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# RESEARCH TOOLS FOR QUALITY ONLINE EDUCATION: AN EXAMPLE OF AN ONLINE LEARNER READINESS INSTRUMENT



**Oregon State**  
University

# Presenters



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# Overview

**Part 1** Evolution of Readiness Instruments



**Part 2** Validation Study



**Part 3** Applications of the Learning Skills  
Journey Tool



**Part 4** Discussion

# Background

**Partnership:** BYU Online & OSU Ecampus Research Unit

**How we got involved in this project:**

Dray, B. J., Lowenthal, P. R., Miskiewicz, M. J., Ruiz Primo, M. A., & Marczyński, K. (2011). Developing an instrument to assess student readiness for online learning: A validation study. *Distance Education*, 32(1), 29-47.

# Online Learner Readiness

Why measure online learner readiness?

Self-assessment tool

Advising/coaching tool

Faculty and TA tool

Administrative tool

Predictive tool



Targeted  
support for  
online learners

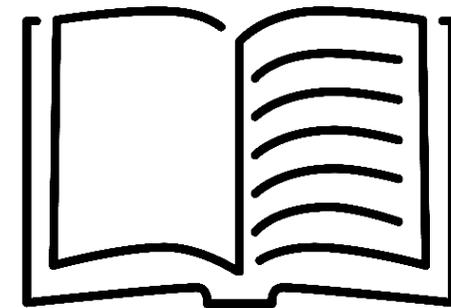
# Online Learner Readiness

## Scan of Existing Measures

Published scales

Open-access scales

Proprietary instruments



## Examination of the Published Literature

# Online Learner Readiness

## Key Constructs in the Literature

- ✓ Technology use
- ✓ Self-directed learning
- ✓ Motivation
- ✓ Self-efficacy
- ✓ Communication with instructor  
& other students
- ✓ Time management skills
- ✓ Challenges with time and work

## What was missing?

- Challenges and commitments
- Learning environment  
(proper study location)

## What needs updating?

- Technology

# Scale Development

- 1** Changes to the prior instrument based on literature and the BYU instrument
- 2** Consultations with OSU Student Success Team and Ecampus Advisors
- 3** Cognitive testing with OSU students: 1:1 interviews
- 4** Instrument testing at OSU and BYU:  
41-items that included some explanatory text about what the subscales indicate

# Results

## Demographics

### BYU

N= 9,406

Median Age = 21 (SD=2.9)

Age Range = 18-62

|                   |       |
|-------------------|-------|
| Asian             | 2.5%  |
| Hispanic/Latino   | 3.7%  |
| Two or more races | 4.9%  |
| White             | 85.9% |

### OSU

N= 739

Median Age = 28 (SD = 8.4)

Age Range = 18-64

|                   |       |
|-------------------|-------|
| Asian             | 5.7%  |
| Hispanic/Latino   | 7.8%  |
| Two or more races | 10.8% |
| White             | 72.1% |

# Results

## Reducing the Scale

- Reliability Analysis
- Exploratory Factor Analysis
- Confirmatory Factor Analysis (AMOS)
- Cross validation with BYU students



## Reduced Scale

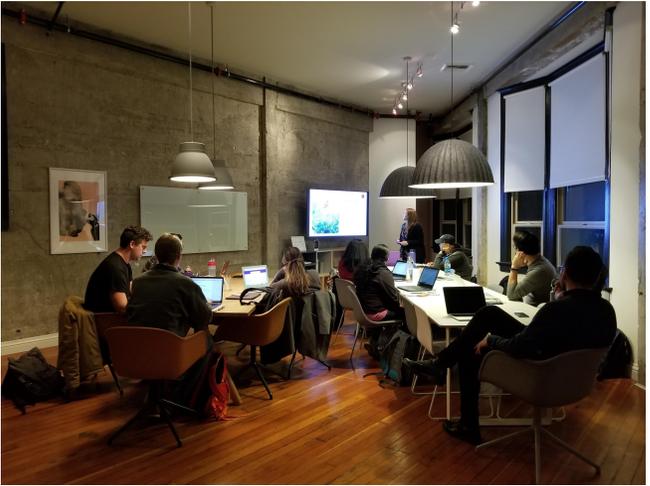
| Subscales                | Number of items |
|--------------------------|-----------------|
| Locus of Control         | 5               |
| Self-regulation Efficacy | 7               |
| Communication Efficacy   | 8               |
| Efficacy Technology      | 5               |

# Results

## Learning Skills Journey Tool (LSJT): 25 items

| Final Subscales          | Description   |
|--------------------------|---|
| Locus of Control         | perceived control for education   |
| Self-regulation Efficacy | regulate their thoughts and behaviors in order to complete their coursework |
| Communication Efficacy   | communicate with classmates, group members and instructors                  |
| Efficacy Technology      | comfort with common technologies that student may need in online courses    |

# Reconceptualizing Readiness



# Reconceptualizing & Applying

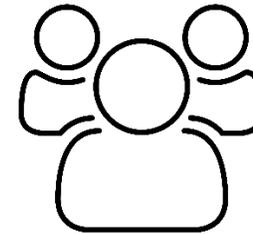
Applying the Learning Skills Journey Tool for:

- 1** Learner Self-Assessment
- 2** Connecting students with resources and support services
- 3** Helping student support personnel identify opportunities for students to further develop learning skills

# OSU Implementation

Embed scale into the Ecampus Orientation

Ecampus Student Success Coaches & Advisors



## Next Phase of the Research

Analyzing educational data (GPA, DFW) to see if the scale has predictive value

# Discussion Question

When you're searching for quality research-based instruments to collect data on your programs, what do you look for?

# What We Look For...

- ✓ Must have research base (over time)
- ✓ Peer reviewed journal publications
- ✓ Representative samples
- ✓ Sample Size
- ✓ Includes reliability testing
- ✓ Validation studies & cross validation with different samples
- ✓ Implementation/application studies

# Discussion Question

Are there any examples you can share of using research-based instruments at your institution?

# Using Research-based Instruments

- Implement an entire instrument in original form
- Use specific subscales
- Modify existing scales to address needs
  - Creative commons?
- More than one instrument at the same time

# Connect with us!



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