to address five content areas:

- Students as learners.
- Instructional process.
- Assessment.
- Professional development, leadership, and community.
- Analysis of instructional scenarios (aligned to the four content areas above).

The Praxis PLT provides separate content-area scores and an overall score. The number of items used to address each content area, and the relative weight assigned to each content area to derive an overall score, vary across the four versions of the assessment. However, the final scores of the four Praxis PLT versions are all calibrated to the same scale. KSDE requires all teacher candidates to pass at least one of the Praxis PLT tests with a score of 160 or higher. The Praxis PLT has been shown to be a valid and reliable assessment of teacher practice (ETS, 2019)

Kansas Performance Teaching Portfolio. The KPTP is the primary teacher candidate assessment used in Kansas. Scored by trained KSDE staff (Kansas State Department of Education, n.d.-b), the KPTP is a summative assessment of teacher candidates' preparedness to enter the classroom, and it is used along with other sources of data to inform teacher licensure and certification decisions. The KPTP measures teacher candidate performance aligned with the 10 KEPPS standards (Kansas State Department of Education, n.d.-a).

Scores are provided based on a unit of study that is designed and implemented by the candidate. KSDE trains and supervises KPTP scorers, who review materials submitted by candidates as a work-sample portfolio that includes six sources of data: detailed descriptions of unit and lesson plans, lesson materials and assessments with associated rationales, reflections based on two video-recorded lessons, data and interpretations from student assessments, reflections on achievement of self-learning objectives, and descriptions of professional communications and their perceived impact. Teacher candidates receive scores for each of the 10 standards, based on a three-point rating scale in which 1 is "criteria not met," 2 is "criteria partially met," and 3 is "criteria met." Two scorers evaluate each teacher candidate, and their scores are averaged to generate a final score. The total possible score for the KPTP is 30 points (up to 3 points for each of 10 ratings), and teacher candidates must have a score of at least 20 to demonstrate competency on the assessment. Each EPP can set its own lower cutscores. Teacher candidates who score above the cutscore have opportunities to improve their final scores, but those who score below must redo the entire KPTP process.

Sample

The samples used to address research question 1a (qualitative research sample) and research questions 1b–1d and 2 (quantitative research sample) are described below.

Qualitative research sample. To address the qualitative research questions, the study team used interviews with cooperating teachers and reviews of K-CAT, InTASC standards, and KEPPS by content experts.

Research question 1a (face validity). To assess the face validity of the K-CAT, the study team randomly selected one cooperating teacher from each of six participating EPPs to interview. Participants were selected from the pool of cooperating teachers who used the K-CAT during the spring 2020 semester. Because the scheduling of interviews coincided with KSDE's decision to close schools to in-person learning in response to the COVID-19

pandemic, it was difficult to contact and recruit cooperating teachers. Multiple rounds of random selection were conducted until a cooperating teacher from each of the six EPPs consented to participate. Ten cooperating teachers were contacted during the recruitment process. (See table B3 for the characteristics of the six cooperating teachers included in the final interview sample.)

Table B3. Characteristics of cognitive interview participants

Participant	Grade level	Subject	Gender	Experience level as cooperating teacher
1	Elementary: grades K–6	Physical education	Male	Experienced
2	Elementary: grade 4	General education	Female	Novice
3	Elementary: grades 5 and 6	Music	Female	Experienced
4	Middle school: grade 6	Science	Female	Experienced
5	Elementary: grades K–5	Physical education	Female	Experienced
6	Middle school: grade 7	Social studies	Male	Experienced

Source: Author-collected data from interviews in spring 2020.

The face validity evidence provided by the interviews with cooperating teachers was limited by the small number of participants and the potential that the participants shared some unmeasured characteristic that could have influenced the outcomes and that would not be the case in a larger sample. To identify 6 teachers to interview, the study team had to contact 10 teachers. This process included using random selection three times for one EPP, three times for another, and once for the remaining EPPs. Additionally, because random selection was used for to select cooperating teachers for the interviews, the study team did not account for subject area or grade level (for example, no high school teachers participated), so the opinions expressed might not be representative of all cooperating teachers. The interviews were also conducted following the midterm administration of the K-CAT and might not fully represent cooperating teachers' evolving perceptions of the K-CAT. Also, because of school closures related to the COVID-19 pandemic, most cooperating teachers did not have a chance to discuss midterm results with supervising faculty members, which might have resulted in lower correlations between the scores provided by the two groups of raters.

Research question 1b (content validity). Study team members with expertise in conducting standards alignment reviewed the content of the K-CAT to determine the extent to which it aligns to the InTASC standards and KEPPS. Before examining the alignment of the full K-CAT instrument, the raters engaged in an exercise to calibrate their decisionmaking process for assigning alignment scores. The raters used an alignment protocol (see appendix F for a sample alignment protocol for standard 1 of the K-CAT) to independently assess the alignment of K-CAT standards 1 and 2 and then met to discuss their rationale and decisionmaking process for assigning the alignment scores. During the calibration the raters agreed to several decisionmaking rules. The raters agreed that if an indicator required a teacher candidate to take an action that necessitated pedagogical or content knowledge, it could be assumed that the teacher candidate had that knowledge. The raters also agreed to be cautious in making inferences based on their own experience and instead to look for evidence in the wording of the indicators. Another rule was to holistically consider the K-CAT standard against each InTASC or KEPPS indicator so that the standard could be considered aligned if there was evidence of alignment in any K-CAT indicator or at any performance level (novice, apprentice/developing, accomplished, or exemplary).

Quantitative research sample. The study team used separate samples to address the quantitative research questions. To establish these samples, data had to be linked across the following data sources:

- Cooperating teachers' midterm K-CAT scores.
- Cooperating teachers' final K-CAT scores.
- Supervising faculty members' midterm K-CAT scores.

- Supervising faculty members' final K-CAT scores.
- Praxis PLT scores.
- KPTP scores.

The participating EPPs provided data for 130 teacher candidates who had a K-CAT data record for at least one administration (table B4). Two EPPs did not provide data for one or more administrations. Haskell Indian Nations University did not provide data for fall 2019 because the institution does not offer student teaching in the fall. Sterling College provided only final spring 2019 data before withdrawing from the study. Additionally, final K-CAT, Praxis PLT, and KPTP scores for spring 2020 were not collected because of school closures related to the COVID-19 pandemic.

Most teacher candidates participated in their student-teaching experience during the spring semester. Candidates for whom data were provided were pursuing certification in eight certification areas: elementary education (67 percent), physical education (10 percent), music (9 percent), English language arts (5 percent), history/government/social studies (4 percent), mathematics (4 percent), biology (2 percent), and chemistry (1 percent).

Table B4. Number of teacher candidates with Kansas Clinical Assessment Tool data, by education preparation program and semester

Educator preparation program	Spring 2019	Fall 2019	Spring 2020	Total
Baker University	13	4	8	25
Bethel College	4	2	7	13
Haskell Indian Nations University	5	[a]	2	7
Kansas Wesleyan University	15	7	8	30
McPherson College	5	5	12	22
Southwestern College	9	7	11	27
Sterling College	6	[b]	[b]	6
Total	**57**	**25**	**48**	**130**

Note: Teacher candidates with records provided by more than two raters are included in the relevant sample count twice.
a. No data were available because student teaching is not offered in the fall.
b. No data were available because Sterling College provided only final spring 2019 data before withdrawing from the study.
Source: Authors' analysis of data collected during the 2018/19 and 2019/20 school years and provided by Kansas educator preparation programs.

Among the 130 teacher candidates for whom K-CAT data were available, overall midterm scores could be computed for 107 candidates, and overall final scores could be computed for 72 candidates (table B5). Most often, K-CAT overall scores could not be calculated because of missing scores for standards 9 and 10.[2] Overall final K-CAT scores could be matched with 58 teacher candidates' Praxis PLT scores and 72 teacher candidates' KPTP scores.

[2] Valid K-CAT scores could be calculated for 92 percent of all records. Of the 8 percent with at least one missing standard level score, 68 percent were missing a score on standard 9, and 81 percent were missing a score on standard 10.

Table B5. Number of teacher candidates with overall scores and matchable scores by semester

Semester	Midterm K-CAT administration		Final K-CAT administration		Praxis PLT	KPTP
	Cooperating teacher	Supervising faculty	Cooperating teacher	Supervising faculty		
Spring 2019	43	43	51	50		50
Fall 2019	21	23	21	22	44	22
Spring 2020	43	41	—	—	14	—
Total	**107**	**107**	**72**	**72**	—	**72**

— indicates no data were available.
K-CAT is Kansas Clinical Assessment Tool. KPTP is the Kansas Performance Teaching Portfolio. Praxis PLT is the Praxis Principles of Learning and Teaching.
Note: Across the cooperating teacher and supervising faculty ratings, as well as the midterm and final K-CAT administrations, 389 K-CAT records were collected across 130 teacher candidates (an average of three records per candidate). The number of K-CAT records varied by educator preparation program, semester, and administration (see table B6). Among all K-CAT records, a larger proportion (233 of 389, or 60 percent) were from the midterm administration. Teacher candidates with records provided by more than two raters are included in the relevant sample count twice.
Source: Authors' analysis of data collected during the 2018/19 and 2019/20 school years and provided by Kansas educator preparation programs.

Table B6. Number of records by educator preparation program, semester, and administration

Educator preparation program	Midterm K-CAT administration				Final K-CAT administration			All administrations
	Spring 2019	Fall 2019	Spring 2020	Total	Spring 2019	Fall 2019	Total	Total
Baker University	26	8	14	48	26	8	34	82
Bethel College	9	3	14	26	9	4	13	39
Haskell Indian Nations University	10	[a]	4	14	10	[a]	10	24
Kansas Wesleyan University	28	14	16	58	28	14	42	100
McPherson College	6	10	22	38	6	10	16	54
Southwestern College	16	13	20	49	18	11	29	78
Sterling College	[b]	[b]	[b]	[b]	12	[b]	12	12
Total	**95**	**48**	**90**	**233**	**109**	**47**	**156**	**389**

K-CAT is Kansas Clinical Assessment Tool.
Note: Teacher candidates with records provided by more than two raters are included in the relevant sample count twice.
a. No data were available because student teaching is not offered in the fall.
b. No data were available because Sterling College provided only final spring 2019 data before withdrawing from the study.
Source: Authors' analysis of data collected during the 2018/19 and 2019/20 school years and provided by Kansas educator preparation programs.

Research question 1c (convergent validity). The samples used to examine the convergent validity of the midterm and final K-CAT scores consisted of teacher candidates who had both cooperating teacher and supervising faculty K-CAT overall and standard-level scores from a given administration. Separate samples were used to examine the convergent validity of the midterm and final K-CAT scores. To be included in these analyses, a teacher candidate must have had a K-CAT score from both a cooperating teacher and a supervising faculty member for a given administration. Of the teacher candidates with K-CAT overall scores, 88 percent had matched cooperating teacher and supervising faculty K-CAT overall scores for the midterm administration, and 89 percent had matched cooperating teacher and supervising faculty K-CAT overall scores for the final administration (table B7). Sensitivity analyses comparing K-CAT overall scores for the samples that could be matched and the full sample of cooperating and supervisor K-CAT overall scores showed standard deviation differences below 0.05. This suggests that the bias due to missing data might not be substantial. Additionally, the results of sensitivity analyses might differ when examining K-CAT standard-level scores. Some teacher candidates might have partial scores such that a K-CAT overall score could not be calculated while K-CAT standard-level scores could be.

Table B7. Analytic sample for convergent validity analyses for overall score

Analytic sample for teacher candidates with K-CAT overall scores	Midterm administration	Final administration
Number for cooperating teachers	108[a]	73
Number for supervising faculty	108[a]	73
Number matched	95	65
Percent matched	88	89

K-CAT is the Kansas Clinical Assessment Tool.
Note: Teacher candidates with records provided by more than two raters are included in the relevant sample count twice. For example, records provided by two cooperating teachers were each paired with the record provided by the supervising faculty.
a. Although both cooperating teachers and supervising faculty have the same number of overall scores, the subsets of teacher candidates that the scores apply to are not identical.
Source: Authors' analysis of data collected during the 2018/19 and 2019/20 school years and provided by Kansas educator preparation programs.

The study team conducted secondary analyses to examine the convergent validity of the K-CAT standard-level scores. Teacher candidates were included in a given analysis only if they had a K-CAT standard-level score from both a cooperating teacher and a supervising faculty member. Separate analyses were conducted using scores from the midterm and final K-CAT administrations. Because teacher candidates' scores could be calculated separately for each K-CAT standard and by K-CAT administration, the sample sizes varied across the analyses (table B8).

Table B8. Analytic samples for convergent validity analyses by standard

Analytic sample for teacher candidates with scores from both a cooperating teacher and a supervising faculty member[a]	Midterm administration	Final administration
Standard 1 (Learner Development)	110	74
Standard 2 (Learner Differences)	107	70
Standard 3 (Content Knowledge)	110	74
Standard 4 (Learning Environments)	109	73
Standard 5 (Application of Content)	105	72
Standard 6 (Student Assessment)	107	71
Standard 7 (Planning for Instruction)	109	74
Standard 8 (Instructional Strategies)	109	74
Standard 9 (Professional Learning and Ethical Practice)	99	67
Standard 10 (Leadership and Collaboration)	99	66

a. The number of teacher candidates who had standard-level scores might exceed the number who had K-CAT overall scores. Teacher candidates with records provided by more than two raters are included in the relevant sample count twice. For example, records provided by two cooperating teachers were each paired with the record provided by the supervising faculty.
Source: Authors' analysis of data collected during the 2018/19 and 2019/20 school years and provided by Kansas educator preparation programs.

Research question 1d (criterion-related validity). The samples used to examine the criterion-related validity of the K-CAT consisted of teacher candidates who had final cooperating teacher or supervising faculty K-CAT overall scores, or both (table B9). Separate samples were used to examine the relationships between the final K-CAT overall scores and overall Praxis PLT and KPTP scores. The percentage of teacher candidates with final K-CAT overall scores that could be matched to Praxis PLT scores was 76 percent for cooperating teachers and 72 percent for supervising faculty. The percentage of teacher candidates with final K-CAT overall scores that could be matched to KPTP scores was 92 percent for cooperating teachers and 90 percent for supervising faculty. Nonresponse bias analyses comparing the average K-CAT overall scores for the full sample to the average scores for the sample that had matched Praxis PLT data showed a standard deviation difference between the groups of −0.07 for cooperating teacher scores and a difference of 0.02 for supervising faculty scores. This suggests that the K-CAT overall scores provided by cooperating teachers were somewhat higher for the group of teacher candidates who had Praxis PLT scores. Therefore, these results should be interpreted with caution.

Table B9. Analytic samples for criterion-related validity analyses examining final overall scores

Analytic sample	Cooperating teacher scores	Supervising faculty scores
Teacher candidates with final K-CAT overall scores	72	72
Teacher candidates with K-CAT overall scores and Praxis PLT scores	55	52
Teacher candidates with final K-CAT overall scores and KPTP scores	66	65

K-CAT is the Kansas Clinical Assessment Tool. KPTP is Kansas Performance Teaching Portfolio. Praxis PLT is Praxis Principles of Learning and Teaching.
Note: Teacher candidates with records provided by more than two raters are included in the relevant sample count twice. For example, records provided by two cooperating teachers were each paired with teacher candidates' Praxis PLT and KPTP scores.
Source: Authors' analysis of data collected during the 2018/19 and 2019/20 school years and provided by Kansas educator preparation programs.

The study team conducted secondary analyses to examine the relationships between teacher candidates' final K-CAT standard-level scores and their Praxis PLT and KPTP scores. All teacher candidates for whom a K-CAT standard-level score could be calculated and who had Praxis PLT score or KPTP score, or both, were included in the analysis for each K-CAT standard. Therefore, the sample sizes varied across K-CAT standard and by cooperating teacher and supervising faculty (table B10). Additionally, because teacher candidates' scores could be calculated separately for each K-CAT standard, the proportion of teacher candidates included in each analysis was slightly higher than in analyses conducted with the K-CAT overall scores.

Table B10. Analytic samples for criterion-related validity analyses examining final standard-level scores

	K-CAT and Praxis PLT scores		K-CAT and KPTP scores	
Analytic sample	Cooperating teacher	Supervising faculty	Cooperating teacher	Supervising faculty
Standard 1 (Learner Development)	57	59	68	74
Standard 2 (Learner Differences)	57	55	68	70
Standard 3 (Content Knowledge)	57	59	68	74
Standard 4 (Learning Environments)	57	58	68	73
Standard 5 (Application of Content)	56	59	67	74
Standard 6 (Student Assessments)	57	56	68	71
Standard 7 (Planning for Instruction)	57	59	68	74
Standard 8 (Instructional Strategies)	57	59	68	74
Standard 9 (Professional Learning and Ethical Practice)	56	54	67	68
Standard 10 (Leadership and Collaboration)	55	53	66	66

K-CAT is the Kansas Clinical Assessment Tool. KPTP is Kansas Performance Teaching Portfolio. Praxis PLT is Praxis Principles of Learning and Teaching.
Note: Teacher candidates with records provided by more than two raters are included in the relevant sample count twice. For example, records provided by two cooperating teachers were each paired with teacher candidates' KPTP and PLT scores.
Source: Authors' analysis of 2018/19 data provided by Kansas educator preparation programs.

Research question 2 (reliability). Three samples were used to examine the reliability of the K-CAT: one consisting of all available midterm K-CAT indicator scores, one with all available final K-CAT indicator scores, and one combining all available scores across both administrations. Each teacher candidate had two K-CAT records on average for each administration. The proportions of records included in analyses of K-CAT overall scores from both the midterm and final administrations were 67 percent (midterm) and 62 percent (final; table B11). The proportions of records included in analyses of standard-level K-CAT scores from both the midterm and final administrations ranged from 72 percent to 99 percent. A sensitivity analysis comparing the standard 2 reliability estimate generated from all available standard 2 data to the standard 2 reliability estimate generated from the subset of teacher candidates for whom an overall K-CAT reliability estimate could be generated indicated a difference of only 0.02 in the reliability coefficient. Examination of differences in the mean standard 2 scores for these groups revealed a standard deviation difference of 0.04. These results suggest that the bias in reliability estimates because of missing data is small in magnitude.

Table B11. Analytic samples for reliability analyses

Analytic sample	Midterm K-CAT administration	Final K-CAT administration	Both administrations
Total number of K-CAT records	233	156	389
K-CAT overall score			
Number	155	96	251
Percent	66.5	61.5	64.5
Standard 1 (Learner Development) score			
Number	179	102	281
Percent	76.8	65.4	72.2
Standard 2 (Learning Differences) score			
Number	226	151	377
Percent	97.0	96.8	96.9
Standard 3 (Learning Environments) score			
Number	224	153	377
Percent	96.1	98.1	96.9
Standard 4 (Content Knowledge) score			
Number	223	150	373
Percent	95.7	96.2	95.9
Standard 5 (Application of Content) score			
Number	221	150	371
Percent	94.8	96.2	95.4
Standard 6 (Student Assessment) score			
Number	223	151	374
Percent	95.7	96.8	96.1
Standard 7 (Planning for Instruction) score			
Number	221	150	371
Percent	94.8	96.2	95.4
Standard 8 (Instructional Strategies) score			
Number	229	155	384
Percent	98.3	99.4	98.7
Standard 9 (Professional Learning and Ethical Practice) score			
Number	217	147	364
Percent	93.1	94.2	93.6
Standard 10 (Leadership and Collaboration) score			
Number	207	142	349
Percent	88.8	91.0	89.7

K-CAT is Kansas Clinical Assessment Tool.
Source: Authors' analysis of 2018/19 and 2019/20 data provided by Kansas educator preparation programs.

Analysis methods

Research question 1a (face validity). To explore the face validity of the K-CAT, the study team analyzed transcripts of interviews conducted with six cooperating teachers, using MAXQDA qualitative analysis software. Each

cooperating teacher's subject area and grade level were recorded. Two study team members then analyzed the transcripts to evaluate the cooperating teachers' assessment of the K-CAT's representativeness, usability, and feasibility. Responses were binary for each category such that cooperating teachers' responses overall could be counted as yes or no for each code. Representativeness indicated that the K-CAT standard's content captured the knowledge, skills, and abilities required by the corresponding InTASC standards and KEPPS and aligned with feedback that cooperating teachers envisioned giving. Usability indicated whether the cooperating teachers reported that they were able to capture teacher candidate performance using the scoring rubric. As the study team engaged in the interviews and coding, a third code of feasibility emerged, indicating whether the K-CAT indicators were appropriate for and within the reach of teacher candidates.

Prior to analyzing all the transcripts, the two study team members independently coded one common transcript. The raters went through the transcript and identified and tagged excerpts that aligned with the codes. The coders then met to compare ratings and the rationale for them. Agreement was consistently above 90 percent across the two raters, with the same excerpts selected and assigned the same codes. K-CAT standards were considered to demonstrate evidence of face validity if at least four of the six cooperating teachers reported that the K-CAT standards were representative or usable.

Research questions 1b (content validity). Assessment of the content validity of the K-CAT focused on the extent to which an individual K-CAT standard aligned to the InTASC and KEPPS indicators it was designed to address. Using the study alignment protocol (see appendix F), two raters reviewed the content of each K-CAT standard and provided a score from .00 to 1.00 to indicate how much each relevant InTASC and KEPPS indicator was addressed by the given K-CAT standard. The scale range was .25 for "very little or none," .50 for "some," .75 for "most", and 1.00 for "all or almost all." When the raters disagreed about the alignment score for a given K-CAT standard and indicator, they met and discussed their respective rationale for the score until they reached consensus. When they could not reach consensus, the raters consulted with an expert in educator preparation programs and their associated standards to determine a final rating. Of 204 indicators, 12 required expert review.

The level of alignment for each K-CAT standard was computed by separately averaging the final alignment scores for each InTASC and KEPPS indicator associated with that K-CAT standard. Overall alignment of the K-CAT to the InTASC and KEPPS was calculated by averaging alignment ratings across all InTASC and KEPPS indicators. The alignment scores for each K-CAT standard and the K-CAT overall assessment ranged from .25 to 1.00, with .25 indicating little or no alignment and 1.00 indicating full alignment. Each K-CAT standard, as well as the K-CAT overall assessment, was considered to demonstrate evidence of content validity if the overall rating was at least .75, or "mostly aligned," for either InTASC or KEPPS.

Research question 1c (convergent validity). The study team conducted bivariate correlation analyses (using Spearman's rank correlation coefficient, r_s) to examine the relationship between K-CAT overall scores provided by cooperating teachers and supervising faculty. Spearman's rank correlation was chosen because of the non-normal distribution and rating scale nature of the data. The same analysis was conducted for each standard, and separate analyses were conducted for the midterm and final K-CAT scores. Although a cooperating teacher and supervising faculty member provided scores for a teacher candidate at roughly the same point in time, these ratings were likely based on different sources of information available to the two raters over the period of student teaching, providing support of convergent validity (Campbell & Fiske, 1959). Therefore, the convergent validity analysis was not an examination of the inter-rater reliability of the K-CAT. The study team determined that identification of a statistically significant and positive correlation between cooperating teachers and supervising faculty provides evidence that their scores are assessing a common construct, thus demonstrating evidence of convergent validity. A K-CAT standard was considered to have evidence of convergent validity if the correlation was statistically significant and positive for either the midterm or final administration. Because there is no general guidance on how large a coefficient should be to show evidence of validity, the study team decided that a statistically significant

and positive correlation provided some validity evidence, given that the statistical significance shows that the correlation was unlikely to have been obtained by chance (Anastasi & Urbina, 1997).

Research question 1d (criterion-related validity). The study team conducted bivariate correlation analyses (using Spearman's rank correlation coefficient, r_s) to examine the relationships between final administration K-CAT overall scores and scores on the Praxis PLT and KPTP. Analyses examined relationships between K-CAT overall and standard-level scores and Praxis PLT composite scores, KPTP overall scores, and KPTP task scores. All analyses were conducted separately for cooperating teachers and supervising faculty. As in the examination of convergent validity, the K-CAT overall and the individual K-CAT standards were considered to have evidence of criterion-related validity if the correlation coefficient was statistically significant and positive for the Praxis PLT as administered by the cooperating teachers or supervising faculty as well as for the KPTP as administered by either rater.

Research question 2 (reliability). The study team examined internal consistency (Cronbach's alpha) across all K-CAT indicators and separately for the indicators associated with each K-CAT standard. Internal consistency is a measure of how closely indicators within a standard are related. The score ranges from 0 (no relationship) to 1 (completely related). Analyses were conducted separately for the midterm and final administrations and for both administrations combined. A K-CAT standard was considered to demonstrate reliability if Cronbach's alpha was at least .70 for the midterm or the final administrations. The K-CAT overall was considered reliable if it had a Cronbach's alpha of at least .90. A Cronbach's alpha of .70 is considered acceptable for research purposes. Because the K-CAT overall score could be used to make high-stakes decisions, such as whether a teacher candidate will be required to repeat the student-teaching experience, the higher threshold of a .90 Cronbach's alpha was adopted for the K-CAT overall score (see, for example, Cortina, 1993; Nunnally, 1978).

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Appendix C. Detailed analyses

This appendix includes the detailed methodology for the supporting analyses presented in the main report. The details of the coding for the exploratory cognitive interviews are described, followed by the ratings for each standard performed as part of the content alignment. Finally, there is detailed information on the bivariate correlation analyses conducted for convergent and criterion-related validity.

Detailed analyses and findings from exploratory cognitive interviews

Six cooperating teachers were interviewed after the midterm administration of the Kansas Clinical Assessment Tool (K-CAT). Their responses to the interview protocol questions were transcribed and coded by the study team (see appendix G for a sample of the protocol). If a cooperating teacher gave positive feedback related to the specific area identified and did not express specific concerns, they were counted as rating the K-CAT standard as representative, usable, and feasible (table C1).

For the most part cooperating teachers felt that the K-CAT standards were representative of the component standards and accurately captured the knowledge, skills, and abilities of teacher candidates. However, there were a few recurring themes across cooperating teachers who did not provide positive feedback. Cooperating teachers felt that because interviews were conducted at midterm and because schools had closed in response to the COVID-19 pandemic, they were unable to assess teacher candidates on some of the indicators that they might have rated positively. Another common concern for cooperating teachers was that the component of standard 2 that addresses intentional collaboration with other professionals and community resources would be difficult for many teacher candidates. However, the most common concern in terms of representativeness and usability was about the use of technology, which is included as an indicator across multiple standards. Some teachers expressed that "the technology one was difficult because we don't have one to one at our school so it's almost unfair to ask [the teacher candidate] to use technology." Finally, an overarching concern in terms of feasibility was that because many of the K-CAT indicators were derived from standards for in-service teachers, they were not relevant for teacher candidates or they were not achievable in the short time a teacher candidate was in the school and classroom.

Table C1. Proportion of cooperating teachers who rated each standard as representative, usable, or feasible

K-CAT standard	Representative	Usable	Feasible
Standard 1: Learner Development	4/6	5/6	3/6
Standard 2: Learning Differences	4/6	5/6	4/6
Standard 3: Learning Environments	4/6	5/6	4/6
Standard 4: Content Knowledge	3/6	6/6	4/6
Standard 5: Application of Content	1/6	5/6	1/6
Standard 6: Student Assessment	5/6	6/6	4/6
Standard 7: Planning for Instruction	3/6	5/6	3/6
Standard 8: Instructional Strategies	5/6	6/6	4/6
Standard 9: Professional Learning and Ethical Practice	4/6	5/6	5/6
Standard 10: Leadership and Collaboration	4/6	4/6	1/6

K-CAT is Kansas Clinical Assessment Tool.
Source: Authors' analysis of six cooperating teachers' interview data from spring 2020.

Content analysis

The final rating from the consensus between raters for each indicator, including the input from the third expert rater when needed, were averaged to reach a mean rating and standard deviation for each standard and for the

K-CAT overall (table C2). The consensus rating for the Interstate Teacher Assessment and Support Consortium (InTASC) and Kansas Educator Preparation Program Standards (KEPPS) for Professional Education indicators that the K-CAT standard was designed to address are in tables C3–C12 (see appendix E for the crosswalk).

Table C2. Alignment of standard content to existing standards

K-CAT standard	InTASC standards mean rating	KEPPS mean rating
Standard 1: Learner Development	.75 (.00)	.71 (.22)
Standard 2: Learning Differences	.92 (.13)	.97 (.09)
Standard 3: Learning Environments	.78 (.28)	.89 (.13)
Standard 4: Content Knowledge	.81 (.24)	.86 (.16)
Standard 5: Application of Content	.94 (.12)	.85 (.17)
Standard 6: Student Assessment	.78 (.34)	.80 (.21)
Standard 7: Planning for Instruction	.70 (.21)	.81 (.21)
Standard 8: Instructional Strategies	.61 (.25)	.67 (.28)
Standard 9: Professional Learning and Ethical Practice	.75 (.32)	.83 (.28)
Standard 10: Leadership and Collaboration	.82 (.28)	.98 (.07)
Total K-CAT alignment	.78 (.22)	.84 (.18)

InTASC is Interstate Teacher Assessment and Support Consortium. K-CAT is Kansas Clinical Assessment Tool. KEPPS is Kansas Educator Preparation Program Standards for Professional Education.
Note: Numbers in parentheses are standard deviations. The means and standard deviations were calculated from the indicator alignment ratings generated by two content area experts and presented in tables C3–C12.
Source: Alignment data generated by two content-area experts during the 2019/20 school year.

Table C3. Standard 1 (Learner Development) alignment by indicator

Alignment indicator	Consensus rating
InTASC indicators	
1 (a)	.75
1 (b)	.75
1 (c)	.75
KEPPS indicators	
1.1.1	.50
1.1.2	.50
1.1.3	.75
1.1.4	.50
1.2.1	1.00
1.3.2	1.00
7.3.1	.75

InTASC is Interstate Teacher Assessment and Support Consortium. KEPPS is Kansas Educator Preparation Program Standards for Professional Education.
Source: Alignment data generated by two content-area experts during the 2019/20 school year.

Table C4. Standard 2 (Learning Differences) alignment by indicator

Alignment indicator	Consensus rating
InTASC indicators	
2 (a)	1.00
2 (b)	1.00
2 (c)	1.00
2 (d)	.75
2 (e)	.75
2 (f)	1.00
KEPPS indicators	
2.1.1	1.00
2.1.2	1.00
2.1.3	1.00
2.1.6	.75
2.2.1	1.00
2.2.2	1.00
4.2.8	1.00
7.3.2	1.00

InTASC is Interstate Teacher Assessment and Support Consortium. KEPPS is Kansas Educator Preparation Program Standards for Professional Education.
Source: Alignment data generated by two content-area experts during the 2019/20 school year.

Table C5. Standard 3 (Learning Environments) alignment by indicator

Alignment indicator	Consensus rating
InTASC indicators	
3 (a)	1.00
3 (b)	.25
3 (c)	1.00
3 (d)	1.00
3 (e)	.75
3 (f)	.75
3 (g)	1.00
3 (h)	.50
KEPPS indicators	
3.1.1	.75
3.1.2	1.00
3.1.3	1.00
3.1.4	.75
3.2.1	1.00
3.2.3	.75
3.3.5	1.00

InTASC is Interstate Teacher Assessment and Support Consortium. KEPPS is Kansas Educator Preparation Program Standards for Professional Education.
Source: Alignment data generated by two content-area experts during the 2019/20 school year.

Table C6. Standard 4 (Content Knowledge) alignment by indicator

Alignment indicator	Consensus rating
InTASC indicators	
4 (a)	.75
4 (b)	1.00
4 (c)	1.00
4 (d)	1.00
4 (e)	.75
4 (f)	1.00
4 (g)	.75
4 (h)	.75
4 (i)	.25
KEPPS indicators	
4.1.1	1.00
4.1.2	.75
4.1.3	1.00
4.1.4	.75
4.1.5	1.00
4.1.6	.75
4.2.1	.75
4.2.2	.50
4.2.3	1.00
4.2.4	1.00
4.2.5	1.00
4.2.6	.75
4.2.7	.75
5.3.1	1.00

InTASC is Interstate Teacher Assessment and Support Consortium. KEPPS is Kansas Educator Preparation Program Standards for Professional Education.
Source: Alignment data generated by two content-area experts during the 2019/20 school year.

Table C7. Standard 5 (Application of Content) alignment by indicator

Alignment indicator	Consensus rating
InTASC indicators	
5 (a)	1.00
5 (b)	1.00
5 (c)	1.00
5 (d)	1.00
5 (e)	.75
5 (f)	1.00
5 (g)	1.00
5 (h)	.75
KEPPS indicators	
5.1.1	.75
5.1.2	.75
5.1.3	.75
5.1.4	.75
5.1.5	1.00
5.2.1	1.00
5.2.2	1.00
5.2.3	1.00
5.3.2	.50
5.3.3	.75
5.3.5	1.00
5.3.6	1.00

InTASC is Interstate Teacher Assessment and Support Consortium. KEPPS is Kansas Educator Preparation Program Standards for Professional Education.
Source: Alignment data generated by two content-area experts during the 2019/20 school year.

Table C8. Standard 6 (Student Assessment) alignment by indicator

Alignment indicator	Consensus rating
InTASC indicators	
6 (a)	1.00
6 (b)	.50
6 (c)	1.00
6 (d)	1.00
6 (e)	1.00
6 (f)	1.00
6 (g)	1.00
6 (h)	.25
6 (i)	.25
KEPPS indicators	
1.1.3	.75
6.1.1	1.00
6.1.2	.75
6.1.3	1.00
6.1.4	1.00
6.1.5	.75
6.1.6	.50
6.1.7	1.00
6.2.1	.75
6.2.2	.25
6.2.3	.50
6.2.4	.75
6.2.5	.75
6.2.6	1.00
6.3.1	.75
6.3.2	1.00
6.3.3	1.00
6.3.4	.75
6.3.5	.75
6.3.6	1.00

InTASC is Interstate Teacher Assessment and Support Consortium. KEPPS is Kansas Educator Preparation Program Standards for Professional Education.
Source: Alignment data generated by two content-area experts during the 2019/20 school year.

Table C9. Standard 7 (Planning for Instruction) alignment by indicator

Alignment indicator	Consensus rating
InTASC indicators	
7 (a)	.75
7 (b)	1.00
7 (c)	.50
7 (d)	.75
7 (e)	.25
7 (f)	.50
KEPPS indicators	
1.2.2	1.00
1.3.4	1.00
2.1.5	.50
2.2.3	1.00
2.2.5	1.00
3.3.1	1.00
3.3.3	.75
5.3.4	.75
7.1.1	.75
7.1.2	.50
7.1.3	.50
7.1.4	1.00
7.2.1	.50
7.2.2	1.00
7.2.4	.75
7.3.3	1.00
7.3.4	.75
7.3.5	.75

InTASC is Interstate Teacher Assessment and Support Consortium. KEPPS is Kansas Educator Preparation Program Standards for Professional Education.
Source: Alignment data generated by two content-area experts during the 2019/20 school year.

Table C10. Standard 8 (Instructional Strategies) alignment by indicator

Alignment indicator	Consensus rating
InTASC indicators	
8 (a)	1.00
8 (b)	1.00
8 (c)	.75
8 (d)	.50
8 (e)	.50
8 (f)	.50
8 (g)	.50
8 (h)	.25
8 (i)	.50
KEPPS indicators	
1.3.1	1.00
2.1.4	.75
2.2.4	1.00
5.2.4	.50
5.2.5	.25
8.1.1	.50
8.1.2	1.00
8.1.3	1.00
8.1.4	.25
8.1.5	1.00
8.1.6	1.00
8.1.7	.75
8.1.8	.50
8.1.9	.50
8.1.10	.50
8.2.1	.25
8.2.2	1.00
8.2.3	.50
8.2.4	.50
8.2.5	.50
8.2.6	.75

InTASC is Interstate Teacher Assessment and Support Consortium. KEPPS is Kansas Educator Preparation Program Standards for Professional Education.
Source: Alignment data generated by two content-area experts during the 2019/20 school year.

Table C11. Standard 9 (Professional Learning and Ethical Practice) alignment by indicator

Alignment indicator	Consensus rating
InTASC indicators	
9 (a)	1.00
9 (b)	1.00
9 (c)	1.00
9 (d)	.75
9 (e)	.50
9 (f)	.25
KEPPS indicators	
9.1.1	1.00
9.1.2	1.00
9.1.3	1.00
9.1.4	.25
9.1.5	1.00
9.2.1	1.00
9.2.2	.50
9.2.3	1.00
10.1.3	.75

InTASC is Interstate Teacher Assessment and Support Consortium. KEPPS is Kansas Educator Preparation Program Standards for Professional Education.
Source: Alignment data generated by two content-area experts during the 2019/20 school year.

Table C12. Standard 10 (Leadership and Collaboration) alignment by indicator

Alignment indicator	Consensus rating
InTASC indicators	
10 (a)	1.00
10 (b)	1.00
10 (c)	1.00
10 (d)	1.00
10 (e)	1.00
10 (f)	1.00
10 (g)	1.00
10 (h)	.25
10 (i)	.50
10 (j)	.75
10 (k)	.50
KEPPS indicators	
3.2.2	1.00
3.3.2	1.00
3.3.4	.75
7.2.3	1.00
7.2.5	1.00
10.1.1	1.00
10.1.2	1.00
10.2.1	1.00
10.2.3	1.00
10.2.4	1.00
10.2.5	1.00
10.2.6	1.00

InTASC is Interstate Teacher Assessment and Support Consortium. KEPPS is Kansas Educator Preparation Program Standards for Professional Education.
Source: Alignment data generated by two content-area experts during the 2019/20 school year.

Convergent validity

Analyses of the relationship between K-CAT overall scores from cooperating teachers and supervising faculty revealed positive Spearman's rank correlations of .39 for the midterm administration and .48 for the final (end-of-term) administration (table C13). Pearson's correlations yielded similar findings. Analysis of data across semesters showed positive rank correlations of .43 for the midterm administration and .36 for the final administration. These correlations show evidence of convergent validity following Campbell and Fiske's (1959) guidance for the monotrait-heteromethod approach for assessing validity. In this approach a phenomenon, such as teacher candidate readiness, is assessed using differing methods or data sources, such as the bodies of evidence used by the cooperating teacher and the supervising faculty.

Table C13. Convergent validity: Relationship between scores from cooperating teachers and supervising faculty

Semester	Correlation (Spearman's rho, r_s) Midterm administration (N = 95)	Final administration (N = 65)
All semesters	.39**	.48**

** Significant at $p \leq 01$.
Source: Authors' analysis of data provided by Kansas educator preparation programs for the spring 2019, fall 2019, and spring 2020 semesters.

Correlations between K-CAT standard-level scores from cooperating teachers and supervising faculty for the midterm administration were positive and statistically significant, ranging from .28 to .56 (table C14). Correlations for the final administration were all statistically significant, ranging from .25 to .54.

Table C14. Convergent validity: Relationship between standard-level scores from cooperating teachers and supervising faculty

K-CAT standard	Correlation (Spearman's rho, r_s) Midterm administration	Final administration
Standard 1: Learner Development	.41** (110)	.40** (74)
Standard 2: Learning Differences	.43** (107)	.54** (70)
Standard 3: Learning Environments	.56** (110)	.47** (74)
Standard 4: Content Knowledge	.28** (109)	.27** (73)
Standard 5: Application of Content	.30** (105)	.42** (72)
Standard 6: Student Assessment	.30** (107)	.43** (71)
Standard 7: Planning for Instruction	.29** (109)	.39** (74)
Standard 8: Instructional Strategies	.33** (109)	.25* (74)
Standard 9: Professional Learning and Ethical Practice	.33** (99)	.44** (67)
Standard 10: Leadership and Collaboration	.52** (99)	.51** (66)

* Significant at $p \leq .05$; ** significant at $p \leq .01$.
K-CAT is Kansas Clinical Assessment Tool.
Note: Numbers in parentheses are sample sizes.
Source: Authors' analysis of data provided by Kansas educator preparation programs for the spring 2019, fall 2019, and spring 2020 semesters.

Criterion-related validity

Analyses of the relationship between final K-CAT overall scores and scores on other teacher candidate assessments (Praxis PLT and KPTP) were statistically significant and positive for supervising faculty. K-CAT overall scores provided by cooperating teachers were not significantly correlated with scores on the other assessments (table C15). No cooperating teacher K-CAT standard-level scores were significantly correlated with the KPTP. K-CAT

standard 9 (Professional Learning and Ethical Practice) had a statistically significant correlation with the KPTP for supervising faculty (r_s = .25).

Correlations between K-CAT standard level scores provided by cooperating teachers and the PLT were statistically significant for 5 of the 10 K-CAT standards: standard 2: Learning Differences (r_s = .39); standard 3: Learning Environments (r_s = .29); standard 4: Content Knowledge (r_s = .29); standard 5: Application of Content (r_s = .34); and standard 7: Planning for Instruction (r_s = .30). Correlations between K-CAT standard level scores provided by supervising faculty and the PLT were statistically significant for 2 of the 10 K-CAT standards: standard 5: Application of Content (r_s = .26) and standard 9: Professional Learning and Ethical Practice (r_s = .35).

Table C15. Criterion-related validity: Relationship between overall scores and scores on other measures, by rater type (Spearman rank correlation, r_s)

	Praxis PLT composite score		KPTP overall score	
K-CAT standard	Cooperating teachers	Supervising faculty	Cooperating teachers	Supervising faculty
K-CAT overall	.24 (55)	.27* (52)	.06 (66)	.30* (65)
Standard 1: Learner Development	.23 (57)	.11 (59)	.11 (68)	.16 (74)
Standard 2: Learning Differences	.39** (57)	.26 (55)	.09 (68)	.21 (70)
Standard 3: Learning Environments	.29* (57)	.16 (59)	.22 (68)	.08 (74)
Standard 4: Content Knowledge	.29* (57)	.03 (58)	.09 (68)	.10 (73)
Standard 5: Application of Content	.34* (56)	.26* (59)	.12 (67)	.17 (74)
Standard 6: Student Assessment	.19 (57)	.05 (56)	.08 (68)	.21 (71)
Standard 7: Planning for Instruction	.30* (57)	.16 (59)	.07 (68)	.23 (74)
Standard 8: Instructional Strategies	.12 (57)	.01 (59)	.09 (68)	.09 (74)
Standard 9: Professional Learning and Ethical Practice	.08 (56)	.35** (54)	.02 (67)	.25* (68)
Standard 10: Leadership and Collaboration	.17 (55)	.20 (53)	−.13 (66)	.18 (66)

* Significant at $p \leq .05$; ** significant at $p \leq .01$.
K-CAT is Kansas Clinical Assessment Tool. KPTP is Kansas Performance Teaching Portfolio. Praxis PLT is the Praxis Principles of Learning and Teaching.
Note: Numbers in parentheses are sample sizes.
Source: Authors' analysis of data provided by Kansas educator preparation programs for the spring 2019 and fall 2019 semesters.

Reliability

Analysis of K-CAT overall scores combined across the midterm and final administrations and across both rater types (cooperating teachers and supervising faculty) revealed high internal consistency, with a Cronbach's alpha of .97 (table C16). Analysis of K-CAT standard-level scores showed that all scores (except scores for standard 9 when calculated for the final administration) had a Cronbach's alpha of at least .70. A Cronbach's alpha of .70 is considered a minimum standard for research, whereas a Cronbach's alpha of .90 is considered necessary when

the data will be used to make high-stakes decisions, such as with the K-CAT overall score (see, for example, Cortina, 1993; Nunnally, 1978). The internal consistency for K-CAT overall and standard-level scores from the midterm administration was equal to or higher than the scores for the final administration. Analysis of K-CAT overall and standard-level scores by rater type showed that the internal consistency of overall scores was similar and that there were only slight differences in the internal consistency of standard-level scores across raters.

Table C16. Reliability: Overall and standard-level scores, by administration and rater type (internal consistency, Cronbach's alpha)

	Midterm administration			Final administration			Both administrations		
K-CAT standard	Teachers	Faculty	Both raters	Teachers	Faculty	Both raters	Teachers	Faculty	Both raters
K-CAT overall	.98 (73)	.97 (82)	.97 (155)	.95 (46)	.95 (50)	.95 (96)	.97 (119)	.97 (132)	.97 (251)
Standard 1: Learner Development	.82 (88)	.80 (91)	.81 (179)	.72 (48)	.69 (54)	.70 (102)	.82 (136)	.81 (145)	.81 (281)
Standard 2: Learning Differences	.81 (113)	.81 (113)	.81 (226)	.74 (73)	.81 (78)	.78 (151)	.81 (186)	.83 (191)	.83 (377)
Standard 3: Learning Environments	.81 (108)	.81 (116)	.81 (224)	.79 (72)	.80 (81)	.79 (153)	.82 (180)	.82 (197)	.82 (377)
Standard 4: Content Knowledge	.86 (109)	.82 (114)	.84 (223)	.79 (72)	.81 (78)	.80 (150)	.86 (181)	.83 (192)	.85 (373)
Standard 5: Application of Content	.79 (107)	.80 (114)	.80 (221)	.83 (71)	.75 (79)	.80 (150)	.83 (178)	.81 (193)	.82 (371)
Standard 6: Student Assessment	.88 (111)	.87 (112)	.88 (223)	.88 (73)	.83 (78)	.86 (151)	.89 (184)	.88 (190)	.89 (374)
Standard 7: Planning for Instruction	.84 (106)	.83 (115)	.83 (221)	.79 (71)	.75 (79)	.78 (150)	.84 (177)	.83 (194)	.84 (371)
Standard 8: Instructional Strategies	.81 (113)	.85 (116)	.83 (229)	.73 (73)	.70 (82)	.72 (155)	.82 (186)	.85 (198)	.84 (384)
Standard 9: Professional Learning and Ethical Practice	.80 (110)	.76 (107)	.79 (217)	.66 (73)	.72 (74)	.69 (147)	.78 (183)	.78 (181)	.79 (364)
Standard 10: Leadership and Collaboration	.86 (103)	.85 (104)	.86 (207)	.78 (70)	.87 (72)	.83 (142)	.85 (173)	.87 (176)	.86 (349)

K-CAT is Kansas Clinical Assessment Tool.
Note: "Teachers" refers to cooperating teachers, and "Faculty" refers to supervising faculty. The "Both raters" and "Both administrations" columns indicate that if a teacher candidate had multiple K-CAT records within a given administration or across administrations, each record was included as a separate observation. Numbers in parentheses are sample sizes.
Source: Authors' analysis of data provided by Kansas educator preparation programs for the spring 2019, fall 2019, and spring 2020 semesters.

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Appendix D. The Kansas Clinical Assessment Tool

The Regional Educational Laboratory Central worked with Kansas educator preparation programs to develop a document with implementation guidance for the Kansas Clinical Assessment Tool (K-CAT) users. This guidance contains an introduction to the standards, expectations for K-CAT users, processes for administering the K-CAT, and procedures for data entry and use. This guidance has been disseminated to participating educator preparation programs but has not yet been published.

KSDE Standard 1: The [candidate] understands how learners grow and develop, recognizing that patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas, and designs and implements developmentally appropriate, relevant, and rigorous learning experiences.

InTASC Standard 1: The teacher understands how learners grow and develop, recognizing that patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas, and designs and implements developmentally appropriate and challenging learning experiences.

Learner Development Criteria The teacher…	Novice (1)	Apprentice-Developing (2)	Accomplished Candidate Practitioner—Target Level (3)	Exemplary (4)	Raw Score
1.1-Learner growth and development	Candidate demonstrated a minimal understanding of child development.	Candidate demonstrated • an understanding of child development • but did not apply it to planning for instruction.	Candidate demonstrated • learner development through planned developmentally appropriate instruction • which addressed many of the individual learners' strengths, interests, and needs.	**Candidate met all expectations in the accomplished practitioner—target level. As well as use** • appropriate methods to evaluate the vast majority of students' skill levels of performance and • planned instruction accordingly.	
1.2-Individual differences in readiness for instruction	Candidate made a minimal attempt to identify the specific areas of student readiness of whole class • cognitive, • linguistic, • social, • emotional, or • physical.	Candidate identified, for a limited number of the students in the classroom, • cognitive, • linguistic, • social, • emotional, or • physical aspects of student readiness for learning.	Candidate identified, for most of the students in the classroom and for small groups of students, • cognitive, • linguistic, • social, • emotional, and • physical aspects of student readiness for learning.	Candidate identified, for the vast majority of the students in the classroom and for small groups of students, • cognitive, • linguistic, • social, • emotional, and • physical aspects of student readiness for learning.	
1.3-Assess for learning needs and performance	Candidate demonstrated • unrealistic expectations for student performance.	Candidate did • limited checking for understanding to assess student performance.	Candidate regularly assessed • individual and group performance in order • to meet most learners' needs in instruction.	Candidate • maintained and • analyzed assessment data collected on student performance to make data-driven decisions about instruction.	

Learner Development Criteria The teacher…	Novice (1)	Apprentice-Developing (2)	Accomplished Candidate Practitioner—Target Level (3)	Exemplary (4)	Raw Score
1.4-Cultural context	Candidate displayed • little awareness of culture and • interests of the students and • made no effort to accommodate for those differences.	Candidate showed awareness of • cultural and • varied interests in students but • seldom differentiated to accommodate for those differences.	Candidate collaborated with • families, • communities, • colleagues, and • other professionals to • design and • implement developmentally appropriate, relevant, and rigorous learning experiences.	Candidate deliberately pursued • knowledge about the vast majority of students' cultural heritage and • family background.	
1.5-Behavior management	Candidate demonstrated • little awareness of student development as tool to guide behavioral issues.	Candidate was aware of • behavior concerns and • often took steps to deter unwanted behavior.	Candidate's knowledge of development aided in • low-profile redirection, • positive behavior support, • teacher proximity, and • student movement to engage learners.	Candidate's knowledge of development used to develop • a classroom behavior management system which • facilitated effectively engaged high levels of student learning.	

InTASC is Interstate Teacher Assessment and Support Consortium. KSDE is Kansas State Department of Education.

KSDE Standard 2: The [candidate] uses understanding of differences in individuals, languages, cultures, and communities to ensure inclusive learning environments that enable each learner to meet rigorous standards.

InTASC Standard 2: The teacher uses understanding of individual differences and diverse cultures and communities to ensure inclusive learning environments that enable each learner to meet high standards.

Learning Differences Criteria The teacher…	Novice (1)	Apprentice-Developing (2)	Accomplished Candidate Practitioner—Target Level (3)	Exemplary (4)	Raw Score
2.1-Understanding student learner differences	Candidate addressed • only the needs of the whole group.	Candidate designed instruction that • met the needs of the whole group.	Candidate accommodated instruction • for the whole and small group instruction.	**Candidate met all expectations in the accomplished practitioner—target level. As well as…** Candidate demonstrated understanding of • each student's differences, • languages, • cultures, and • communities to • design and accommodate instruction to meet the individual needs of the vast majority of students.	
2.2-Differentiation in instruction	Instructional strategies were • limited to meeting the needs of the whole group. • Variation is minimal.	Candidate • at times showed awareness of individual differences, but • often teaching to the whole group.	Candidate • designed instruction, and • initiated several differentiation techniques (i.e., process, product, content, environment, and affect) for most students.	Candidate • designed original instruction, and • initiated multiple differentiation techniques (i.e., process, product, content, environment, and affect) for the vast majority students.	

Learning Differences Criteria The teacher…	Novice (1)	Apprentice-Developing (2)	Accomplished Candidate Practitioner—Target Level (3)	Exemplary (4)	Raw Score
2.3-Collaboration with others to meet learner needs	Candidate worked • with cooperating teacher as required. • Candidate inconsistently applied suggestions.	Candidate collaborated • with a few other professionals (mainly the cooperating teacher) and • implemented some suggestions.	Candidate collaborated with professionals • to understand student abilities, • needs and • interests (including learner's personal, family, and community experiences and cultural norms).	Candidate used • intentional collaboration with other professionals and • community resources to • incorporate students' abilities, • needs, and • interests into instruction.	
2.4-Instruction designed to meet learner needs	Candidate had • limited repertoire of instructional strategies.	Candidate implemented • a few select learning strategies in • an attempt to meet the needs of a variety of students.	A variety of learning modalities were • incorporated and the • candidate tiered instruction to accommodate student interests and/or • academic abilities.	Candidate deliberately incorporated • a wide range of learning modalities and • designed tiered instruction to accommodate the vast majority of student interests and • academic abilities to enable learners to meet rigorous standards.	

InTASC is Interstate Teacher Assessment and Support Consortium. KSDE is Kansas State Department of Education.

KSDE Standard 3: The [candidate] works with others to create learning environments that support individual and collaborative learning, includes teacher and student use of technology, and encourages positive social interaction, active engagement in learning, and self- motivation.

InTASC Standard 3: The teacher works with others to create environments that support individual and collaborative learning, and that encourage positive social interaction, active engagement in learning, and self-motivation.

Learning Environments Criteria The teacher…	Novice (1)	Apprentice-Developing (2)	Accomplished Candidate Practitioner—Target Level (3)	Exemplary (4)	Raw Score
3.1-Individual and collaborative learning	Candidate and students displayed • a lack of commitment to learning • students demonstrated low energy in accomplishing work. Candidate established general classroom control.	Candidate established a classroom culture that has • limited commitment by the teacher and students to learning and • work expectations. Candidate applied classroom management techniques to produce a positive learning environment in the classroom.	Candidate established a classroom culture in which • learning is valued by all and • hard work and learning are typical for most students. Candidate worked with others, • pre-established, • monitored, and • used a variety of methods to • maintain classroom expectations allowing for • smooth transitions and the maintenance of momentum.	**Candidate met all expectations in the accomplished practitioner—target level. As well as…** Candidate created • a smoothly functioning classroom environment that • demonstrated a shared belief in the importance of learning • with high expectations for learning for all students, • supportive of student participation, • mutual respect, and • without fear of humiliation from the candidate or other students.	
3.2-Behavior management	Candidate demonstrated • little awareness of behavioral issues/did not address issues or • valued friendship of students over management of student behaviors and learning.	Candidate was aware of • behavior concerns and • often took steps to deter unwanted behavior.	Candidate used • low-profile redirection, • positive behavior support, • teacher proximity, and • student movement to engage learners.	Candidate developed • a classroom behavior management system which • facilitated effectively engaged high levels of student learning.	

Learning Environments Criteria The teacher…	Novice (1)	Apprentice-Developing (2)	Accomplished Candidate Practitioner—Target Level (3)	Exemplary (4)	Raw Score
3.3-Active engagement in learning	Candidate did little • to encourage respect between students and • open participation of students in classroom activities.	Candidate established an environment in which • students were hesitant to share opinions, • ask questions, or • make academic risks.	Candidate provided a classroom community where students were • respected and • actively engaged in the learning process.	Candidate developed a classroom environment which • promoted critical thinking and • supported active participation of the vast majority of students in their learning.	
3.4-Teacher and student use of technology	Candidate used technology • in a cursory way in the classroom • focusing on teacher presentations. • Limited student use.	Candidate used technology for • instructional purposes. • Student use of technology was evident but • not necessarily aligned with learning tasks.	Appropriate • candidate and • student use of technology was used • to create a positive learning environment.	Candidate actively • sought and • implemented available cutting-edge technology effectively and • promoted student use of technology to maximize learning engagement.	
3.5-Positive social interaction	Candidate's communication (verbal and/or non-verbal) at times created confusion.	Candidate demonstrated use of speaking and listening skills with limited effectiveness.	Candidate demonstrated effective interpersonal communication skills in • face-to-face and/or • virtual environments.	Candidate exhibited creativity and thoughtful planning in projecting effective communication skills in • multiple environments and • multiple forms of media.	

InTASC is Interstate Teacher Assessment and Support Consortium. KSDE is Kansas State Department of Education.

KSDE Standard 4: The [candidate] understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and creates content-specific learning and literacy experiences that make the discipline accessible and relevant to assure mastery of the content.

InTASC Standard 4: The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and creates learning experiences that make these aspects of the discipline accessible and meaningful for learners to assure mastery of the content.

Content Knowledge Criteria The teacher…	Novice (1)	Apprentice-Developing (2)	Accomplished Candidate Practitioner—Target Level (3)	Exemplary (4)	Raw Score
4.1-Central concepts and structures of content	Candidate displayed • limited knowledge of content and • stayed one lesson ahead of students. • Candidate displayed some difficulty in answering student questions over content.	Candidate demonstrated • rudimentary knowledge of content and • relied on text and curricular materials for sequencing and pacing.	Candidate organized and • logically sequenced (scaffold) instruction because of • his/her knowledge of content, • content standards, and • college and career readiness standards, • including literacy experiences.	**Candidate met all expectations in the accomplished practitioner-target level. As well as…** Candidate instruction extended beyond • the boundaries of the classroom and • integrated cross- curricular elements.	
4.2-Evaluation of content	Candidate taught lessons without identifying student prior knowledge.	Candidate used • general knowledge of students and • aggregated data to provide instruction for whole class with • little differentiation for individual needs.	Instructional strategies and • learning experiences built on • prior content knowledge and • supported each student in the process to • construct new concepts and knowledge and • connected content to student lives.	Candidate used • appropriate methods to • evaluate all students' skill levels of performance, • established prior knowledge and • designed learning activities for whole class and individuals to meet learning goals. The vast majority of students integrated new learning into their individual lives.	

Content Knowledge Criteria The teacher…	Novice (1)	Apprentice-Developing (2)	Accomplished Candidate Practitioner—Target Level (3)	Exemplary (4)	Raw Score
4.3-Inquiry	Candidate demonstrated • insufficient knowledge to convey • tools of inquiry associated with the content field.	Candidate used • content tools of inquiry however • demonstrated uneven understanding of rationale or purpose.	Candidate used and taught students the tools of inquiry • per the content and • demonstrated the ability to facilitate student use of content tools of inquiry.	Candidate and students used the inquiry method to • foster critical thinking and • to make the learning relevant to each student.	
4.4-Differentiation for accessible learning	Candidate taught • to the median ability • without trying to meet the needs of individual students.	Candidate was able to implement levels I and II of MTSS or an alternative method of tiered system of support.	Candidate adapted instruction (aligned with MTSS protocols, or an alternative method of tiered system of support) so • content was meaningful and • relevant for most learners.	Candidate and the students were fully engaged in the use of MTSS or an alternative method of tiered system of support. Candidate designed • meaningful differentiation of content so that • an appropriate level of mastery was attained by the vast majority of students.	

InTASC is Interstate Teacher Assessment and Support Consortium. KSDE is Kansas State Department of Education. MTSS is Multi-Tiered System of Support.

KSDE Standard 5: The [candidate] understands how to engage learners through interdisciplinary lessons that utilize concept-based teaching and authentic learning experiences to engage students in effective communication and collaboration, and in critical and creative thinking.

INTASC Standard 5: The teacher understands how to connect concepts and use differing perspectives to engage learners in critical thinking, creativity, and collaborative problem solving related to authentic local and global issues.

Application of Content Criteria The teacher…	Novice (1)	Apprentice-Developing (2)	Accomplished Candidate Practitioner—Target Level (3)	Exemplary (4)	Raw Score
5.1-Interdisciplinary instruction with effective communication, collaboration, and critical thinking	Candidate's lessons focused • on the specific content area without inter-disciplinary connections. Candidate showed • little effort to use authentic learning experiences and • to elicit creativity and • problem solving.	Candidate designed lessons with • the intention of cross-curricular activities (focused on local issues) that included • some but not all of the following: concept-based teaching, • authentic experiences, • collaboration, and/or • critical/creative thinking.	Candidate's instructional practices • promoted student creativity, • critical and creative thinking, • collaboration and • communication related to authentic local and global issues.	**Candidate met all expectations in the accomplished practitioner-target level. As well as…** Candidate integrated content fields to • create innovative learning opportunities in a • problem-based environment that • extended beyond the local community. Students demonstrated • effective communication skills and • the willingness to collaborate to solve critical issues.	
5.2-Lesson plans integrating College & Career Readiness Standards [(CCRS) Kansas Curricular Standards]	Lesson plans showed minimal understanding of how to incorporate (CCRS) Kansas Curricular Standards in day-to-day activities.	Candidate demonstrated • understanding of (CCRS) Kansas Curricular Standards • however use of (CCRS) Kansas Curricular Standards in lesson plans was limited. Instructional planning has some alignment of (CCRS) Kansas Curricular Standards.	Candidate lesson plans were aligned to college and career readiness standards (CCRS) Kansas Curricular Standards.	Lesson plans and activities clearly demonstrated • an understanding and • application of college and career readiness standards (CCRS) Kansas Curricular Standards.	

Application of Content Criteria The teacher…	Novice (1)	Apprentice-Developing (2)	Accomplished Candidate Practitioner—Target Level (3)	Exemplary (4)	Raw Score
5.3-Concept based instruction with authentic learning experiences	Learners worked individually to progress through learning experiences.	Candidate integrated • content and • curriculum in instruction and • used small group work to collaborate on problem solving. Asked learners to think about local issues.	Lesson emphasized • literacy, • critical thinking skills and • established curriculum connections by • relating content to other subject areas and • considered diverse social and cultural perspectives when appropriate.	Candidate had a comprehensive understanding • of various content and • curricula and • promoted family literacy opportunities that • showed an understanding of community diversity. Students demonstrated use of critical thinking skills beyond content specific instruction.	
5.4-Use of technology	Candidate attempted the use of technology for instruction. Use of appropriate technology was minimal.	Technology was used to • present the lesson and • specific information.	Candidate utilized • technology and/or • innovative resources to increase student interest, • present information in a novel way, • allow for increased relevance, • active engagement, and the • practice of college and career ready skills.	Candidate encouraged student use of technology to bring content alive beyond the classroom.	

CCRS is College & Career Readiness Standards. InTASC is Interstate Teacher Assessment and Support Consortium. KSDE is Kansas State Department of Education.

KSDE Standard 6: The [candidate] understands how to use multiple measures to monitor and assess individual student learning, engage learners in self-assessment, and use data to make decisions.

InTASC Standard 6: The teacher understands and uses multiple methods of assessment to engage learners in their own growth, to monitor learner progress, and to guide the teacher's and learner's decision making.

Student Assessment Criteria The teacher…	Novice (1)	Apprentice-Developing (2)	Accomplished Candidate Practitioner—Target Level (3)	Exemplary (4)	Raw Score
6.1-Multiple measures to monitor and assess	Candidate used • assessments to assign grades but • demonstrated little use of data to inform instructional practice.	Candidate monitored assessment • for the whole group to • evaluate their learning.	Candidate used • formative and • summative assessment to support, • verify, and • document learning.	**Candidate met all expectations in the accomplished practitioner—target level. As well as…** Candidate consistently used • a variety of assessment techniques/methods and • utilized data collected to inform instructional decisions.	
6.2-Learner self-assessment	Candidate relied on traditional assessments.	Candidate typically used • a few assessment strategies but • the students showed little understanding of how their work would be evaluated.	Candidate utilized • various assessment measures to • monitor student learning throughout the lesson and • involved students in self-assessment of knowledge and skills.	Candidate created a culture in which • self-assessment and • reflection on learning was embraced. Assessment was used in a positive light to promote learning, not judge students.	
6.3-Learner awareness	Candidate assessment criteria for student work were unclear. Students demonstrated lack of clear understanding of expectations.	Students did not have a clear understanding of • how to meet the assessment and • learning expectations.	Candidate made students aware of • assessment criteria and • performance expectations.	Students demonstrated awareness of the impact of their effort on their conceptual understanding.	

Student Assessment Criteria The teacher…	Novice (1)	Apprentice-Developing (2)	Accomplished Candidate Practitioner—Target Level (3)	Exemplary (4)	Raw Score
6.4-Feedback to students and use of data	Students received feedback • in the form of a grade with • little additional information.	Students received • feedback but • it did not indicate how to improve the learning.	Students received • specific and • supportive feedback from candidates.	Candidate provided • individual feedback to students and • used the individual data to plan further instruction and • learning extensions that were specific to individual students.	
6.5-Data driven decisions	Candidate did not use assessment data to inform instructional activities.	Assessment data used • to modify whole class instruction, but • not tailored to the needs of individuals.	Assessment was used, for most students, • to inform instruction and • further student knowledge/content acquisition and application.	Assessment was used, for the vast majority of students, • to inform instruction and • further student knowledge/content acquisition and application.	

InTASC is Interstate Teacher Assessment and Support Consortium. KSDE is Kansas State Department of Education.

KSDE Standard 7: The [candidate] plans instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, technology, curriculum, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context.

InTASC Standard 7: The teacher plans instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, curriculum, cross- disciplinary skills, and pedagogy, as well as knowledge of learners and the community context.

Planning for Instruction Criteria The teacher…	Novice (1)	Apprentice-Developing (2)	Accomplished Candidate Practitioner—Target Level (3)	Exemplary (4)	Raw Score
7.1-Instruction planning to meet learning goals	Candidate relied on curriculum guides to provide instructional activities.	Candidate instruction • was aligned with the text and • there was some differentiation of instruction for small groups and • a few individual students.	Candidate planned • developmentally appropriate instruction that met all students' learning goals, • accessed community context, and • integrated learning across disciplines • using conceptual understandings.	**Candidate met all expectations in the accomplished practitioner—target level. As well as…** Candidate planned • learning opportunities that extended beyond the curriculum and school day. Students were encouraged to modify the lesson to make it more meaningful to them.	
7.2-Differentiation in instruction	Candidate demonstrated • little understanding of students as learners and • provided instruction designed for whole class delivery.	Differentiation of instruction was based on • current performance and • accessibility to some students was made based on language barriers.	Candidate modified instruction • to draw upon prior knowledge, • to make instruction accessible, • to make language understandable, and • to be relevant for individuals and • groups of learners.	Candidate drew on • knowledge of individual student differences • to make instruction meaningful on a personal level to each student.	
7.3-Learning experiences that are cross-curricular	Instruction was • text driven with • little planning for • experiences that related to students.	Learning experiences did not build upon • prior knowledge of the individual students but • considered the whole group.	Candidate • created experiences allowing • learners to demonstrate their knowledge/understandings.	Cross-curricular learning experiences were • used in a collaborative, problem-based model that • fully engaged learners.	

Planning for Instruction Criteria The teacher…	Novice (1)	Apprentice-Developing (2)	Accomplished Candidate Practitioner—Target Level (3)	Exemplary (4)	Raw Score
7.4-Learning motivation	Candidate used • external motivators to • encourage student attainment of content knowledge.	The whole group showed • some awareness of the need to learn but candidate • did not instill internal motivation in students.	Candidate motivated students with learning experiences where students exhibited • collaboration, • self- governance, and • self-directed learning.	Candidate utilized • individual motivators for the vast majority of students, • calling upon previously gained understanding of student's personal and • academic achievements and • students were intellectually engaged and • were required to display high- level thinking in their learning.	
7.5-Use of technology	Candidate attempted the use of technology for instruction. Use of appropriate technology was minimal.	Candidate utilized the technology in the classroom to enhance whole class instruction.	Candidate and students utilized technology • which supported instruction, • student learning, and • increased student interest.	Candidate encouraged • student use of technology to bring • content alive beyond the classroom.	

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KSDE Standard 8: The [candidate] understands and uses a variety of appropriate instructional strategies and resources to encourage learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in relevant ways.

InTASC Standard 8: The teacher understands and uses a variety of instructional strategies to encourage learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways.

Instructional Strategies Criteria The teacher…	Novice (1)	Apprentice-Developing (2)	Accomplished Candidate Practitioner—Target Level (3)	Exemplary (4)	Raw Score
8.1-Instructional strategies	Candidate used whole-class instruction.	Candidate employed • the use of a few instructional strategies to • foster the learning goals of the whole group. Students with Individualized Educational Plans would have specific strategies implemented as required.	Candidate used • a variety of appropriate instructional strategies and • resources to meet the needs of individuals and • groups of learners.	**Candidate met all expectations in the accomplished practitioner-target level. As well as…** Candidate planned • learning opportunities that extended beyond the curriculum and • school day. Students were • encouraged to extend the lesson to make it more meaningful to them and • to build integration across content areas.	
8.2-Assessment and monitoring	Candidate used data for the purpose of assigning a grade. Students demonstrated • little understanding of the connection between instructional activity and • conceptual understandings.	Candidate evaluates • whole group for learning and • adapts the instruction as needed for the class.	Candidate continuously • monitored student learning, • engaged learners in assessing their progress, and • adjusted instruction in response to student learning needs.	Candidate used • knowledge of individual student differences to • make instruction meaningful on a personal level to each student.	

Instructional Strategies Criteria The teacher…	Novice (1)	Apprentice-Developing (2)	Accomplished Candidate Practitioner—Target Level (3)	Exemplary (4)	Raw Score
8.3-Understanding content	Candidate demonstrated • little understanding of relationship between course content and other areas and • was unable to help students see interconnectedness between content areas.	Candidate demonstrated that • some integration of content was evident but • not related to the students' individual needs. • Pacing of instruction was determined by the whole group's progress.	Candidate built • connections between content areas to • support cognitive development of learners and • depth of understanding of content areas.	Candidate integrated • cross-curricular learning experiences that • required reflection and • closure resulting in synthesizing their learning.	
8.4-Knowledge application	Candidate relied on curriculum guide to provide instructional activity.	Candidate planned • some learning experiences that were aligned to the content but • did not consider relevancy to all learners.	Candidate implemented • relevant learning experiences, • building on learner strengths and • community contexts.	Students were encouraged to • apply their learning experiences to the bigger picture and to • find relevancy to their lives.	

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KSDE Standard 9: The [candidate] engages in ongoing professional learning and uses evidence to continually evaluate his/her practice, particularly the effects of his/her choices and actions on others (learners, families, other professionals, and the community), and adapts practice to meet the needs of each learner.

InTASC Standard 9: The teacher engages in ongoing professional learning and uses evidence to continually evaluate his/her practice, particularly the effects of his/her choices and actions on others (learners, families, other professionals, and the community), and adapts practice to meet the needs of each learner.

Professional Learning and Ethical Practice Criteria The teacher…	Novice (1)	Apprentice-Developing (2)	Accomplished Candidate Practitioner—Target Level (3)	Exemplary (4)	Raw Score
9.1-Professional learning	Candidate participated in • required professional learning activities, however, • was unable to make connections between professional learning and • the classroom.	Candidate was able to articulate the importance of professional learning. Candidate did participate in • required professional learning but • did not always apply his/her learning to the classroom.	Candidate participated in • ongoing learning opportunities and • relevant, appropriate professional learning experiences to • support learner and • professional needs.	**Candidate met all expectations in the accomplished practitioner-target level. As well as…** Candidate reflected on • personal professional needs and • sought out opportunities for professional learning beyond • those provided at the local area.	
9.2-Use of data to evaluate practice	Candidate demonstrated • lack of awareness of connection between data, • planning, and • student learning.	Candidate • collected data but • did not utilize all evidence to impact teaching. Some reflection was evident.	Candidate used • a variety of data to • evaluate the outcomes of his/her teaching and learning, • adapt planning, and • reflect upon the impact of his/her practice on others.	Candidate regularly • reflected on student outcomes and • used the data to inform development	

Professional Learning and Ethical Practice Criteria The teacher…	Novice (1)	Apprentice-Developing (2)	Accomplished Candidate Practitioner—Target Level (3)	Exemplary (4)	Raw Score
9.3-Differentiation of instruction	Candidate provided whole group instruction.	Candidate made • some changes to his/her practice but • usually met the needs of the whole group. Some differentiation was made for a few students.	Candidate adapted practice to meet the needs of each learner.	Candidate • differentiated instruction and practice to • adapt to the vast majority of learners' needs • as a result of self-reflection process.	
9.4-Ethical practice	Candidate was aware of the Kansas Educator Code of Conduct.	Candidate • was aware of the code of conduct and • served as an appropriate role model for students.	Candidate modeled the Kansas Educator Code of Conduct.	Candidate exhibited the Kansas Educator Code of Conduct • within the school community, • college/university community, and • the larger community. Candidate modeled ethical behavior • in day-to-day activities and • relationships.	

InTASC is Interstate Teacher Assessment and Support Consortium. KSDE is Kansas State Department of Education.

KSDE Standard 10: The [candidate] seeks appropriate leadership roles and opportunities to take responsibility for student learning, to collaborate with learners, families, colleagues, other school professionals, support staff, and community members to ensure learner growth, and to advance the profession.

InTASC Standard 10: The teacher seeks appropriate leadership roles and opportunities to take responsibility for student learning, to collaborate with learners, families, colleagues, other school professionals, and community members to ensure learner growth, and to advance the profession.

Leadership & Collaboration Criteria The teacher…	Novice (1)	Apprentice-Developing (2)	Accomplished Candidate Practitioner—Target Level (3)	Exemplary (4)	Raw Score
10.1-Leadership and student learning	Candidate needed cooperating teacher's guidance • in lesson plan development and • classroom management procedures.	Candidate • was engaged in the learning process in the classroom, • exhibited knowledge of being responsible for the learning of each student, • and exhibited knowledge of classroom management procedures.	Candidate took • an active role on the instructional team, • giving and receiving feedback on practice, • examining learner work, • incorporating multiple measures, • analyzing data from multiple sources, and • sharing responsibility for decision making and • accountability for each student's learning. Candidate effectively utilized cooperating teacher's classroom management procedures to maintain an environment conducive to student learning.	**Candidate met all expectations in the accomplished practitioner-target level. As well as…** Candidate interacted • with colleagues and • community constituents to • create and implement learning activities beyond the classroom and school day. Candidate demonstrated responsibility for establishing classroom management to produce an environment conducive to student learning.	
10.2-Learning community	Candidate taught to the common denominator of student needs.	Candidate demonstrated • more work in isolation and • less collaboration with other school professionals to • meet student needs.	Candidate worked • with other school professionals to • plan and jointly facilitate learning on • how to meet diverse needs of learners and • to advocate on their behalf.	Candidate engaged community organizations in working to meet the needs of diverse learners.	

Leadership & Collaboration Criteria The teacher…	Novice (1)	Apprentice-Developing (2)	Accomplished Candidate Practitioner—Target Level (3)	Exemplary (4)	Raw Score
10.3-Collaboration	Candidate • generally enforced building-wide/district-wide rules, • policies, and • goals.	Candidate worked collaboratively with a few teachers. There was some awareness • of the school vision and culture and • how it impacted classroom goals.	Candidate engaged • collaboratively in the school-wide effort to build a shared vision and supportive culture, • identified common goals, and • monitored and evaluated progress toward those goals.	Through Professional Learning Communities and staff meetings, the candidate helped • in planning and developing the identity of the institution; • provided input on a strategic plan.	
10.4-Context of learners	Candidate engaged • with families as required in the daily operations of the classroom or • as required by district policy.	Candidate made contact • with some families about their learner • to discuss learning outcomes and • goals.	Candidate worked • collaboratively with learners and • their families to establish • mutual expectations and • ongoing communication to support learner development and achievement.	Candidate actively engaged • the learners' families in ventures that • foster positive communication and lead • to stronger families, family literacy.	
10.5-Technology	Candidate attempted the use of technology for instruction. Use of appropriate technology was minimal.	Candidate utilized the technology in the classroom to enhance whole class instruction.	Candidate used technological tools and • a variety of communication strategies to • build local and • global learning communities that • engage learners, families, and colleagues.	Candidate encouraged • student use of technology to • bring content alive beyond the classroom.	

InTASC is Interstate Teacher Assessment and Support Consortium. KSDE is Kansas State Department of Education.

Appendix E. Crosswalk between the Kansas Clinical Assessment Tool and existing standards

For the purpose of the alignment, raters considered all indicators in the Interstate Teacher Assessment and Support Consortium (InTASC) standards and Kansas Educator Preparation Program Standards for Professional Education that each Kansas Clinical Assessment Tool standard was designed to address. The InTASC performance indicators are in the *InTASC Model Core Teaching Standards and Learning Progressions for Teachers 1.0* (Council of Chief State School Officers, 2013). The Kansas State Department of Education (n.d.) educator preparation indicators are in the *Kansas Educator Preparation Program Standards: Professional Education Standards*.

K-CAT standard	InTASC performance indicators	KEPPS performance indicators
Standard 1: Learner Development	1(a), 1(b), 1(c)	1.1.1, 1.1.2, 1.1.3, 1.1.4, 1.2.1, 7.3.1
Standard 2: Learner Differences	2(a), 2(b), 2(c), 2(d), 2(e), 2(f)	2.1.1, 2.1.2, 2.1.3, 2.1.6, 2.2.1, 2.2.2, 4.2.8, 7.3.2
Standard 3: Learning Environments	3(a), 3(b), 3(c), 3(d), 3(e), 3(f), 3(g), 3(h)	3.1.1, 3.1.2, 3.1.3, 3.1.4, 3.2.1, 3.2.3, 3.3.5
Standard 4: Content Knowledge	4(a), 4(b), 4(c), 4(d), 4(e), 4(f), 4(g), 4(h), 4(i)	4.1.1, 4.1.2, 4.1.3, 4.1.4, 4.1.5, 4.1.6, 4.2.1, 4.2.2, 4.2.3, 4.2.4, 4.2.5, 4.2.6, 4.2.7, 5.3.1
Standard 5: Application of Content	5(a), 5(b), 5(c), 5(d), 5(e), 5(f), 5(g), 5(h)	5.1.1, 5.1.2, 5.1.3, 5.1.4, 5.1.5, 5.2.1, 5.2.2, 5.2.3, 5.3.2, 5.3.3, 5.3.5, 5.3.6
Standard 6: Student Assessment	6(a), 6(b), 6(c), 6(d), 6(e), 6(f), 6(g), 6(h), 6(i)	1.3.3, 6.1.1, 6.1.2, 6.1.3, 6.1.4, 6.1.5, 6.1.6, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4, 6.2.5, 6.2.6, 6.3.1, 6.3.2, 6.3.3, 6.3.4, 6.3.5, 6.3.6
Standard 7: Planning for Instruction	7(a), 7(b), 7(c), 7(d), 7(e), 7(f),	1.2.2, 1.3.4, 2.1.5,2.2.3, 2.2.5, 3.3.1, 3.3.3, 5.3.4, 7.1.1, 7.1.2, 7.1.3, 7.1.4, 7.2.1, 7.2.2, 7.2.4, 7.3.3, 7.3.4, 7.3.5
Standard 8: Instructional Strategies	8(a), 8(b), 8(c), 8(d), 8(e), 8(f), 8(g), 8(h), 8(i)	1.3.1, 2.1.4, 2.2.4, 5.2.4, 5.2.5, 8.1.1, 8.1.2, 8.1.3, 8.1.4, 8.1.5, 8.1.6, 8.1.7, 8.1.8, 8.1.9, 8.1.10, 8.2.1, 8.2.2, 8.2.3, 8.2.4, 8.2.5, 8.2.6
Standard 9: Professional Learning and Ethical Practice	9(a), 9(b), 9(c), 9(d), 9(e), 9(f)	9.1.1, 9.1.2, 9.1.3, 9.1.4, 9.1.5, 9.2.1, 9.2.2, 9.2.3, 10.1.3
Standard 10: Leadership and Collaboration	10(a), 10(b), 10(c), 10(d), 10(e), 10(f), 10(g), 10(h), 10(i), 10(j), 10(k)	3.2.2, 3.3.2, 3.3.4, 7.2.3, 7.2.5, 10.1.1, 10.1.2, 10.2.1, 10.2.2, 10.2.3, 10.2.4, 10.2.5, 10.2.6

InTASC is Interstate Teacher Assessment and Support Consortium. K-CAT is Kansas Clinical Assessment Tool. KEPPS is Kansas Educator Preparation Program Standards for Professional Education.

References

Council of Chief State School Officers. (2013). *InTASC model core teaching standards and learning progressions for teachers 1.0*. Retrieved August 21, 2020, from https://ccsso.org/resource-library/intasc-model-core-teaching-standards-and-learning-progressions-teachers-10.

Kansas State Department of Education. (n.d.). *Kansas educator preparation program standards: Professional education standards*. https://www.ksde.org/Portals/0/TLA/Program%20Standards/Professional%20Education%20final%20revised.pdf.

Appendix F. Sample alignment protocol

Below is an example of the protocol used to assess the alignment of standard 1 in the Kansas Clinical Assessment Tool to existing standards.

Table F1. Sample alignment protocol

Indicators for alignment	All or almost all	Most	Some	Very little or none
InTASC performance indicator				
1(a) The teacher regularly assesses individual and group performance in order to design and modify instruction to meet learners' needs in each area of development (cognitive, linguistic, social, emotional, and physical) and scaffolds the next level of development.				
1(b) The teacher creates developmentally appropriate instruction that takes into account individual learners' strengths, interests, and needs and that enables each learner to advance and accelerate his/her learning.				
1(c) The teacher collaborates with families, communities, colleagues, and other professionals to promote learner growth and development.				
Kansas educator preparation indicator				
1.1.1 The teacher understands how learning occurs—how learners construct knowledge, acquire skills, and develop disciplined thinking processes.				
1.1.2 The teacher understands the role of language and culture in learning.				
1.1.3 The teacher collaborates with families, communities, colleagues, and other professionals to promote learning growth and development.				
1.1.4 The teacher identifies readiness for learning and understands how development in any one area may affect performance in others.				
1.2.1 The teacher understands that each learner's cognitive, linguistic, social, emotional, and physical development influences learning.				
1.3.2 The teacher knows how to make instructional decisions that build on learners' strengths and needs.				

InTASC is Interstate Teacher Assessment and Support Consortium.

Appendix G. Sample cognitive interview protocol

Below is the set of questions addressing standard 1 of the Kansas Clinical Assessment Tool (K-CAT). Similar questions were asked for K-CAT standards 2–10.

Kansas Clinical Assessment Tool standard 1

1. The K-CAT standard 1 was designed to address the following standards:
    - Kansas educator preparation program standard 1: "The [teacher candidate] understands how learners grow and develop, recognizing that patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas, and designs and implements developmentally appropriate, relevant, and rigorous learning experiences."
    - Interstate Teacher Assessment and Support Consortium (InTASC) standard 1: "The teacher understands how learners grow and develop, recognizing that patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas, and designs and implements developmentally appropriate and challenging learning experiences."
2. In reviewing the K-CAT assessment and the K-CAT scores you assigned to your teacher candidate during the spring 2020 semester, in what ways do you feel the K-CAT scores you provided accurately represent the knowledge, skills, and behaviors of the teacher candidate as they relate to these standards?
3. In what ways do you feel the K-CAT scores you assigned do not accurately represent the knowledge, skills, and behaviors of the teacher candidate as they relate to these standards?
4. How do the results from the K-CAT align with other feedback you've provided the teacher candidate?
5. How do the results from the K-CAT align with other feedback you've received about the teacher candidate from their supervising faculty member?