

A. McKinzie Sutter

Learner | Responsibility | Strategic | Individualization | Restorative

Education

M.S. Natural Resource Sciences, University of Nebraska-Lincoln (UNL), May 2017

Minor: College STEM Education

Thesis: [Socio-Scientific Issues and Construal Level Theory](#)

B.S. Fisheries and Wildlife, UNL, May 2014, Honors Program graduate

Teaching Experience

- *Biology. Hyflex.* 15 students. Spring 2021, partial semester (instructor). Southeast Community College. Transitioned into instructor role mid-semester. Students reported they felt hopeful when I started teaching.
- *Plant Science. Online.* 35 students. Summer 2019 (instructor) & spring 2019 (TA). UNL. Noticed students overlooked portions of their course content, so I streamlined the design of the weekly work to be a single page with two columns of content. Students preferred the new layout according to an informal survey.
- *Invasive Plants: Impacts on Ecosystems. Online.* 50 students. Fall & spring semesters from fall 2018 – spring 2020 (instructor). UNL. Redesigned the course with special attention towards a shift in viewpoints on what the term “invasive” refers to and to include more examples of invasive species from other countries.
- *Biotechnology. Online.* 35 students. Spring 2019 (instructor) & fall 2018 (TA). UNL. Helped a faculty member redesign the course using backward design. Independently modified the course final project with Universal Design for Learning principles to create higher levels of motivation and student self-monitoring abilities.
- *Genetics. Online.* 30 students. Summer 2018 & 2019 (instructor). UNL.
- *Genetics. Face-to-face, online.* 35 students, Fall & Spring from 2013 – 2015 (TA). UNL. Helped the teaching team identify gaps in student understanding and plan activities or interventions to address student confusion.
- *Science and Decision-Making for a Complex World. Face-to-face.* 100 students. 3-week guest lecture spring 2016 on prairie dogs (instructor). UNL. Utilized active learning (clickers and discussion questions).
- *Science and Decision-Making for a Complex World. Face-to-face.* 30 students. Fall 2015 & 2016 (TA). UNL. Independently ran a recitation course where students learned about topics in greater depth and worked in groups.

Educational Material Development Experience

- [Accessibility/UDL resource](#) for UNL that addresses the need for resources that teach instructors how to implement accessibility in their digital course materials. It teaches the foundations of accessible design in UNL-supported technologies as well as the (re)design of courses toward universal design for learning.
- Developed a **rubric for a course reflection process** for STEM faculty at UNL learn about quality markers and inclusive practices in their courses and plan next steps.
- Created five **2-page guides on online teaching tactics** for distribution in the Department of Agronomy and Horticulture at UNL. See the first guide: [online vs. face-to-face](#)
- **Transformed educational Flash animations into HTML5.** Self-taught skills to preserve frequently used teaching animations that were in outdated Flash technology. Added roll-over buttons, breakpoints (for mobile capabilities), accessibility, and drag & drop features to animations. See an example: Who Wants to be a Genetic Engineer on the [PASSeL website](#).
- Created 11 **study guides and quizzes** as part of guiding an instructor through a redesign of the course using backward design. The study guides and quizzes aligned to biotechnology lectures provided by a faculty member for a freshman level college course and brought in real-world applications of the content as desired by the department.
- Modified a **biotechnology final project** using Universal Design for Learning. The revised final project asks students to propose solutions for an environmental, food, or human health problem using classical, modern, and diagnostic biotechnology techniques and allows students to present via PowerPoint or create a write-up. Initial project allowed for food problem selection and PowerPoint only. This new design allows students to pick topics that interest them and express their knowledge in ways that they are interested in, which creates greater motivation.
- Created **active teaching style unit** for *Science and Decision-Making for a Complex World*, a required freshman-level course for students in the College of Agriculture and Natural Resources. Included 3 lectures, 1 quiz, 1 homework assignment, 1 unit assessment, and 1 recitation activity.
- **Scripted and oversaw edits on videos** about genetic engineering for high school age students. See an example of the final product: [Enviropig Part 2: Transformation](#)
- Created a high school [classroom activity on pedigrees and inheritance](#) of the double muscle gene in cattle. Distributed on the National Agriculture in the Classroom webpage.
- Collaborated with a colleague to launch the Center for Transformative Teaching **web resource called “What does an online course look like?”** The resource promotes research-based best practices for online teaching throughout the institution.

Educational & Workplace Technology Proficiencies

- Advanced skill in the Canvas Learning Management System
- Proficient in Microsoft Office products, OneDrive, MediaHub, VidGrid, Wordpress (Journey of a Gene environment), PASSeL, Zoom, Adobe Captivate
- Ability to implement accessible design in all the platforms above
- Basic skills in Moodle/eXtension, Camtasia, Canvas Design Tools

Research Experience

- Gas and soil sample collection. USDA – ARS, June 2017 – August 2018
- Interviewer for educational studies. UNL, School of Natural Resources, January – May, 2018
- Interviewer and mixed-methods analysis for graduate project on 6th grade students' conceptualization of a wind energy socio-scientific issue and college students' conceptualization of a prairie dog socio-scientific issue. UNL, School of Natural Resources; 2015-2017
- Coding of interviews for a qualitative research study on secondary teachers' confidence of delivering genetic engineering curriculum using "The Journey of a Gene" website; UNL, Department of Agronomy and Horticulture, 2015-2016
- Collected and analyzed water quality samples from the Niobrara River and tributaries. Sampled the Niobrara fish population using backpack electrofishing. UNL, School of Natural Resources, 2013
- Prepared growth media and cleaned laboratory spaces for gene knockout projects and rice pathogen studies; UNL, plant pathology, 2011-2013

Professional Development

Completed Short Courses

- ***Inclusive STEM Teaching Project*** (edX-Boston University, Summer 2021)
- ***Quality Matters*** (*Quality Matters*, Fall 2020)
- *An Introduction to **Evidence-Based Undergraduate STEM Teaching*** (Edx-Cornell, Fall 2020)
- *Teaching and Learning in the **Diverse Classroom*** (edX-Cornell, Fall 2020)
- *Becoming a More **Equitable Educator: Mindsets and Practices*** (edX-Cornell, Summer 2020)
- ***Online Labs*** (Online Learning Consortium, Fall 2019)
- ***Yellowdig Certification*** (Yellowdig, Summer 2019)
- ***Competency-Based Learning*** (edX, Spring 2019)

Professional Development through Reading

- Reach Everyone, Teach Everyone
- Talking about Leaving
- Making it Stick: The Science of Successful Learning
- Creating a Culture of Accessibility in the Sciences
- Ungrading: Why Rating Students Undermines Learning
- Small Teaching Online
- Small Teaching
- Culturally Responsive Teaching and the Brain
- Bandwidth Recovery
- Cheating Lessons
- How Learning Works
- How to be an Antiracist
- White Fragility
- Dare to Lead
- The Broken Ladder
- Don't Label Me
- The Immortal Life of Henrietta Lacks

Formal Education on Teaching Practices (Graduate Courses)

- Introduction to the Development of **Distance Education** Courses, Spring 2017
- **STEM Curriculum** Integration, Spring 2016
- Teaching and Learning in Post-Secondary **Science Education**, Fall 2015
- **Environmental Education** and Interpretation, Fall 2015

Professional Memberships

- National Association for Research in Science Teaching (NARST), student member, 2016-2017
- Women in STEM, 2016-2017
- School of Natural Resources Graduate Student Association, fall 2015 – spring 2017
- Dean's Student Experiential Leadership Club, 2010-2011

Volunteering and Service

- UNL CTT Workshop Committee, 2021
- Contributor to IT-TIPS UNL Listserv, 2021
- Department seminar support, COVID online transition March – July 2020
- Rubrics in Canvas Courses, presentation for the Agronomy and Horticulture Seminar series in Spring 2019
- Staff Advisory Committee, Spring 2019 – Summer 2020. Became Vice Chair in August 2019.
- Yellowdig interviewee and baseball card feature, Fall 2019.
- Presentation on De-Extinction for Aurora Public Schools (at UNL). Co-created and co-presented a 20-minute presentation on the genetic basis of de-extinction with a faculty member (Leah Sandall). Twenty high school students attended. 2020
- Search Committee member for a Support Assistance position in Agronomy and Horticulture, Fall 2019
- Science Fair Judge, Lincoln Public Schools, Spring 2016 - 2019
- Graduate Student Association member, UNL School of Natural Resources 2015-2017
- Teaching Delivery Committee member, 2015-2017
- Graduate Student Mission Area Representative – Climate Science, 2016
- Morrill Hall Volunteer, Saturday with a Scientist, *The Sights and Sounds of Spring*, Spring 2016
- After School Program Educator – Upper Elementary School, Spring 2016

Presentations & Posters

Peterson, A. McKinzie, Forbes, Cory T., Schubert, Jan, & Kreuziger, Tobias. (2017) **Student conceptualization of and decisions about a wind energy** socio-scientific issue. *European Science Education Research Association (ESERA)*, accepted presentation (switched to poster presentation), Dublin, Ireland.

Peterson, A. McKinzie & Forbes, Cory. (Presented 2017) Using construal theory to characterize middle-school **students' decision-making about wind energy**. *National*

Association for Research in Science Teaching (NARST), San Antonio, TX.

Peterson, A. McKinzie, Dauer, Jenny M., & Forbes, Cory T.. (Presented 2017) Using construal theory to understand **student problematization of two socio-scientific issues**. *Water for Food Global Conference* poster presentation, Lincoln, NE.

Peterson, A. McKinzie, Dauer, Jenny M., & Forbes, Cory T.. (Presented 2017) Using construal theory to understand **students' problematization of a prairie dog socio-scientific issue**. *Midwest Fish and Wildlife Conference*, poster presentation, Lincoln, NE.

Peterson, A. McKinzie, Dauer, Jenny M., & Forbes, Cory T.. (Presented 2016) Using construal theory to understand **student problematization of two socio-scientific issues**. *STEM Education Retreat*, poster presentation, Lincoln, NE.

Peterson, A. McKinzie, Dauer, Jenny M., Kreuziger, Tobias, Schubert, Jan, & Forbes, Cory T. (accepted 2017, conference cancelled) Student Problematization and **Decision-Making on a Wind Energy Socio-Scientific Issue**. *North American Association of Environmental Education*, poster presentation, San Juan, Puerto Rico.

Publications

Troupe, G., Lee, D., **Sutter, A.M.**, Spier, S. and Sandall, L. (2020), The Journey of a Gene: Teaching and learning genetic engineering in plants and animals. *Nat. Sci. Educ.*. Accepted Author Manuscript. doi:10.1002/nse2.20029

Sutter, A. M., Dauer, J. M., Kreuziger, T., Schubert, J., & Forbes, C. T. (2019). Sixth grade students' problematization of and decision-making about a wind energy socio-scientific issue. *International Research in Geographical and Environmental Education*, 28(3), 242-256.

Sutter, A. M., Dauer, J. M., & Forbes, C. T. (2018). Application of construal level and value-belief norm theories to undergraduate decision-making on a wildlife socio-scientific issue. *International Journal of Science Education*, 40(9), 1058-1075.

Troupe, G., **Peterson, A. M.**, Golick, D., Turnbull, S., & Lee, D. (2018). Improving genetic engineering secondary education through a classroom-ready online resource. *Journal of Agricultural & Food Information*, 19(1), 37-54.