

The Online Teaching Effectiveness Scale: A New Assessment Tool for Online Education



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Agenda

- Background & Literature Review
- Conceptualization
- Survey Development
- Current Progress



Trends in Online Education



6,359,121 enrolled in 2016¹



32% of university students¹



20-year trends suggest the continued viability²

¹Seaman, Allen, and Seaman (2018)

²Lokken (2016)

We Explored Online Teaching Effectiveness (OTE)

Literature Review

Reflections on our
Experiences

Discussions
among Colleagues

Limitations in the OTE Literature

We found the existing research literature on OTE limited in operational definitions and measurement tools.

- Outdated
- Lack of Context Relevance
- Limited in Scope
- Limited Support for Validity
- Little Psychometric Data
- Limited Accessibility

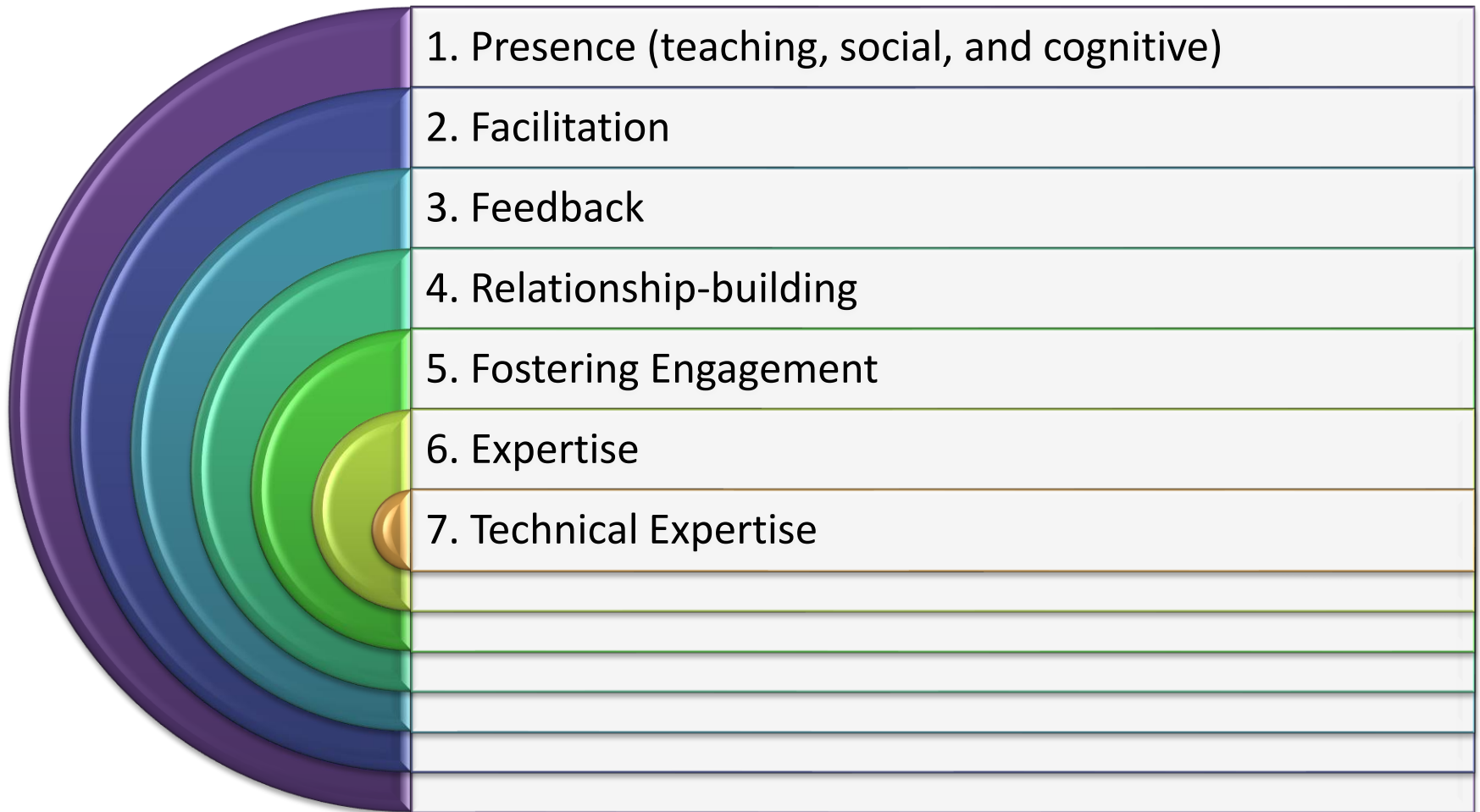
OTE Measures

- Berk (2013) identified 7 options:
 1. Commercially developed measures, e.g., the e-SIR II (Klieger et al., 2014)
 - **Outdated, expensive, not properly revised to accommodate online teaching environments**
 2. Scales published in professional literature
 - **Free, but outdated, inadequate use of theoretical foundations of online teaching**
 3. Instructor and school-developed scales
 - **Lack all reliability & validity**
 4. Traditional face-to-face rating scales
 - **Lack reliability & validity for online settings**
 5. Adding optional online-related items to traditional measures
 - **Retrofit, fails to change original scale to account for the different theoretical foundations of online teaching**
 6. Revising traditional measures to fit online classes
 - **Same limitations as #5**
 7. Creating a new measure
 - **Can incorporate the theoretical foundations of online teaching & demonstrate reliability and validity in online settings**

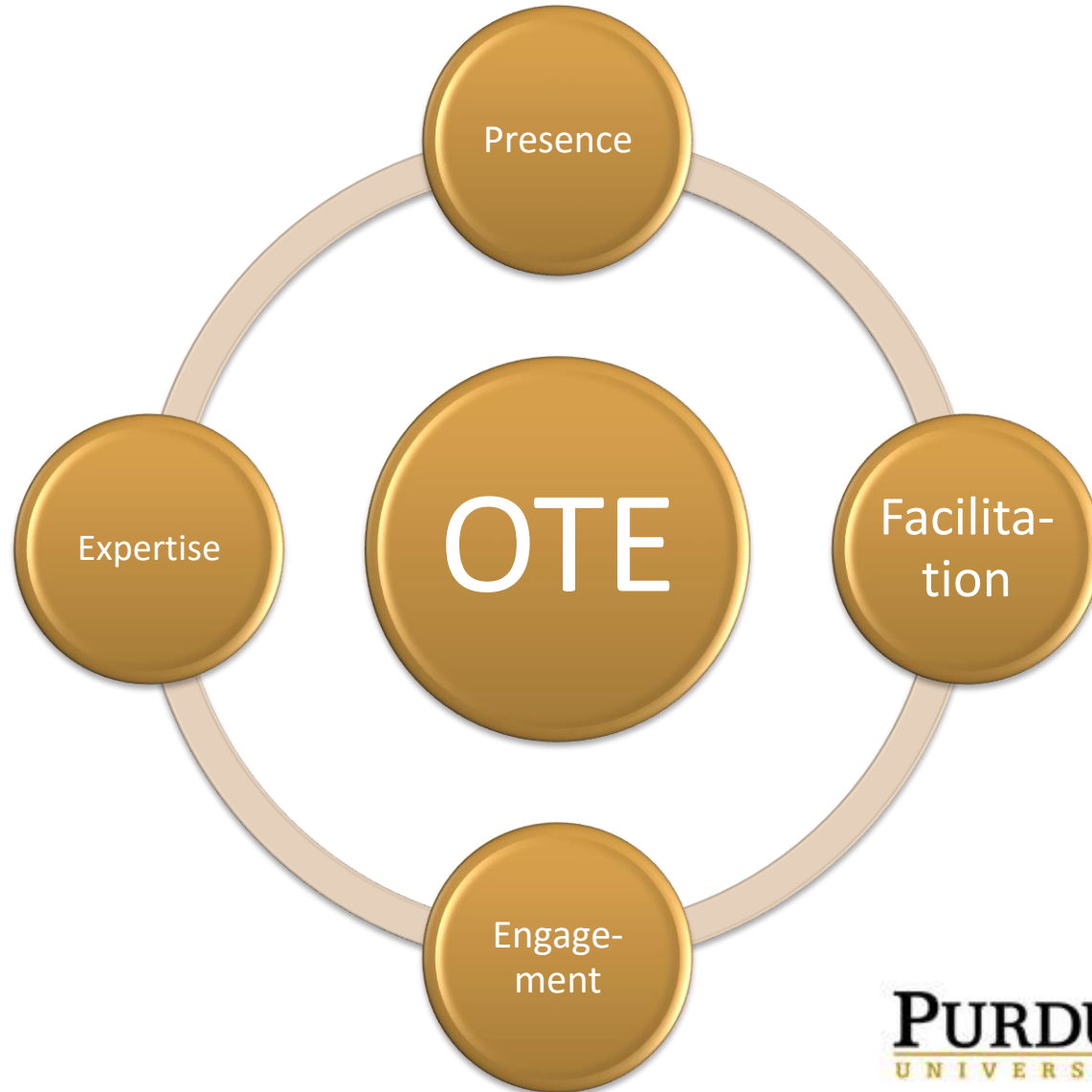
OTE Literature Highlights Behaviors, Roles, Skills, & Traits



Seven Dimensions



Four Major Factors



OTE Defined

Online teaching effectiveness involves instructors promoting student learning and construction of knowledge by:

- (a) Presence** - strong cognitive, social, and teaching presence, cultivating learning through social constructivism, effective communication, and quality instructional techniques
- (b) Engagement** - directly fostering engagement in the classroom, including timely and facilitative feedback and relationship building
- (c) Expertise** - demonstrating and applying content expertise and maintaining technical expertise
- (d) Facilitation** - regular, active, and thoughtful classroom interactions executing planned activities, managing communications, and supervising learning processes

Steps in the Process



Define
OTE

Develop
Measure

Validate
Measure

Online Teaching Effectiveness Survey (OTES)

- Thorough review of existing OTE research and measures
- Particular attention to identifying the best-established items and factors
- New items created by researchers to assess aspects of OTE that pertain solely to online teaching
- Pilot survey contains 80 questions rated on a 7-point Likert scale

OTES Subject Recruitment

- 213 participants were recruited from a cross section of undergraduate and graduate classes at PG
 - Psychology
 - Early Childhood Education
 - Human Services
 - Public Safety and Public Administration
 - Fire Science
 - Emergency Management
 - Criminal Justice
 - Corrections

OTES Item Selection

- Final items were determined based on Principal Components Analysis and Construct Validation
- Four (4) factors emerged, with content mirroring the four (4) factors found in the literature review: Presence, Expertise, Engagement, & Facilitation.
- Presence is the LARGEST factor by far, covering nearly 65% of the variance.
- ***When theory and data match, this is a good sign that the construct is sound!***

Instructions: Place an X in the column that indicates the extent to which you believe the instructor for your current class demonstrates the following characteristics.

Completely Disagree (1) Completely Agree (6)

My current instructor demonstrates or provides...

Presence

1. Sharing their relevant professional experiences
2. Enthusiasm for teaching
3. Good presentation skills
4. Creativity to increase student interest
5. Explanations/presentations of material in novel ways
6. Meaningful examples

Expertise

7. Respect for students
8. Subject matter knowledge

Facilitation

9. Schedules and deadlines
10. Clear expectations

Engagement

11. Timely responses to questions
12. Online and offline availability

OTES Reliability

- Cronbach's alphas for the four OTES factors and total scale were:
 - Presence, .95
 - Expertise, .68
 - Facilitation, .81
 - Engagement, .82
 - Total, .95
- Test/retest reliability coefficients for the four factors and total OTES scale ranged from $r = .74$ to $.89$; all were significant at $p < .001$, one-tailed.
- Coefficients were:
 - Presence, $r = .85$
 - Expertise, $r = .74$
 - Facilitation, $r = .74$
 - Engagement, $r = .87$
 - Total, $r = .89$

OTES Construct Validity

- OTES total and all four factor scores correlated significantly, $p < .001$, with the overall teaching effectiveness item, with coefficients ranging from $r = .50$ to $.72$
- OTES total and factor scores also correlated significantly, $p < .001$, with all four SEOTE scale scores, with coefficients ranging from $r = .38$ to $.69$

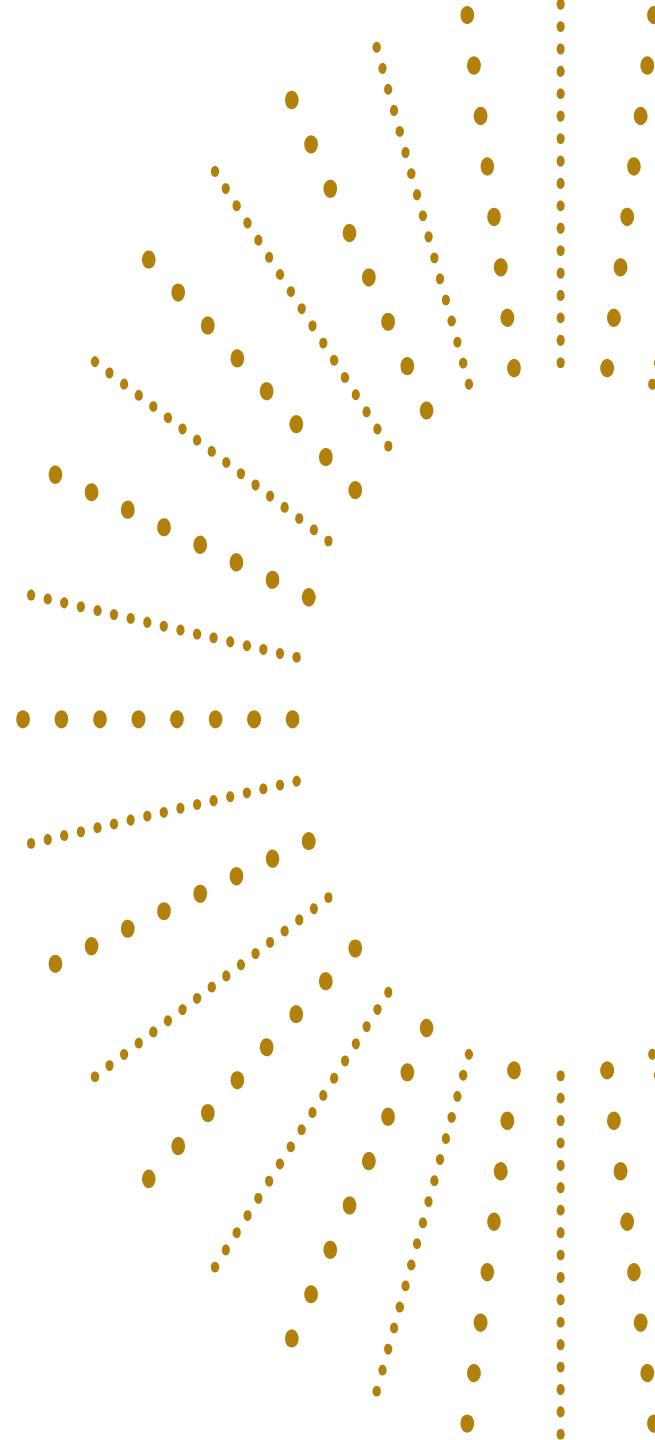
OTES Construct Validity

- Course grade was significantly correlated with OTES instructor Expertise score
- OTES total and factor scores were not significantly associated with:
 - Student Age
 - Student Gender
 - Student Status (year in school)
 - Student Department
 - Anticipated Grade

OTES Next Steps

- The 12-item OTES is now being tested with a much larger sample of PG students
- Aiming for 1,500 participants
- If same factor structure emerges and all reliability and validity checks remain strong, we will have a winner!
- Eventual publication of the OTES

Please share your questions,
comments, or suggestions.



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THANK YOU!

