PROGRAM EVALUATION AND SCALE DEVELOPMENT: INSIGHTS FROM DEVELOPMENT OF ITMASEQ
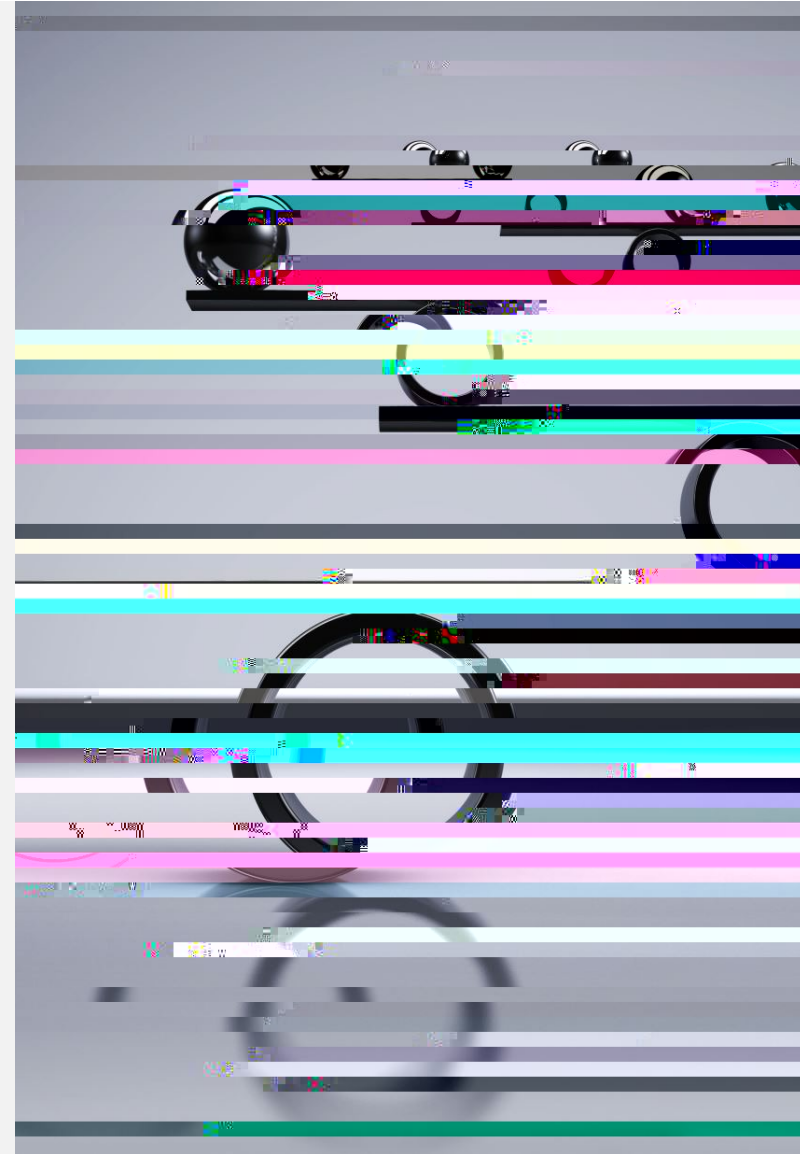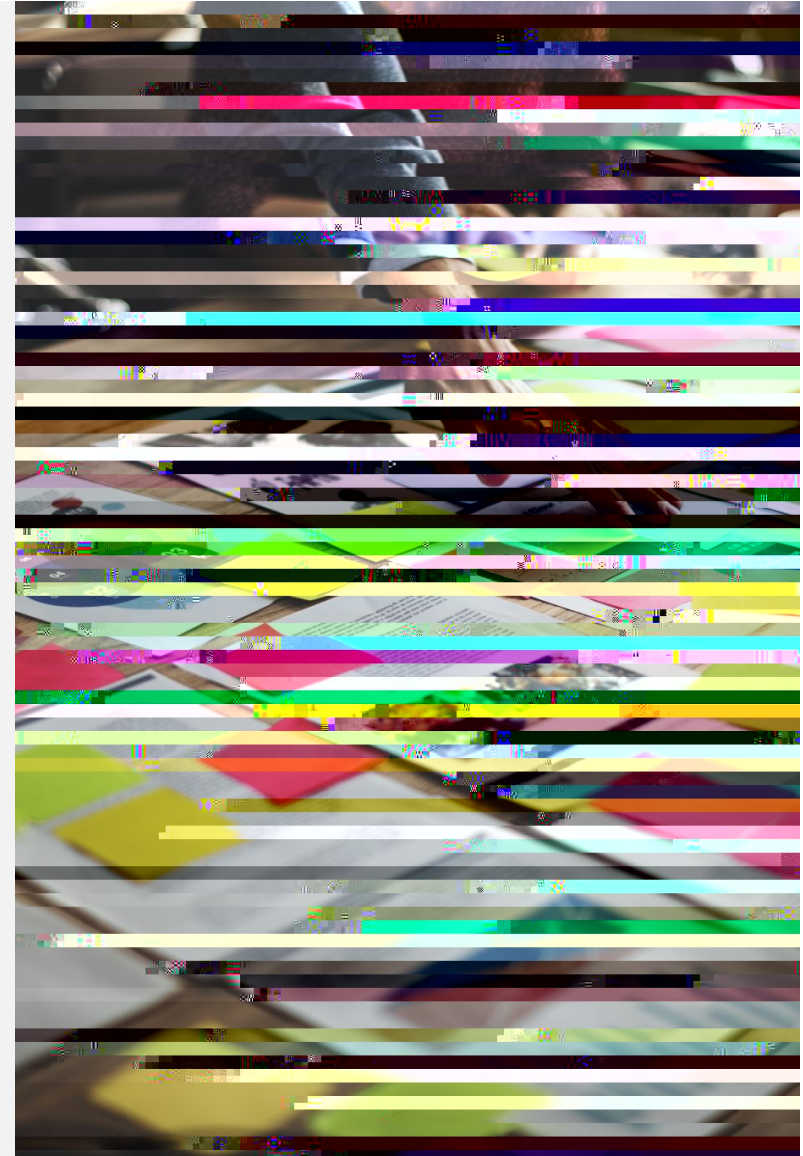
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OUTLINE

- Introduction
- Key Steps in Scale Development
- Application of Scales in Evaluation
- Iterative Relationship
- Challenges and Considerations
- Conclusion

PROGRAM EVALUATION

- Definition: A systematic approach to assessing program design, implementation, and outcomes.

- Purpose: To inform decisions, improve program effectiveness, and ensure accountability

ROLE OF SCALE DEVELOPMENT IN PROGRAM EVALUATION

- Scales as tools: They provide quantifiable data for evaluating specific aspects of a program

- Importance: Reliable and valid scales enhance the accuracy of program evaluation.
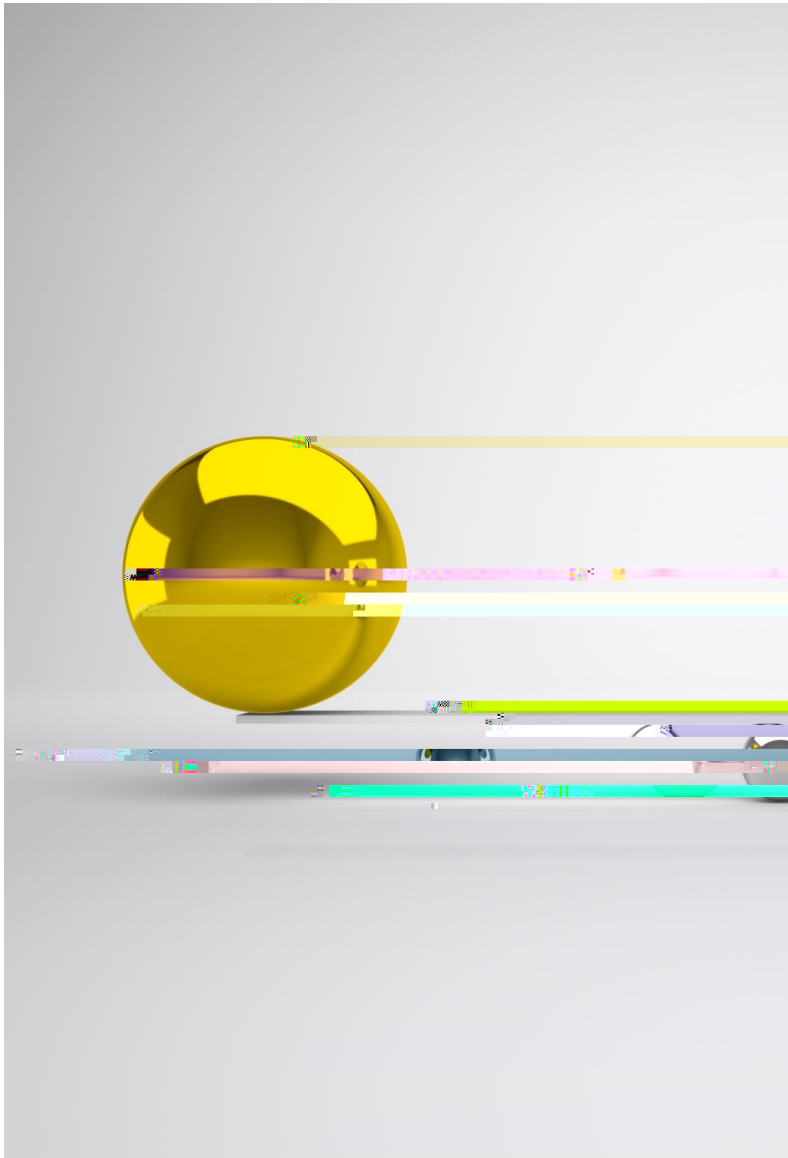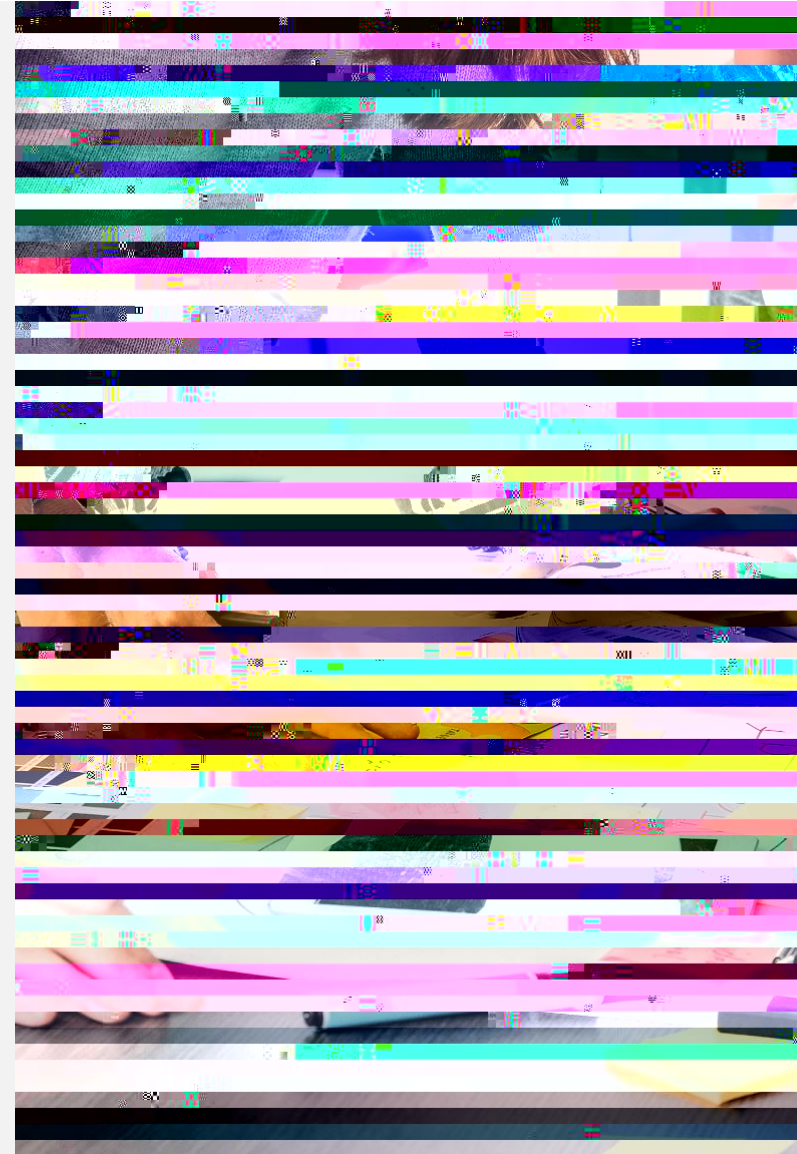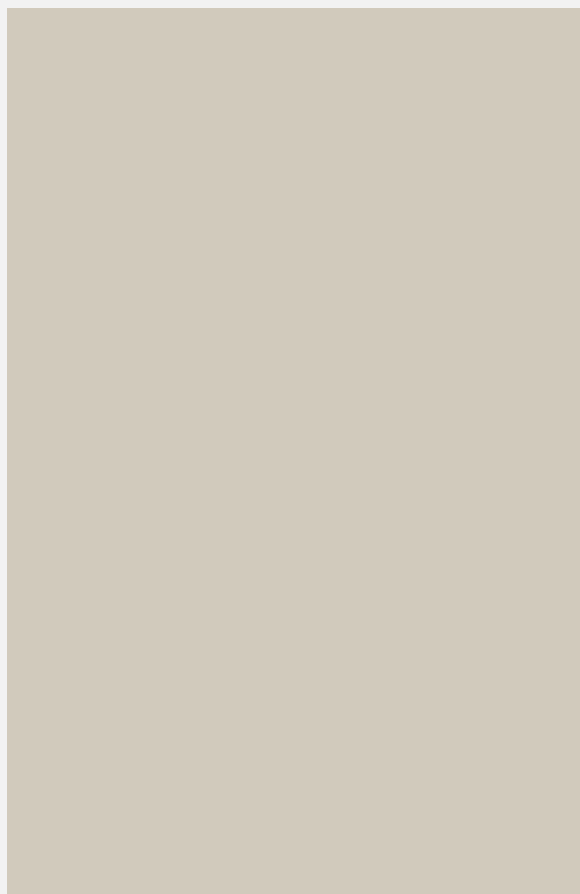
- Stands for In-The-Moment Asynchronous Student Engagement Questionnaire

- Aims measuring undergraduate student engagement (emotional, cognitive, and behavioral) in asynchronous online learning environments by collecting in-the-moment learning engagement experiences (Experience Sampling Method) over time.

- Includes a total of 25 questions:

! *(study day, primary activity, type of primary activity, study place and company),*

! *(calm, anxious, focused, distracted, confident, confused, enjoyment, enjoyment*

KEY STEPS IN SCALE DEVELOPMENT

- <u>Stating the purpose of scale and defining the construct</u>

Construct for ITMASEQ: Asynchronous Student Learning Engagement

(Multidimensional Construct)

Definition: Refers to the degree of active participation and involvement that learners exhibit while interacting with course materials, peers, and instructors in an asynchronous online learning environment. It encompasses various dimensions, including behavioral, emotional, and cognitive engagement

Subconstructs: Emotional Engagement

Cognitive Engagement

Behavioral Engagement

KEY STEPS IN SCALE DEVELOPMENT

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! Reliability Testing: Assess the internal consistency to ensure that the items measure the same construct.

! Validity Testing: Verify that the scale accurately measures the intended construct

Statistical Process:

○ Cronbach's alpha to evaluate reliability and identify problematic items.

○ Factor Analysis: EFA and CFA

○ EFA=Reveals the underlying dimensions or factors within a construct

○ CFA=Tests whether the data fit a pre-specified model of factors based on theoretical assumptions or previous EFA results.
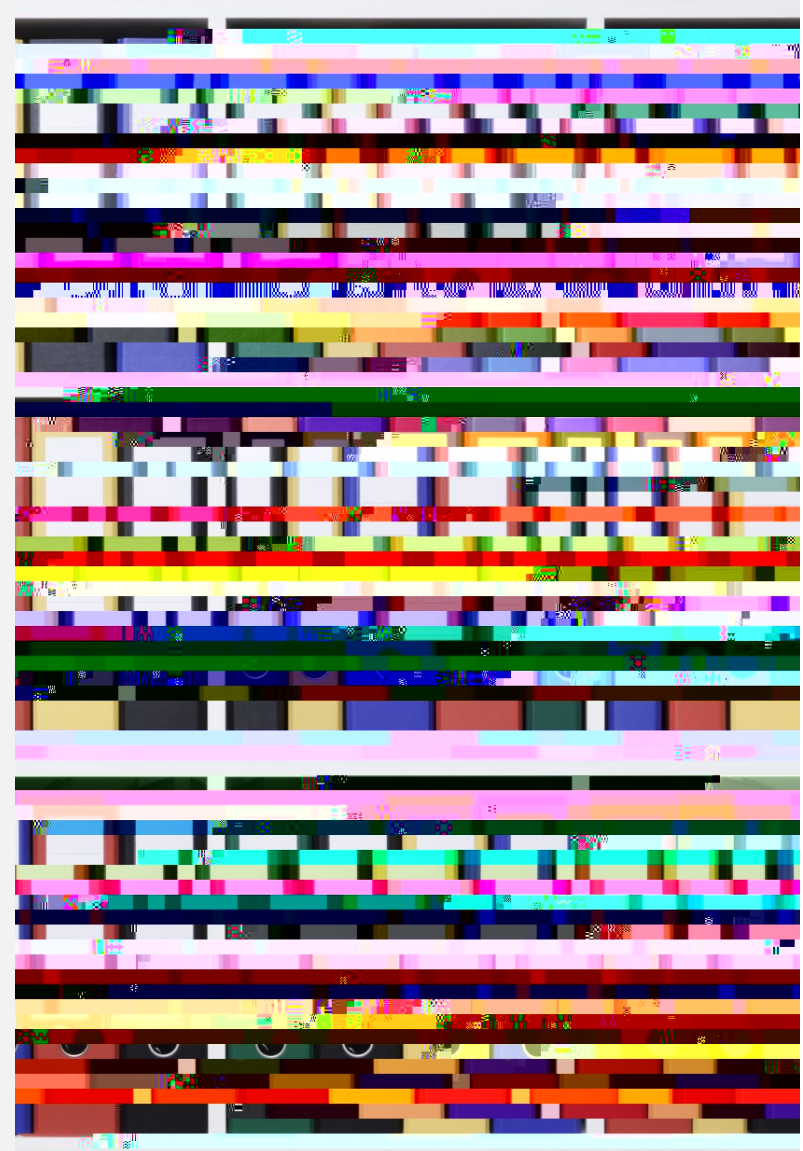
(Evidence Based on Internal Structure)

ITMASEQ: A validation study was conducted with participants from USF College of Education (8 weeks data collection).

CFA was applied for each dimension at each time point.

KEY STEPS IN SCALE DEVELOPMENT

- Prepare a guideline for administration.

  Purpose of scale

  Instructions

  Data collection protocol

  Response format

  Response time

  Ethical Considerations

APPLICATION OF SCALES IN EVALUATION

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ITERATIVE RELATIONSHIP

Evaluation Guides Scales Development

Scales Development Enhances Evaluation

Continuous Cycle:This cycle repeats, ensuring the scale evolves to remain relevant, valid, and useful for ongoing evaluations.
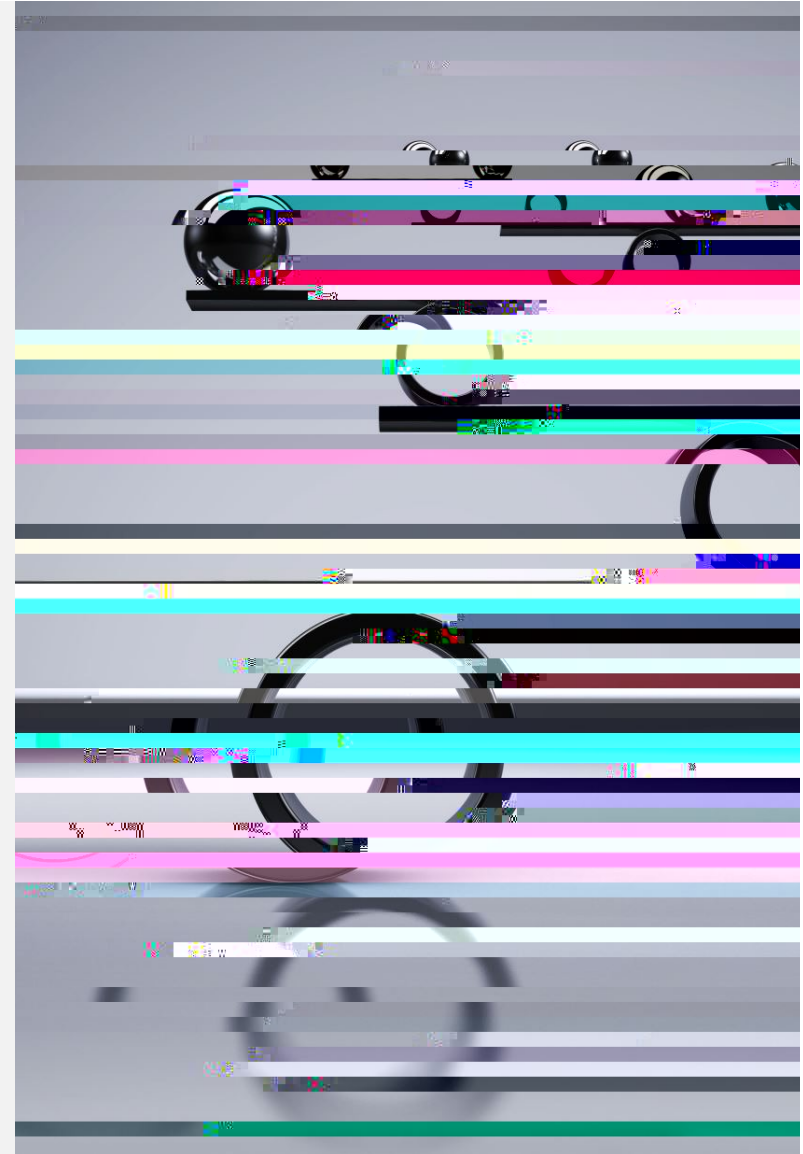
CHALLENGES AND CONSIDERATIONS

- Alignment with theoretical frameworks
- Cultural and contextual relevance.
- Time and expertise.
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CONCLUSION

- Scale development and program evaluation are mutually reinforcing processes.

- Evaluation provides the context and focus needed for developing relevant scales, while robust scales ensure evaluations are reliable, valid, and actionable.

REFERENCES

QUESTIONS?

- For your additional questions: elift@usf.edu