"Research in Action" Podcast Instructor Guide

Use the following episode description, learning objectives, guiding questions and activity suggestions to more easily include "Research in Action" podcast episodes as a supplemental resource for your course.

Oregon State University

Podcast and Episode Information

"Research in Action" is a weekly podcast about topics and issues related to research in higher education featuring experts across a range of disciplines.

On this episode, Mary Ellen is joined by Dr. Kathleen Preston, an Associate Professor in the Department of Psychology at California State University, Fullerton. Dr. Preston teaches several statistics courses including introductory, advanced, and multivariate statistics, as well as psychometrics, and structural equation modeling. She earned her Ph.D. in 2011 in quantitative psychology from UCLA. Her research interests are in using Item Response Theory, specifically the nominal response model, to develop and refine psychological measurement tools. Dr. Preston is co-director of the Fullerton Longitudinal Study where she applies advanced statistical techniques to long-term longitudinal data. Dr. Preston is considered an expert in statistical analysis using R programming and she has recently published a textbook on analyzing multivariate statistics using R. She has given numerous invited statistical presentations and workshops at national and regional conferences, universities, and federal government agencies.

Segment One [00:00-20:11] - In this segment, Kathleen discusses psychometrics, and how she got interested in quantitative psychology; she explains item response theory and the nominal response model and their applications.

Segment Two [20:12-37:44] - In this segment, Kathleen discusses the Fullerton Longitudinal Study, the benefits and drawbacks of the study and the statistical methods she employs in her research.

Show notes and a transcript for this episode can be found at:
http://ecampus.oregonstate.edu/research/podcast/e185/

Learning Outcomes

By listening to this episode, listeners will be able to:

- Describe Item Response Theory

- Provide an example of how Item Response Theory is used

- Describe the nominal response model

- Describe a benefit and a drawback of long-term longitudinal studies

- Discuss statistical methods used in Kathleen's research

Guiding Questions for Listening

- How does Kathleen define psychometrics?

- What factors contributed to Kathleen's interest in quantitative psychology?

- What are some applications of the Item Response Theory?

- How does Kathleen describe the nominal response model?

- How is the nominal response model applied to analyzing response options?

- What are some of variables Kathleen describes in the Fullerton Longitudinal Study?

- What are the benefits and drawbacks that Kathleen describes of this longitudinal study?

- What types of questions can be answered by analyzing this longitudinal data?

- What types of statistical methods are used in Kathleen's research?

- According to Kathleen, what findings surprised her the most?

Possible Activities

- Ask students to visit the show notes for this episode (http://ecampus.oregonstate.edu/research/podcast/e185/) and look at an additional resource that is linked in connection with this episode. Students can write a short review of that resource to share with their peers.

- Ask students to visit the show notes for this episode (http://ecampus.oregonstate.edu/research/podcast/e185/) and post an additional resource connected to the content of the episode in the comments section.

- Have students share questions that are raised for them based on the content of this episode. What would they ask Kathleen Preston if they could?

Suggested Citation (APA, 6th edition)

Dello Stritto, M. E. (Producer/host). (2020, February 17). *Dr. Mary Ellen Dello Stritto and Dr. Kathleen Preston on Item Response Theory* [Audio podcast]. Retrieved from http://ecampus.oregonstate.edu/research/podcast/e185/

Notes

About the Research in Action Podcast

"Research in Action" (RIA) is a podcast about topics and issues related to research in higher education featuring experts across a range of disciplines. Episodes are posted weekly and include guest interviews and occasional solo episodes. Guests are from a range of higher education institutions and share their expertise on qualitative, quantitative and mixed methods as well as their personal experiences as researchers, research and writing practices, organizational and productivity strategies, and much more. Some weeks, bonus content will also be posted.

"Research in Action" was hosted by Dr. Katie Linder, former research director for Oregon State University Ecampus.

Visit the podcast website to view show notes and transcripts for each episode, explore our episode guide, learn more about how to contact us, or suggest a future guest or topic.

You may subscribe to the "Research in Action" RSS feed or access the podcast via iTunes, Soundcloud or Stitcher. "Research in Action" is also listed on MERLOT.

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