

Developing multimedia resources for educators and researchers to create inclusive educational practices for teaching ambiguous classroom concepts

Rachel Yoho, PhD. ARIS Fellow 2019-2020

Current Affiliation: University of Florida, Department of Environmental and Global Health, Gainesville, Florida

Former Affiliation: Miami University, Department of Biology, Oxford, Ohio

Project Summary:

This synthesis work developed multiple resources for educators and researchers with the goal of creating inclusive learning spaces across the disciplines. In the classroom, words and phrases may have different meanings from how they are used in non-academic contexts. Three short videos with introduction information about lexical ambiguity, teaching techniques, and tips are available on YouTube. Additionally, an article was developed and submitted to journal in interdisciplinary education (under review) with research and evidence-based recommendations. These materials seek to help instructors find ways to create connections between classroom learning and society by developing an inclusive and welcoming learning environment.

Videos:

Lexical Ambiguity Introduction

<https://youtu.be/a55JWd-ivc>

Teaching Techniques for Lexical Ambiguity

<https://youtu.be/9xQAMpsjxck>

5 Tips for Addressing Lexical Ambiguity

<https://youtu.be/wAB5VR8t63Q>

Screenshots (with references on following pages)

Resources used to create Lexical Ambiguity Video Series

Rachel Yoho, PhD. ARIS Fellow 2019-2020

University of Florida, Department of Environmental and Global Health, Gainesville, Florida

5 Tips for Addressing Lexical Ambiguity

<https://youtu.be/9xQAMpsjxck>

This video was created as part of a National Alliance for Broader Impacts Advancing Research Impacts in Society Fellowship. Opinions or views expressed here do not necessarily reflect the funding agency.

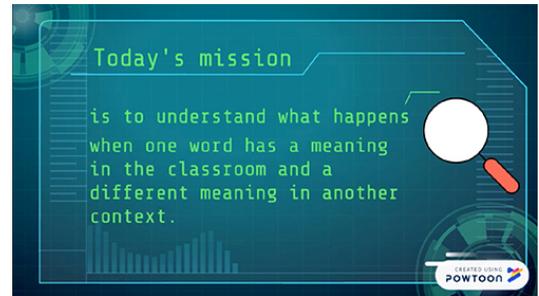
References [1]

Barwell, R. (2005). Ambiguity in the mathematics classroom. *Language and Education*, 19, 117-125.

Kaplan, J. J., Fisher, D. G., & Rogness, N. T. (2009). Lexical ambiguity in statistics: What do students know about the words association, average, confidence, random, and spread? *Journal of Statistics Education*, 17(3), 1-19.

Lemke, J. L. (1990). *Talking science: Language, learning, and values*. Norwood, NJ: Ablex.

Yoho, R. A. (2018). A case of multiple meanings? Perspectives and tips for integrating students into specialized language use within disciplines. The Original Lilly Conference on College Teaching, Oxford, Ohio. http://celt.miamioh.edu/lillycon/session_files/2019/yoho.pdf



Teaching Techniques for Addressing Lexical Ambiguity

<https://youtu.be/9xQAMpsjxck>

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References [1]

For more information, see "5 Tips for Addressing Lexical Ambiguity" video

References [2]

Statements:

Question students' prior knowledge¹

List and write sentences¹

Present both formal and informal definitions²

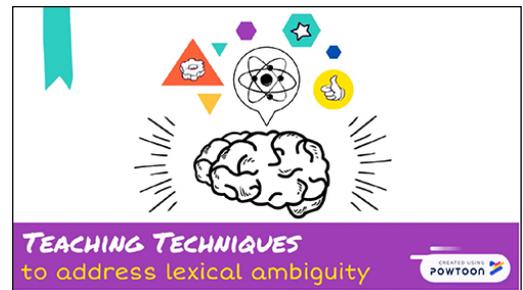
Differentiating statements³

Contrast word meanings²

Corresponding references:

¹ Adams, T. L., Thangata, F., & King, C. (2005). "Weigh" to Go! Exploring Mathematical Language. *Mathematics Teaching in the Middle School*, 10(9), 444-448.

² Lavy, I., & Mashiach-Eizenberg, M. (2009). The interplay between spoken language and informal definitions of statistical concepts. *Journal of Statistics Education*, 17(1).



³ Lemke, J. L. (1990). Talking science: Language, learning, and values. Norwood, NJ: Ablex.
Yoho, R. A. (2018). A case of multiple meanings? Perspectives and tips for integrating students into specialized language use within disciplines. The Original Lilly Conference on College Teaching, Oxford, Ohio. http://celt.miamioh.edu/lillycon/session_files/2019/yoho.pdf

The Case of Lexical Ambiguity: An introduction to lexical ambiguity in the classroom

<https://youtu.be/a55JWd-ivc>

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References [1]

Barwell, R. (2005). Ambiguity in the mathematics classroom. *Language and Education*, 19, 117-125.
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References [2]

Fang, Z. (2005). Scientific literacy: A systemic functional linguistics perspective. *Science education*, 89(2), 335-347.
Yoho, R. A. (2018). A case of multiple meanings? Perspectives and tips for integrating students into specialized language use within disciplines. The Original Lilly Conference on College Teaching, Oxford, Ohio. http://celt.miamioh.edu/lillycon/session_files/2019/yoho.pdf

References [3]

Integral¹

1. Strauss, M. (2018). When writing about survey data, 51% might not mean a 'majority.' Pew Research Center. <http://pewresearch.org/fact-tank/201/when-writing-about-survey-data-51-might-not-mean-a-majority/>
Yoho, R. A. (2018). A case of multiple meanings? Perspectives and tips for integrating students into specialized language use within disciplines. The Original Lilly Conference on College Teaching, Oxford, Ohio. http://celt.miamioh.edu/lillycon/session_files/2019/yoho.pdf

References [4]

Yoho, R. A. (2018). A case of multiple meanings? Perspectives and tips for integrating students into specialized language use within disciplines. The Original Lilly Conference on College Teaching, Oxford, Ohio. http://celt.miamioh.edu/lillycon/session_files/2019/yoho.pdf