

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.

Dr. John Nychka on Creating a Professional Philosophy [34:40]

Research in Action - Episode 66

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 of the podcast, the guest is Dr. John Nychka, Associate Professor, Chemical and Materials Engineering, Associate Dean of Teaching and Learning, Faculty of Graduate Studies and Research, Vargo Teaching Chair, and Adjunct Associate Professor in the School of Dentistry at the University of Alberta. John graduated from the University of Alberta in 1997 with a Bachelors of Science in Metallurgical Engineering, then went on to earn his Masters in Engineering from McMaster University in 1999 and his PhD from the University of California Santa Barbara in 2004. He stayed on at Santa Barbara as a post doc, and then moved to become an assistant professor in Chemical and Materials Engineering at the University of Kentucky from 2005 to 2007. In 2007 he returned home to Edmonton to join the University of Alberta. He teaches introductory materials engineering, communication, and capstone design courses, and his research is primarily about structural materials.

Segment One [00:00-11:53] - In this segment, John shares about the different components of his research on materials.

Segment Two [11:54-21:16] - In this segment, John describes the professional philosophy he uses to guide his research, teaching, and service.

Segment Three [21:17-34:40] - In this segment, John shares about the importance of embracing failure as a researcher.

Bonus Clip #1 [00:00-7:16]: John's CV of Failures

Show notes and a transcript for this episode can be found at:

<http://ecampus.oregonstate.edu/research/podcast/e66/>

Learning Outcomes

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

- Discuss the purpose of researching materials
- Describe Dr. Nychka’s professional philosophy of “Materials at the Interface”
- Cite resources for “Materials at the Interface”
- Review suggestions for approaching failure

Guiding Questions for Listening

- How does Dr. Nychka research materials?
- How does Dr. Nychka describe the process, properties, and performance paradigm?
- According to Dr. Nychka, what is the purpose of researching materials?
- What are some examples of the materials with which Dr. Nychka works?
- What might be some of the broader impacts of Dr. Nychka’s work?
- What led Dr. Nychka to develop his professional philosophy of “Materials at the Interface”?
- According to Dr. Nychka, what has been the benefit of having a professional philosophy?
- How does Dr. Nychka view and describe failure?
- How does Dr. Nychka describe the difference between growth mindset and fixed mindset?
- According to Dr. Nychka, how can one benefit from “failing on purpose”?
- What does Dr. Nychka suggest are two ways one can look at failures? (See also, Bonus Clip)

Possible Activities

- Ask students to visit the show notes for this episode (<http://ecampus.oregonstate.edu/research/podcast/e66/>) 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/e66/>) 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 Dr. John Nychka if they could?

Suggested Citation (APA, 6th edition)

Linder, K. (Producer/host). (2017, July 3). *Dr. John Nychka on Creating a Professional Philosophy* [Audio podcast]. Retrieved from <http://ecampus.oregonstate.edu/research/podcast/e66/>

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” is hosted by [Dr. Katie Linder](#), 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](#).

The “Research in Action” podcast is a resource funded by Oregon State University Ecampus – ranked top ten in the nation for online education two years running by U.S. News & World Report. OSU Ecampus has more than 45 degree programs and more than 1,000 classes online.

Contact

Katie Linder, Ph.D.
Director of Research
Oregon State Ecampus
541-737-4629
kathryn.linder@oregonstate.edu

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