EVALUATING EFFECTIVENESS OF AN ONLINE PHYSICAL ACTIVITY PROMOTION TRAINING FOR SCHOOL-BASED PRACTITIONERS

Thomas Packebush & Kathy Gunter, PhD

BACKGROUND

- **BE Physically Active 2Day (BEPA 2.0)** is a school-based program that enables teachers to easily promote physical activity (PA) in multiple school settings.
- Program implementation is supported by trainings delivered either in-person by BEPA trainers or online via a self-directed, asynchronous learning management system (LMS).
- Previous research showed high levels of understanding, confidence, and self-efficacy to implement BEPA 2.0 among participants of the in-person training (Taylor et al., 2021).
- To date, the effectiveness of the online training had not been evaluated.

PURPOSE

1. Evaluate the effectiveness of the asynchronous, online BEPA 2.0 training.
2. Compare training outcomes between in-person and asynchronous modalities.

METHODS

Design
- Online, asynchronous BEPA 2.0 training was provided to **89 practitioners** via Canvas between June 2021 and May 2022.
- Topics presented included PA intensity, school-based PA, physical education, using BEPA 2.0, inclusion strategies, and tips for remote and socially-distant delivery of program activities.
- Learning materials included lecture videos, readings, discussion activities, and self-check quizzes.
- Participants completed a **pre-training survey** prior to viewing course materials and a **post-training survey** once all materials were completed.
- Both evaluations were completed online through Qualtrics.

Figure 1: Screenshot of module from online, asynchronous training.
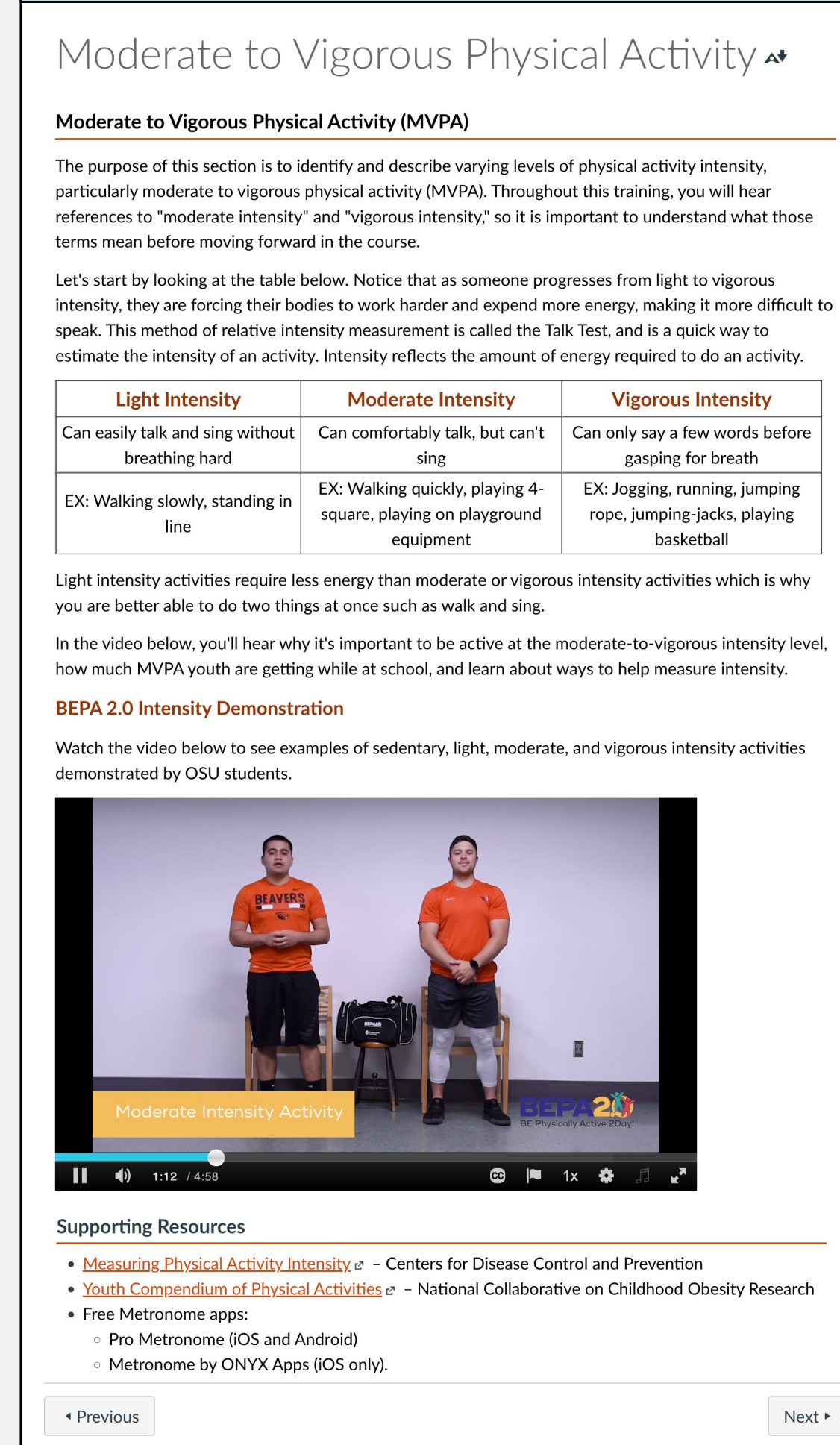
METHODS *(continued)*

Measures
- Demographic data were collected and training outcomes were assessed via 12 questions about participants' knowledge and confidence to deliver the BEPA 2.0 program.
- Training outcomes were measured on a 5-point Likert scale, ranging from *Strongly Disagree* to *Strongly Agree*. In-person outcomes were previously measured on a 4-point scale, excluding a *Neither Agree or Disagree* option.

Analysis
- Likert scale questions were dichotomized into *Agree* and *Disagree* for both asynchronous and in-person evaluations.
- Asynchronous and in-person questions were matched for comparison.
- The Wilcoxon sign-rank test was used to compare pre- and post-training scores. The Wilcoxon-Mann-Whitney test was used to compare the effectiveness of the in-person and asynchronous training approaches.
- Data were analyzed using R Studio and Microsoft Excel.

RESULTS

Participant Demographics
- Pre-post survey responses were successfully matched for **65 trainees**.
- Participants came from **16 schools**, 2 district offices (e.g., Multnomah Education Service District), 5 community organizations, and 4 OSU Extension offices **across 16 Oregon counties**.

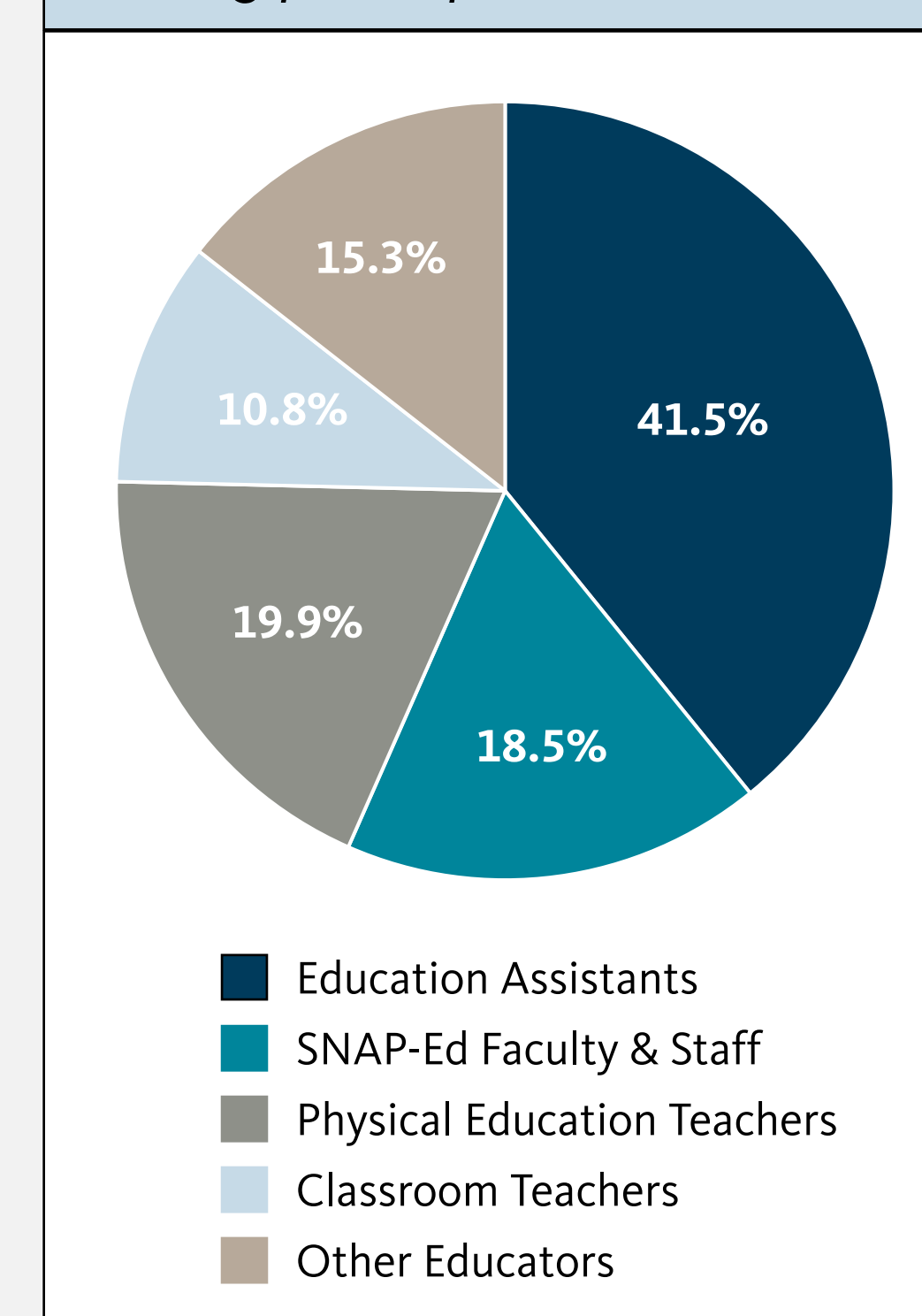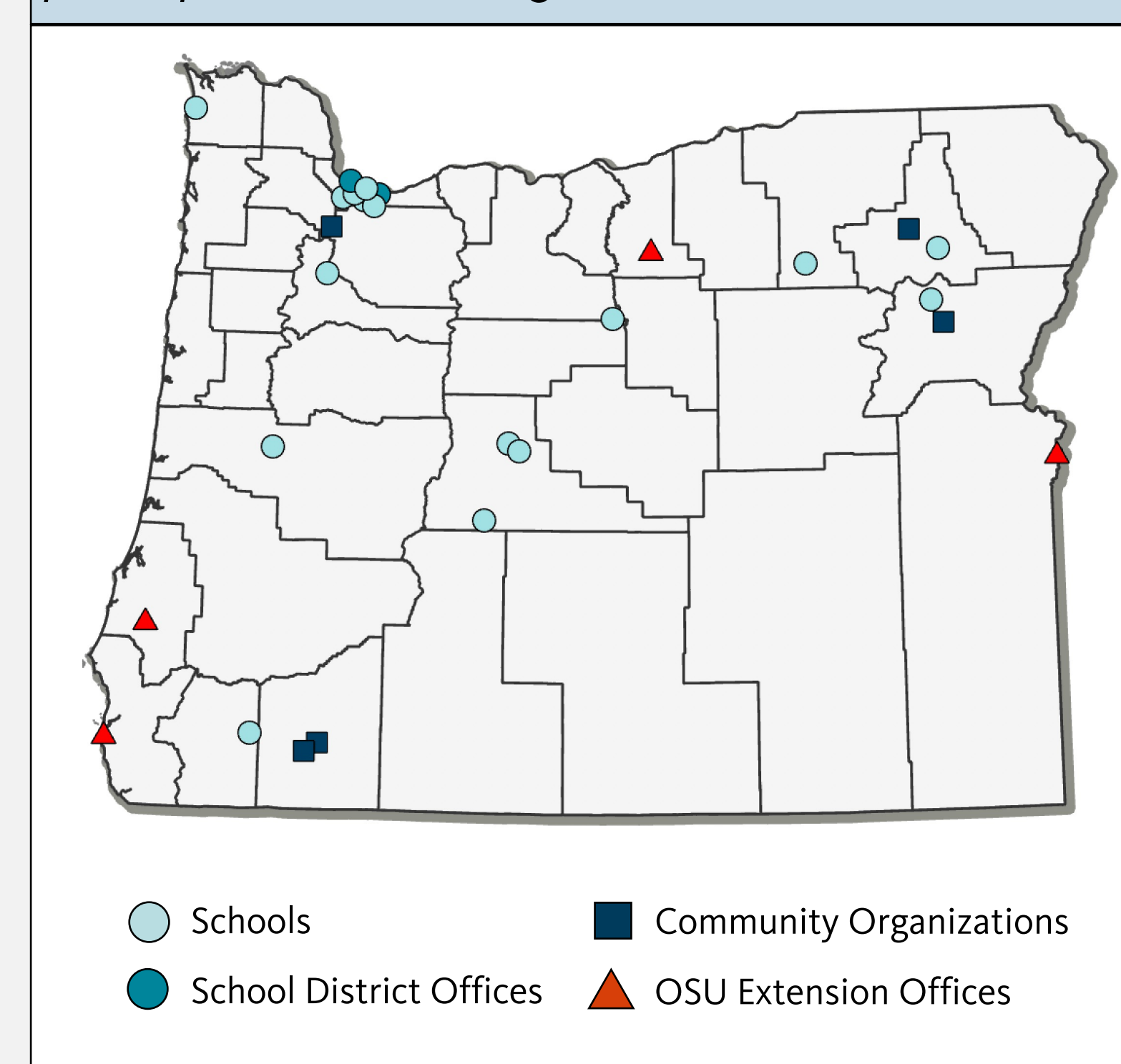*Figure 1: Role of asynchronous training participants.*

- 41.5% Education Assistants
- 18.5% SNAP-Ed Faculty & Staff
- 19.9% Physical Education Teachers
- 10.8% Classroom Teachers
- 15.3% Other Educators

Figure 2: Distribution of asynchronous training participants across Oregon.

- ◯ Schools
- ◯ School District Offices
- ■ Community Organizations
- ▲ OSU Extension Offices

RESULTS *(continued)*

Asynchronous Training, Pre vs. Post
- Comprehension and confidence **increased significantly** from pre- to post-training (Table 1).

Table 1. *Results of Wilcoxon Sign-Rank Test Comparing Pre- and Post-Asynchronous Training Scores (N=65)*

Variable (max score)	Pre Mean (SD)	Post Mean (SD)	p-value
Overall (12)	7.00 (3.21)	10.92 (2.58)	< 0.001
Confidence (6)	3.03 (2.11)	5.20 (1.69)	< 0.001
Comprehension (6)	3.97 (1.72)	5.72 (1.11)	< 0.001

Asynchronous vs. In-Person Training
- Nine of twelve asynchronous evaluation questions were matched to in-person training questions for comparison.
- No overall difference was found between asynchronous and in-person scores. When adjusted to remove *Neither Agree or Disagree* responses, overall asynchronous scores were significantly higher (Table 2).

Table 2. *Results of Wilcoxon Mann-Whitney Two-Sample Test Comparing Post-Training Scores in In-Person and Asynchronous Training Participants*

Variable (max score)	In-Person (N=152) Mean (SD)	Asynchronous (N=65) Mean (SD)	p-value	Adj. Async* Mean (SD) [n]	p-value
Overall (9)	8.72 (0.71)	8.29 (1.81)	0.263	8.77 (1.30) [53]	0.025
Confidence (3)	2.90 (0.34)	2.62 (0.84)	0.012	2.89 (0.57) [54]	0.275
Comprehension (5)	4.86 (0.47)	4.77 (0.91)	1.00	4.92 (0.65) [60]	0.056
Self-Efficacy (1)	0.97 (0.16)	0.91 (0.29)	0.038	0.98 (0.13) [60]	0.663

*Confirmatory analysis removed respondents who selected *Neither Agree or Disagree*.

IMPLICATIONS

- Both in-person and asynchronous training approaches are **effective at increasing knowledge and confidence** to deliver BEPA 2.0 activities.
- Though statistically different in some categories, absolute differences in asynchronous and in-person scores were marginal.
- Follow-up training may benefit asynchronous trainees to increase confidence and self-efficacy similar to the levels reported by trainees in the in-person training.
- The asynchronous approach **may increase program reach** by providing training to those who would not otherwise have access.

References:
Taylor, N., Packebush, T., Winfield, T., & Gunter, K. (2021). Examining the feasibility of partnering with Cooperative Extension to advance statewide physical education policies in Oregon. *Journal of Human Sciences and Extension, 9*(2), 135–145. https://www.jhseonline.com/article/view/882

Oregon State University