

The Wisdom of Crowds

Collaboratively Developing and Establishing the Validity & Reliability of a Student Teaching Evaluation Form

Valid and Reliable Instruments for Educator Preparation Programs (VARI-EPP)
Candidate Preservice Assessment of Student Teaching (CPAST): Spring 2017
 Rubric and assignments may not be shared without permission

- [Pedagogy](#) Evaluation
- [Dispositions](#) Evaluation
- [Goals](#)

Pedagogy	Alignment	Dispositions	Alignment
Planning for Instruction and Assessment		Professional Commitment and Behaviors	
A. Analyze and evaluate standards and curriculum frameworks	InTASC 7a	A. Exhibit a professional demeanor	
B. Design and develop lessons	InTASC 7b	B. Engage in effective communication with students, colleagues, and the community	InTASC 10d
C. Assess and evaluate student learning	InTASC 6b	C. Demonstrate trustworthiness	InTASC 9o
D. Differentiate instruction	InTASC 2c	D. Participate in professional growth opportunities	InTASC 9o
		E. Professionalism	InTASC 3d
Instructional Delivery		Professional Relationships	
E. Establish a safe and respectful environment	InTASC 7c	F. Collaborate	InTASC 10b
F. Engage students	InTASC 5d	G. Address the needs of all students, including those with diverse abilities	InTASC 10j
G. Apply content knowledge and skills in teaching	InTASC 8b		
H. Engage students in problem solving	CAEP 1.5	Critical Thinking and Reflective Practice	
I. Address and respond to individual student needs	InTASC 3d	A. Engage in reflective practice	InTASC 9n
Assessment			
J. Plan and deliver instruction	CAEP 2.3		
K. Assess and evaluate student learning	InTASC 6d		
L. Differentiate instruction	InTASC 7d		
Analysis of Teaching			
M. Commitment to Learning and Change	CAEP 1.2		

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Agenda

Candidate Preservice Assessment of Student Teaching (CPAST)

- CPAST Form
 - **Who** designed
 - **How** designed
 - Instrument **description**
 - Training
 - Resources
- Evidence of Validity & Reliability
 - Data collection
 - Demographic data
 - **Analyses** conducted
 - Results

Pre-Assessment

- Does your EPP use a unit-wide instrument to assess student teaching?
- Has the instrument has been analyzed for **Validity and Reliability**?
- Do you have **comparison** scores (with other EPPs)?

Discuss with your neighbor

- What are **five** (5) essential components in a formative and summative student teaching assessment form?

It takes an army to build a form...

The Ohio State University

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How was the CPAST Form developed?

Year 1

- **Initial** form developed and implemented at **one EPP**

Year 2

- Faculty/staff from 8 EPPs **revised** form
- Piloted with candidates from **8 EPPs** and **322** candidates
- Validity & reliability analyses conducted

Year 3

- Faculty/staff from 10 EPPs **revised** form
- Implemented with **23 EPPs** and **1203** candidates
- Validity & Reliability analyses conducted

What is the CPAST Form?

Candidate Preservice Assessment of Student Teaching (CPAST) Form

- A *formative* and *summative* assessment during *student teaching*, aligned to *CAEP and InTASC Standards*.
- The rubric has *two subscales*:
 - (1) Pedagogy and
 - (2) Dispositions
- Developed over three years
- Collaboration with 26 institutions

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Pedagogy	Alignment	Dispositions	Alignment
Planning for Instruction and Assessment		Professional Commitment and Behaviors	
A. Analyze student needs and learning styles	InTASC 7a	A. Participate in professional development	
B. Design and deliver instruction	InTASC 7b	B. Demonstrate effective communication skills	InTASC 10d
C. Assess student learning	InTASC 6b	C. Collaborate with colleagues	InTASC 9o
D. Differentiate instruction	InTASC 2c	D. Maintain professional ethics	InTASC 9o
		E. Engage in leadership	InTASC 3d
Instructional Delivery		Professional Relationships	
E. Establish a safe and positive learning environment	InTASC 7c	F. Establish positive relationships with students	InTASC 10b
F. Use effective instructional strategies	InTASC 5d	G. Establish positive relationships with colleagues	InTASC 10j
G. Monitor and assess student learning	InTASC 8b		
H. Engage in ongoing professional learning	CAEP 1.5	Critical Thinking and Reflective Practice	
I. Assess student learning	InTASC 3d	H. Engage in reflective practice	InTASC 9n
Assessment			
J. Use data to inform instruction	CAEP 2.3		
K. Establish a safe and positive learning environment	InTASC 6d		
L. Use effective instructional strategies	InTASC 7d		
Analysis of Teaching			
M. Establish a safe and positive learning environment	CAEP 1.2		

Resources

- Required CPAST Form Training for Supervisors
 - Required 80% score on supervisor training quizzes
 - Initial training ~90 minutes (self-paced)
 - Refresher training ~30 minutes (self-paced)
- Optional Cooperating Teacher/Student Teacher Training
 - ~20 minutes (self-paced)
- “Look Fors” Document
 - Elaborates on qualities and behaviors for a given level of performance, describing
 - Sources of Evidence
 - Possible Evidence

Purpose of the CPAST Form Training

This training serves several important purposes. Specifically, it will:

- familiarize CPAST Form users with the structure of the instrument and the research-based expectations for a student teacher's performance
- help Form users understand how and when the instrument is implemented
- increase the inter-rater reliability of the instrument

Slide 1 Slide 7 of 9

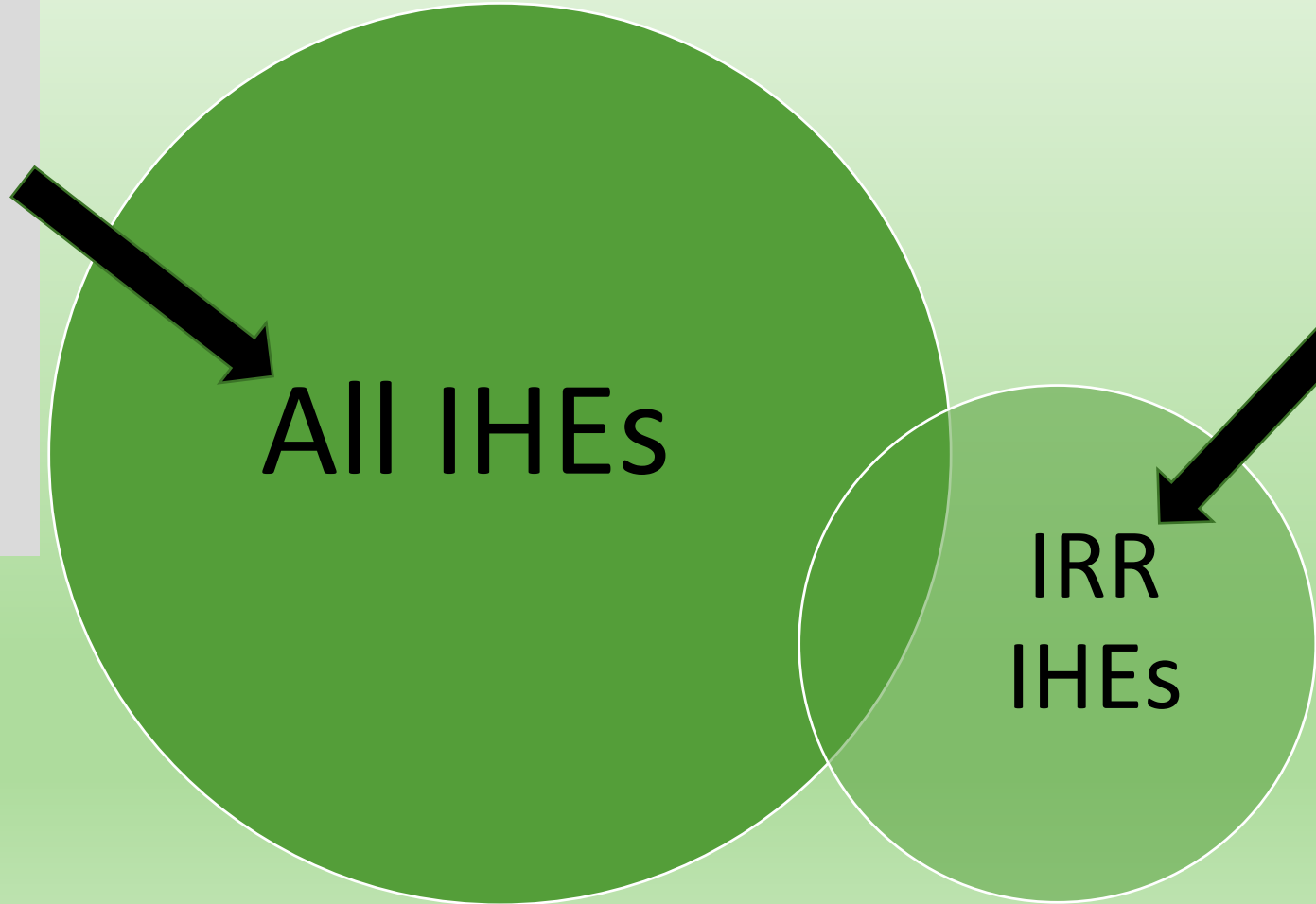
Item	Exceeds Expectations (3 points)	Meets Expectations (2 points)
H. Digital Technology Resources	Instructional Delivery	
Sources of Evidence:	<ul style="list-style-type: none"> • ... • ... • ... 	
Possible Evidence:	<p style="text-align: center;"><i>Exceeds/Meets Expectation</i></p> <p>Student teacher uses and discusses the some of the following questions:</p> <ul style="list-style-type: none"> • ... • ... • ... • ... 	

* This row received low Inter-Rater Reliability scores in the first round of data collection.
 Updated 8/1/16 © 2016

What data were collected?

Data

- Midterm & Final CPAST Consensus Score
 - Combined score from Supervisor, Candidate, & Student Teacher
- edTPA scores
- State test scores
- Demographics



- Data plus
- three observations
 - IRR Supervisor final evaluation

Demographic Data of Participating Institutions

Institution Type	# of Institutions	# of Student Teachers
Urban - Public	6	481
Suburban - Public	2	359
Rural - Public	0	0
Urban - Private	5	208
Suburban - Private	6	85
Rural - Private	4	70
Total	23	1203

*Note - Sample includes representation from a variety of licensure areas, placement types, race, grade level, and gender.

Detailed demographic data available upon request.

Types of Validity and Reliability Analysis Conducted

Validity

- Content Validity
- Construct Validity
- Concurrent Validity

Reliability

- Test-retest Reliability
- Internal Consistency Reliability
- Interrater Reliability
- Addressed areas in the **CAEP Evaluation Framework for Assessments**

Content Validity

- Method: Content Validity Ratio
- Participants: Three Experts
 - K-12 Teacher
 - EPP Faculty
 - Psychometrician
- Measurement & Results
 - Clarity = average CVR of 0.94
 - Importance = all items reached a value of 1
 - Representativeness = average CVR of 0.94
- The results indicate CPAST has *a high content validity* (Wilson, Pan & Schumsky, 2012)

Construct Validity: CFA Results

- **Model fit indexes** RMSEA (0.048), CFI (0.980) and TLI (0.978) indicated that the **hypothesized two-factor model fit the data reasonably well**
- Factor loadings range from 0.676 to 0.841, all at .001 significance level, indicating that **all the items are moderately or strongly associated** with their corresponding latent factors.
- **Pedagogy and Dispositions scales were correlated** ($r=0.873$), which is supported by the literature (Kuzborska, 2011)

Concurrent Validity

- Concurrent Validity examined by correlating CPAST scores with
 - state standardized professional knowledge and skills test scores and
 - edTPA scores
- *No significant* correlation between
 - CPAST Form and state professional knowledge and skills test
 - CPAST Form Disposition Rows and edTPA
- *Significant* correlation between
 - CPAST Form Pedagogy Rows and edTPA

Internal Consistency Reliability

- Cronbach Alpha coefficient
- Results
 - 0.907 for the Pedagogy subscale
 - 0.831 for the Dispositions subscale
 - 0.929 for the total scale
- Subscales and the total scale display *good internal consistency*

*Note: A commonly accepted rule of thumb for describing internal consistency is as follows : $\alpha \geq 0.9$ Excellent, $0.9 > \alpha \geq 0.8$ Good, $0.8 > \alpha \geq 0.7$ Acceptable, $0.7 > \alpha \geq 0.6$ Questionable, $0.6 > \alpha \geq 0.5$ Poor, $0.5 > \alpha$ Unacceptable

Test-Retest

- Test-retest reliability examined by correlating Pedagogy and Disposition scores in the
 - midterm and
 - final term under the CFA model.
- Pedagogy & Disposition *significantly correlated* at midterm and final term
 - (Pedagogy =.752; Disposition =.845)

Inter-rater Reliability

- Adjacent agreement and Kappa-n statistics
 - Same methods used by SCALE for edTPA analyses
- Adjacent agreement
 - Same or within one
- Kappa-n
 - Accounts for chance agreements
- **Exceeds** CAEP requirements
 - Adjacent agreement = 98%
 - Average Kappa-n = 0.97

Item	Agreement Rate	Kappa-N
[Redacted]	100%	1.00
[Redacted]	100%	1.00
[Redacted]	100%	1.00
[Redacted]	100%	1.00
[Redacted]	100%	1.00
[Redacted]	100%	1.00
[Redacted]	100%	1.00
[Redacted]	100%	1.00
[Redacted]	100%	1.00
[Redacted]	96.9%	0.96
[Redacted]	100%	1.00
[Redacted]	100%	1.00
[Redacted]	100%	1.00
[Redacted]	100%	1.00
[Redacted]	100%	1.00
[Redacted]	87.5%	0.83
[Redacted]	87.5%	0.85
[Redacted]	90.6%	0.86
[Redacted]	100%	1.00
[Redacted]	96.9%	0.96
[Redacted]	96.9%	0.96
[Redacted]	96.9%	0.96
[Redacted]	96.9%	0.96

*Note: CAEP requires assessment to have a interrater reliability greater than 0.8.

Would YOU like to join our
team?

What questions do you have?

Thank you for your time!

- If you have any questions AT ANY TIME, feel free to contact:

Name	Email	Phone	Topic
Erica Brownstein	Brownstein.2@osu.edu	(614) 292-1414	“Big Picture” project questions, rubric questions
Carolyn Kaplan	Kaplan.169@osu.edu	(614) 292-5044	Training, Timeline, IRR Participants
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Also, see us at Spring 2017 CAEPCon **March 24 at 11 am**
And Fall 2017 CAEPCon September TBD.