

Rahmi ‘Ami’ Qurota Aini
PhD Candidate
Department of Biology, Mathematics and Science Education PhD Program
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Education

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| 2021 – Present | Ph.D in Biology Education , Mathematics and Science Education Program
Biology Education Concentration
Middle Tennessee State University (MTSU), the United States of America |
| 2018 – 2020 | M.Ed. in Science Education , Division of Science Education
Kangwon National University (KNU), Republic of Korea |
| 2013 –2017 | B.Ed. in Biology Education , Department of Biology Education
Indonesia University of Education (UPI), Indonesia |

Research Experience

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| 2021 – Present | Graduate Research Assistant , Middle Tennessee State University, US
<i>Social Perception of Science Lab, Principal Investigator: Dr. M Elizabeth Barnes</i> <ul style="list-style-type: none">• Contribute to NSF-funded studies on culturally competent instruction in Evolution Education and Science Communication projects.• Responsibilities include assisting with research protocols, supporting data-collection planning and execution, conducting statistical analysis in R to examine learning outcomes, and preparing manuscripts for peer-reviewed journals. |
| 2024 | <i>Principal Investigator: Dr. Katy Hosbein & Dr. M Elizabeth Barnes</i> <ul style="list-style-type: none">• Examined the impact of Learning Assistants on introductory science courses by assisting with data collection, analysis, and contributing to the interpretation of results |
| 2020 – 2021 | Research Assistant , Kangwon National University, Republic of Korea.
<i>Principal Investigator: Dr. Minsu Ha</i> <ul style="list-style-type: none">• Contributed to National Research Foundation–funded research on cognitive biases in scientific practice.• Responsibilities included developing surveys, coordinating and conducting data collection, and performing bibliometric and keyword-network analyses in R to identify research trends and inform literature reviews. |
| 2018 – 2020 | Graduate Research Assistant , Kangwon National University, Republic of Korea. <ul style="list-style-type: none">• Conducted cross-country studies in Korea and Indonesia on STEM career values, scientific reasoning, and evolution education.• Responsibilities included organizing and conducting data collection with Indonesian participants, overseeing translation and cultural adaptation of instruments, helping design and implement microcomputer-based laboratory modules, leading teacher workshops, and gathering feedback to refine instructional materials. |

Publications

Mentees are indicated with $\pm$. To date, I have published 23 peer-reviewed articles, including 8 as first author in international journals. My research focuses on evolution education, culturally responsive mentoring in undergraduate biology students in the US, and cross-cultural analyses of scientific reasoning, cognitive bias, and STEM career values of Korean and Indonesian students. I use both

Last updated: Mar 2026

quantitative approaches (e.g., randomized controlled trials and large naturalistic studies) and qualitative approaches (e.g., multiple case studies) for my research.

23. Edwards, B. A., Granados, A., Mohammed, T. F., **Aini, R. Q.**, Cooper, K. M., Barnes, M. E., & Brownell, S. E. (2025). The Experiences of Students with Concealable Muslim Identities During Peer Interactions in Undergraduate Biology Courses. *CBE—Life Sciences Education*, 24(4), ar42.
 22. **Aini, R. Q.**, Edwards, B. A., Summersill⁺, A., Epting⁺, C., Zheng, Y., Brownell, S. E., & Barnes, M. E. (2025). Evidence for the Efficacy of Conflict-reducing Practices in Undergraduate Evolution Education in a Randomized Controlled Study. *CBE—Life Sciences Education*, 24(2), ar27.
 21. **Aini, R. Q.**, Supriya, K., Dunlop, H., Edwards, B., Maas, S., Roberts, J., A., Summersill⁺, C., Zheng, Y., Brownell, S. E., & Barnes, M. E. (2024). Conflict-reducing practices in evolution education are associated with increases in evolution acceptance in a large naturalistic study. *PLOS one*, 19(12), e0313490.
- Commentary:** *Chosen by PLOS ONE to be highlighted in their private press release to media outlets.*
20. **Aini, R. Q.**, Stewart⁺, M., Brownell, S. E., & Barnes, M. E. (2024). Exploring patterns of evolution acceptance, evolution understanding, and religiosity among college biology students in the United States. *Evolution: Education and Outreach*, 17(1), 13.
 19. **Aini, R. Q.**, Mohammed, T. F., Barnes, M. E., & Cooper, K. M. (2024). Toward Culturally Responsive Mentoring of Muslim Research Mentees in the Sciences. *CBE—Life Sciences Education*, 23(3), es5.
 18. Rusmana⁺, A. N., **Aini, R. Q.**, Sya'bandari⁺, Y., & Ha, M. (2024). The attitude of Korean and Indonesian scientists toward Merton's scientific norms. *Cultural Studies of Science Education*, 1-22.
 17. Barnes, M. E., **Aini, R. Q.**, Collins, J. P., Dunk, R. D., Holt, E. A., Jensen, J., ... & Brownell, S. E. (2024). Evaluating the current state of evolution acceptance instruments: a research coordination network meeting report. *Evolution: Education and Outreach*, 17(1), 1.
 16. Sya'bandari⁺, Y., Fadillah⁺, S.M., Rusmana⁺, A.N., **Aini, R.Q.**, & Ha, M. (2022). Assessing cognitive bias in Korean and Indonesian scientists: considering sociocultural factors in judgment and choice. *Asia-Pacific Science Education*, 1(aop), 1-34.
 15. Lee, J. K., Rachmatullah, A., Shin, S., Sya'bandari⁺, Y., Rusmana⁺, A. N., **Aini, R. Q.**, & Ha, M. (2022). A comparison of Korean and Indonesian secondary school students' career values. *International Journal for Educational and Vocational Guidance*, 22(1), 117-136. <https://doi.org/10.1007/s10775-021-09476-1>
 14. Lee, H., Ha, M., Lee, J., **Aini, R. Q.**, Rusmana⁺, A. N., Sya'bandari⁺, Y., ... & Park, J. (2021). Spelling errors in Korean students constructed responses and the efficacy of automatic spelling correction on automated computer scoring. *Technology, Knowledge and Learning*, 1-21. <https://doi.org/10.1007/s10758-021-09568-5>
 13. Ha, M., Sya'bandari, Y., Rusmana, A. N., **Aini, R. Q.**, & Fadillah⁺, S. M. (2021). Comprehensive analysis of the FORT instrument: Using distractor analysis to explore students' scientific reasoning based on academic level and gender difference. *Journal of Baltic Science Education*, 20(6), 906. 10.33225/jbse/21.20.906
 12. Sya'bandari⁺, Y., **Aini, R. Q.**, Rusmana⁺, A. N., & Ha, M. (2021, July). Indonesian students' STEM career motivation: A study focused on gender and academic level. *Journal of Physics: Conference Series*, 1957(1), p. 012029.
 11. **Aini, R. Q.**, Sya'bandari⁺, Y., Rusmana, A. N., & Ha, M. (2021). Bibliometric and Clustering Keywords Network Analysis of Scientist Creativity Research. *Brain, Digital, & Learning*, 11(4), 563-576. <https://doi.org/10.31216/BDL.20210036>
 10. **Aini, R. Q.**, Sya'bandari⁺, Y., Rusmana, A. N., & Ha, M. (2021). Addressing challenges to a systematic thinking pattern of scientists: A literature review of cognitive bias in scientific work. *Brain, Digital, & Learning*, 11(3), p. 417-430. <https://doi.org/10.31216/BDL.20210027>
 9. Rusmana⁺, A. N., Sya'bandari⁺, Y., **Aini, R. Q.**, Rachmatullah, A., & Ha, M. (2021). Teaching Korean science for Indonesian middle school students: Promoting Indonesian students' attitude towards

- science through the global science exchange programme. *International Journal of Science Education*, 43(11), 1837-1859. <https://doi.org/10.1080/09500693.2021.1938278>
8. Rachmatullah, A., **Aini, R. Q.**, & Ha, M. (2021). The role of environmental beliefs in determining the self-reported personal conservation behaviour of Indonesian preservice biology teachers. *Asia-Pacific Forum on Science Learning and Teaching*, 20(2), 1-26
 7. Lee, J. K., **Aini, R. Q.**, Sya'Bandari⁺, Y., Rusmana⁺, A. N., Ha, M., & Shin, S. (2021). Biological Conceptualization of Race. *Science & Education*, 30(2), 293-316.
 6. Park, I., **Aini, R.Q.** (2021). Sleep and actigraphy research trends: A bibliometric and keyword network analysis from 2004 to 2020. *Sleep Medicine Research*, 12(2), 147-155 DOI: <https://doi.org/10.17241/smr.2021.01039>
 5. **Aini, R. Q.**, Rachmatullah, A., Harliadi, M. D., & Ha, M. (2020). Indonesian Pre-service biology teachers' and biology education professors' views on evolution. *Science & Education*, 29, 713–741. <https://doi.org/10.1007/s11191-020-00127-5>
 4. **Aini, R. Q.**, Rachmatullah, A., Roshayanti, F., Shin, S., Lee, J. K., & Ha, M. S. (2020). Testing validity inferences of science motivation questionnaire (SMQ-II) instrument: Rasch-based analysis with Indonesian secondary students. In *Journal of Physics: Conference Series (Vol. 1521, p. 042101)*.
 3. Rusmana, A. N., **Aini, R. Q.**, Sya'bandari, Y., Ha, M., Shin, S., & Lee, J. K. (2019). Probing high school students' perceptions of the concept of species: a semantic network analysis approach. *Journal of Biological Education*, 1-15. <https://doi.org/10.1080/00219266.2019.1707261>
 2. **Aini, R. Q.**, Rachmatullah, A., & Ha, M. (2019). Indonesian primary school and middle school students' attitudes toward science: Focus on gender and academic level. *Journal of Baltic Science Education*, 18(5), 654-667 10.33225/jbse/19.18.654
 1. **Aini, R. Q.**, Sya'bandari, Y., Rusmana, A. N., Lee, J. K., Shin, S., & Ha, M. (2019). Indonesian high school students' perception of scientific experiment using network analysis: Differences between science and humanities groups. *Jurnal Pendidikan IPA Indonesia*, 8(3), 298-307 10.15294/jpii.v8i3.18943

Under review manuscript

Rowland-Schaefer, E. G., Kelp, N. C., Eddy, S. L., Bergan-Roller, H. E., Coscia, K. A., Davidyan, A., Hayes, J. G., Hoskins, N., Rocha, A. I., **Aini, R. Q.**, Akin, H., Bailey, E. G., Ballen, C. J., Besley, J. C., Booth, K. K., Cargill, T., Chandar, S. S., Donkoh, J., Dyer, J. M., Foley, M. E., Jacobson, J., Jensen, J. L., Marroquin-Flores, R. A., McCartney, M., Mitchell, L. D., Sarvary, M., Uminski, C., Delaney, W., Zareiesfandabadi, B., & Barnes, M. E. (under review) A call to action: Developing undergraduate science communication education to bridge societal divides. *Science*

In preparation manuscripts

- Aini, R. Q.#**, Coscia, K#., Brownell, S. E., Barnes, M. E. (revision). Non-religious biology students perceive more conflict and less compatibility between evolution and religion than Christian students.
- Aini, R.Q.**, Alnassari, K., Alnassari, Z., Alnassari, F., Alnassari A., Mohammed, T. F., Edwards, B. A., Cooper, K. M., Brownell, S. E. Barnes, M. E. (in prep). Intersectional Experiences of Muslim Students and their Recommendations for Improving Undergraduate Biology Courses
- Aini, R.Q.**, Alnassari, K., Alnassari, Z., Alnassari, F., Alnassari A., Mohammed, T. F., Edwards, B. A., Cooper, K. M., Brownell, S. E. Barnes, M. E. (in prep). Undergraduate Muslim Students' Perception of Evolution and Evolution Education
- Aini, R.Q.**, Brownell, S., Barnes, M.E. in prep for *Evolution Education and Outreach*). Patterns for managing potential conflict between religion and evolution among Muslim undergraduate biology students.
- Aini, R.Q.**, Ha, M. Cognitive dissonance in accepting evolution: The case of Indonesian science students.

Book

Ari Widodo et al. (2019). *Modul Pembelajaran Berbasis MBL – Microcomputer-Based Laboratory Guidebook*. UPI Press: Bandung. (ISBN: 978-623-7776-01-7)

Awards and Honors

2024	The Patrick Doyle Student Research Fund (\$1,485) Biology Department, MTSU
2023 – 2025	College of Graduate Studies Travel Award, MTSU (total \$1,500 across award cycles)
2023 – 2024	Biology Department Travel Award, MTSU (total \$600 across award cycles)
Mar, 2024	1 st Place Poster Award, Graduate Student Level (\$150) MTSU Scholar Week (University-Wide, College of Basic and Applied Sciences)
Mar, 2024	Poster Award, Student Innovation or Creative Project (\$150) MTSU Scholar Week (College of Education-Day)
Nov, 2022	3 rd Place Poster Award, Graduate Student Biology Education Research (\$50) NABT Professional Development Conference
July, 2022	1 st Place Poster Award, Graduate Student Research (\$500) SABER Conference
Mar, 2022	1 st Place Poster Award, Doctoral Level (\$500) MTSU Scholar Week (College of Basic and Applied Sciences-Day)
Mar, 2022	3 rd Place Poster Award, Graduate Student Level (\$150) MTSU Scholar Week (University-Wide, College of Basic and Applied Sciences)
Feb, 2020	Outstanding Academic Award Kangwon National University's Spring Graduation
Dec, 2018	Young Scholar Award East-Asia Association for Science Education

Scholarships and Assistantships

2021 – <i>Present</i>	Graduate Research Assistantship , funded by National Science Foundation (NSF) Research Grants. Covers tuition and stipend for my Ph.D. degree through research participation.
2023	Teaching Research Assistantship , supported by the Mathematics and Science Education PhD program at MTSU. Covered tuition and stipend for a semester through teaching participation.
2018 – 2020	Graduate Research Assistantship , funded by the Korean National Research Foundation (NRF) and the National Institute for International Education (NIIED) Research Grants. Covered tuition and stipend for my master's degree through research participation.
2025 – 2026	Djarum Beasiswa Plus , Djarum Foundation Indonesia. Provided 1 year of stipend and leadership development opportunities.

Software and Programming Language

Proficient with: RStudio (*Statistical analysis, advanced data visualization, programming for package development*), Qualtrics (*Data collections & management*), SPSS (*Statistical analysis*), Microsoft Office Suite, Google Office Suite, Adobe Illustrator & Canva (*Visual communication*), Atlas.ti & Dedoose (*Qualitative analysis*).

Familiar with: Python for basic bioinformatics and other bioinformatic tools (*Finding genes, identifying genes, identifying proteins and domains, making comparisons of sequences/amino acids/genomes, building phylogenetic trees, NGS data analyses*).

Research Expertise

Quantitative Analysis (Psychometrics and Data Tools): Experienced in preparing large, multi-site

datasets and building reproducible workflows in R for scoring, item and scale analysis, and reporting. Conduct analyses using CTT (reliability, item-level diagnostics) and measurement models (e.g., factor analysis; IRT/Rasch) to evaluate instrument quality and support evidence-based revisions. Produce clear tables, figures, and technical summaries for research teams and publications.

Qualitative Research: Experienced in designing educational research studies, collecting data through interviews and open-ended written responses, and analyzing data using thematic analysis, multiple case study approaches, and content analysis with both inductive and deductive coding.

Teaching Experience

Fall 2024	Lab Instructor, Dual Enrollment Introduction to Biology (BIOL-1111 Lab) <i>Department of Biology, Middle Tennessee State University, USA</i> - Facilitated laboratory sessions that complemented lecture content, provided hands-on guidance for experiments, reinforced core biological concepts, and ensured a safe learning environment. - Designed and implemented practical assessments to evaluate students' comprehension and proficiency in laboratory techniques
Fall 2021 – Spring 2023	Teaching Assistant, Introduction to Biology (BIOL-1110) <i>Department of Biology, Middle Tennessee State University, USA</i> - Assisted Dr. Elizabeth Barnes in facilitating active-learning discussions on foundational biology topics. - Delivered guest lectures on specialized subjects including Inside the Cell (Spring 2022) and Evolution, Phylogenetic Trees, and the History of Earth (Fall 2022 & Spring 2023).
Feb – Aug 2021	Learning Designer for Teachers Professional Development <i>Academic Division, Sekolah.mu PT Sekolah Integrasi Digital, Indonesia</i> Designed three professional-development programs for Indonesian K–12 teachers, developing competency-based curricula and assessments.
Aug 2027	STEM Teacher - Middle School (Volunteer) <i>SMP Labschool Bandung and SMPN 29 Bandung, Indonesia</i> Taught STEM subjects using a Korean STEM curriculum during a one-month volunteer program.
Feb – Jun 2017	Biology Teacher – High School (Pre-Service Program) <i>SMA Labschool Bandung, Bandung, Indonesia</i> Completed a one-semester teaching internship, creating lesson plans and teaching biology to 10th and 11th graders.
July – Aug 2016	Science Teacher – Middle School (Pre-Service Program) <i>Boonkumratbumroong School, Pathum Thani, Thailand</i> Taught STEM subjects during a one-month internship under the SEAMEO SEA-Teacher Project.

Conference Presentations

First authored and mentored talks:

- Aini, R.Q.**, Alnassari, K., Alnassari, A., Alnassari, F., Alnassari, Z., & Barnes, M.E. (2026). Intersectional Experiences and Recommendations from Undergraduate Muslim Students in Biology Courses. *2026 Southeastern STEM Education Research Conference*, Birmingham, Alabama, Jan 10-11.
- Aini, R.Q.**, Edwards, B., Brownell, S., & Barnes, M. E. (2024). Exploring the Effect of Students and Professors' Religious Identity on Increasing Students' Perceived Compatibility Between Evolution and Religion. *Joint Conference East Asian Science Education & International Conference on Mathematics and Science Education*, Bandung, Indonesia, July 8-10.
- Aini, R.Q.**, Edwards, B., Brownell, S., & Barnes, M. E. (2024). Does Religious Identity Impact the Efficacy of Evolution Instruction with Cultural Competence? *NARST Annual International Conference*, Denver, March 17-20.

- Aini, R. Q.,** Barnes, M. E. (2024). An experimental study testing the effect of biology instructor identity on reducing students' perceived conflict between evolution and religion. *2024 The Southeastern STEM Education Research Conference*. Murfreesboro, January 12-13.
- Aini, R. Q.,** Barnes, M. E. (2023). Patterns for Managing Conflict between Religion and Evolution among Muslim Undergraduate Biology Students. *2023 The Society for the Advancement of Biology Education Research Conference*. Minneapolis, July 7-10.
- Aini, R. Q.** Brownell, S. E., Barnes, M. E. (2023). Patterns for Managing Conflict between Religion and Evolution among Muslim Undergraduate Biology Students. *2023 NARST Annual International Conference*. Chicago, Illinois. April 18-21.
- Aini, R. Q.** Brownell, S. E., Barnes, M. E. (2023). Patterns for Managing Conflict between Religion and Evolution among Muslim Undergraduate Biology Students. *2023 The Southeastern STEM Education Research Conference*. Cookeville, January 11
- Aini, R. Q.** Brownell, S. E., Barnes, M. E. (2022). Patterns for Managing Conflict between Religion and Evolution among Muslim Undergraduate Biology Students. *Biology Education Research Symposium, The National Association of Biology Teachers Professional Development Conference*. Indianapolis, Indiana, the USA. November 10-13.
- Aini, R. Q.** Ha, M. (2022). Challenge in Reasoning about Evolution Acceptance for Muslim Students: The Mechanism of Motivated Reasoning. *2022 NARST Annual International Conference*. Vancouver, Canada. March, 27-30.
- Sya'bandari, Y., **Aini, R. Q.,** Rusmana, A. N., Ha, M., Lee, J. K., Shin, S. (2019). Examining the Relation of Gender and Track in Indonesian High School Students' Attitude toward Convergence. *The 13th Conference of the European Science Education Research Association (ESERA)*. Piazza della Costituzione, 4/a 40128 Bologna, Italy. August, 26-30.
- Aini, R. Q.,** Rachmatullah, A., Roshayanti, F., Shin, S., Lee, JK., Ha, M. (2019). Testing Validity Inferences of Science Motivation Questionnaire (SMQ-II) Instrument: Rasch-Based Analysis with Indonesian secondary students. *International Conference on Mathematics and Science Education 2019*. Grand Mercure Setiabudi, Bandung, Indonesia. June 29.
- Sya'bandari, Y., **Aini, R. Q.,** Rusmana, A. N., Ha, M., Lee, J. K., Shin, S. (2019). The Ontological Categories of Race Concept on Science and Humanities Track Students: Semantic Network Analysis Approach. *International Conference on Mathematics and Science Education 2019*. Grand Mercure Setiabudi, Bandung, Indonesia. June 29.
- Rusmana, A. N., **Aini, R. Q.,** Sya'bandari, Y., Ha, M., Shin, S., Lee, J. K. (2019). The Students Ideas about Species Concept: A Semantic Network Analysis. *International Conference on Mathematics and Science Education 2019*. Grand Mercure Setiabudi, Bandung, Indonesia. June 29.
- Aini, R. Q.,** Rachmatullah, A., Ha, M. (2019). Attitude toward Science among Indonesian elementary and middle school students: Findings on gender and academic level. *2019 NARST Annual International Conference*. Renaissance Baltimore Harborplace Hotel, Baltimore, MD, USA. March 31 - April 3.
- Aini, R. Q.,** Shin, S., Lee, J. K., & Ha, M. (2019). Motivated Reasoning Mechanism in Indonesian Pre-Service Science Teacher and Young Science Researcher. *2019 KASE International Conference*. Korea National University of Education, South Korea. January 24-26.
- Aini, R. Q.,** Supriatno, B., Fitriani, A., & Ha, M. (2019). Student-generated Video of Environmental Issues for Students' Conceptual Mastery and Creative Thinking. *The Korean Society for Biology Education (KSBE) Conference 2019*. Seoul National University, South Korea. January 16-17
- Aini, R. Q.,** Shin, S., & Ha, M., (2018). Investigating Pre-Service Science Teacher and Young Science Researcher: How Motivated Reasoning Occurs. *Korean Association for Learner-centered Curriculum and Instruction Conference 2018*. Gyeongin National University of Education, South Korea. November 17.
- Aini, R. Q.,** Rachmatullah, A., & Ha, M. (2018). Indonesian Elementary and Middle School Students' Attitudes toward Science: Is Science in Indonesia A Female-oriented Subject?. *2018 International Conference of East-Asian Association for Science Education*. National Dong-Hwa University, Hualien, Taiwan. November 29 – December 02.

First authored and mentored poster presentations:

J. Hayes; E. Rowland-Schaefer; **R. Q. Aini**; M. E. Barnes. (2025). Exploring Christian Undergraduate Biology Students as Potential Boundary Spanners About Climate Change. SABER Annual Conference. Minneapolis, MN. July 10-13

Commentary: J Hayes Received Undergraduate Student Poster Competition Award

Alnassari, Z. & Alnassari F. **Aini**, R.Q., Alnassari, K., Alnassari, A., Edwards, B., Mohammed, T., Cooper, K., Brownell, S., & Barnes, M.E. (2025). Intersectional experiences of undergraduate Muslim students in biology courses. SABER Annual Conference. Minneapolis, MN. July 10-13

Aini, R.Q., Alnassari, K., Alnassari, A., Alnassari, F., Alnassari, Z., Edwards, B., Mohammed, T., Cooper, K., Brownell, S., & Barnes, M.E. (2025). Navigating Biology Classrooms: Undergraduate Muslim Students' Experiences at the Intersection of Faith and Science. NARST Annual International Conference. Washington, D.C., March 23–26.

Aini, R.Q., et al. (2025). conVIZ: A New R Package for Analyzing and Visualizing Concept Networks in Biology Education. 2025 MTSU Scholars' Week Research and Creativity Exposition. Murfreesboro, Tennessee, March 21.

Alnassari, Z., **Aini, R.Q.**, Alnassari, K., Alnassari, A., Alnassari, F., & Barnes, M.E. (2025). Perceptions of Evolution and Evolution Education among Undergraduate Muslim Biology Students in the United States. 2025 MTSU Scholars' Week Research and Creativity Exposition. Murfreesboro, Tennessee, March 21.

Alnassari, A., **Aini, R.Q.**, Alnassari, K., Alnassari, A., Alnassari, F., & Barnes, M.E. (2025). Perceptions of Evolution and Evolution Education among Undergraduate Muslim Biology Students in the United States. 2025 MTSU College of Basic and Applied Sciences Scholars' Day. Murfreesboro, Tennessee, March 18.

Aini, R.Q., et al. (2025). conVIZ: A New R Package for Analyzing and Visualizing Concept Networks in Biology Education. 2025 MTSU College of Basic and Applied Sciences Scholars' Day. Murfreesboro, Tennessee, March 18.

Aini, R.Q., et al. (2025). conVIZ: A New R Package for Analyzing and Visualizing Concept Networks in Biology Education. 2025 MTSU College of Education Scholars' Day. Murfreesboro, Tennessee, March 18.

Aini, R., Epting, C., Summersill, A., Edwards, B., Brownell, S., & Barnes, M. E. (2024). Can Non-Religious Instructors Reduce Perceived Conflict Between Religion and Evolution? A Randomized Controlled Study. NABT Professional Development Conference. Anaheim, November 14-17.

Alnassari, K, **Aini, R.Q.**, Alnassari, Z., Alnassari, A., & Alnassari, F., Barnes, M. E. (2024). Undergraduate Muslim Biology Students in the United States. NABT Professional Development Conference. Anaheim, November 14-17.

Coscia, K., **Aini, R.Q.**, Bowen, C., & Barnes, M. E. (2024). Perceptions of Conflict Between Religion and Evolution Are Higher among Atheist Undergraduate Biology Students than Christian Biology Students. NABT Professional Development Conference. Anaheim, November 14-17.

Aini, R.Q., Barnes, M. E. (2024). Going Beyond Correct Answers: Evaluating Metacognitive Monitoring in Evolution Understanding. 2024 MTSU Scholars' Week Research and Creativity Exposition, March, 12-15

Commentary: 1st Place Winner for the Graduate level at Scholar Week 2024 University-Wide from College of Basic and Applied Sciences MTSU.

Aini, R.Q., Barnes, M. E. (2024). Going Beyond Correct Answers: Evaluating Metacognitive Monitoring in Evolution Understanding. 2024 College of Basic and Applied Sciences Scholars' Day. March, 12-15

Aini, R.Q., Barnes, M. E. (2024). Going Beyond Correct Answers: Evaluating Metacognitive Monitoring in Evolution Understanding. 2024 College of Education Scholars' Day. March, 12-15

Commentary: Winner for the College of Education Graduate Student Innovation or Creative Project

Aini, R.Q., Barnes, M. E. (2024). Navigating Intersection of Evolution and Religion among Muslim Biology Students. 2024 AAAS Annual Meeting. Denver, 15-17 February

Aini, R.Q., Barnes, M. E. (2024). Metacognition in Assessing Evolutionary Understanding: A Consideration Background of the study. 2024 *The Southeastern STEM Education Research Conference*. Murfreesboro, January 12-13.

Aini, R.Q., Supriya, K., Dunlop, H., Roberts, J. Zheng, Y., Brownell, S.E., Barnes, M. E. (2022). Student Reports of Religious Cultural Competence in Evolution Education (ReCCEE) is associated with gains in students' evolution acceptance. 2022 The National Association of Biology Teachers (NABT) Professional Development Conference. November 10-13.

Commentary: 3rd Place Graduate Student Biology Education Research Competition Award from The National Association of Biology Teachers) Professional

Aini, R. Q. Brownell, S. E., Barnes, M. E. (2022). Patterns for Managing Conflict between Religion and Evolution among Muslim Undergraduate Biology Students. 2022 The Society for the Advancement of Biology Education Research (SABER) Annual Conference. July

Commentary: Received Graduate Student Poster Competition Award from the Society for the Advancement of Biology Education Research

Aini, R. Q. Brownell, S. E., Barnes, M. E. (2022). Patterns for Managing Conflict between Religion and Evolution among Muslim Undergraduate Biology Students. 2024 MTSU University-Wide and CBAS Scholars Week. March

Commentary: 1st Place Poster Award for Doctoral level at College of Basic and Applied Science Scholars Day MTSU.

Commentary: 3rd Place Winner for the Graduate level at Scholar Week 2022 University-Wide from College of Basic and Applied Sciences MTSU.

Aini, R. Q. Hwang, H., Ha, M. (2020). Keyword clustering network for research trend opportunity about 'Scientist Creativity'. *International Conference on the Advancement of STEAM 2020, Republic of Korea*. October 23

Commentary: Received Academic Achievement Award from the International Society for the Advancement of STEAM

Aini, R. Q., Rusmana, A. N., Sya'bandari, Y., Ha, M., (2020). The Role of Motivation and Belief to Bias Reasoning in Evolution Acceptance. *2020 KASE (The Korean Association for Science Education) Summer Online Conference*. July 6-7.

Commentary: Received Conference Excellent Paper Presentation Award from 2020 The Korean Association for Science Education Summer Online Conference

Aini., R. Q., Rachmatullah, A., Harliadi., Ha, M. (2020). Religious, Socio-cultural, and Dilemma of Teaching and Learning Evolution in Indonesian Pre-Service Biology Teacher and Biology Education Professors. The Korean Society for Biology Education (KSBE) Conference 2020. Busan, South Korea. January 15-16.

Aini, R. Q., Rusmana, A. N., Sya'bandari, Y., Ha, M., Shin, S., & Lee, J. K. (2019). The Case Motivated Reasoning Mechanism in Preservice Science Teacher and Young Science Researcher. *The 13th Conference of the European Science Education Research Association (ESERA)*. Piazza della Costituzione, 4/a 40128 Bologna, Italy. August, 26-30.

Aini, R. Q., Sya'bandari, Y., Rusmana, A. N., Shin, S., Lee, J. K., Ha, M. (2019). Semantic Network Analysis of Indonesian High School Students' Perception of Scientific Experiment. 2019 KASE Summer Conference. Kangwon National University, South Korea. July 26-27.

Aini, R. Q., Rusmana, A. N., Sya'bandari, Y., Shin, S., Lee, J. K., Park, E., Ha, M. (2019). Validating and Examining Indonesian Elementary and Middle School Students Science Motivation: IRT-Rasch Analysis of SMQ-II. 2019 KASE Summer Conference. Kangwon National University, South Korea. July 26-27.

Service

Ad hoc reviewer for:

International Journal of Science Education (2019-2024)

PLOS One (2024-present)

International Research in Geographical and Environmental Education (*present*)

Journal of Biological Education (*present*)

Membership in Professional Societies

National Association for Research in Science Teaching (NARST)
Society for the Advancement of Biology Education Research (SABER)
The Korea Association for Science Education (KASE)

Languages

Indonesian (Native); **English** (Full professional working proficiency); **Korean** (Basic conversational proficiency)

Mentorship

10. Donye Asberry, MTSU undergraduate student, 2025-2026
9. J. Hayes, MTSU undergraduate student, 2025-2026
8. Khadijah Alnassari, MTSU undergraduate student, 2024 – 2025
7. Ahmed Alnassari, MTSU undergraduate student, 2024 – 2025
6. Zaynab Alnassari, MTSU undergraduate student, 2024 – 2025
5. Fatimah Alnassari, MTSU undergraduate student, 2024 – 2025
4. Madison Stewart, MTSU Master's student, 2022-2024
3. Casey Epting, MTSU undergraduate student, 2022 – 2023
2. Alexa Summersill, MTSU undergraduate student, 2021 – 2023
1. Sarah Meliani, KNU Master's student, 2020-2022

Invitations

- | | |
|---------------|--|
| Oct 23, 2018 | Invited speaker on International Workshop: Development of Microcomputer-based Laboratory in Science Education for Preparing the 4 th Industrial Revolution (UPGRIS, Semarang Indonesia) |
| June 28, 2019 | Invited speaker for Microcomputer-Based Laboratory (MBL) Workshop at Faculty of Science and Mathematics Education, Universitas Pendidikan Indonesia (UPI), Bandung |

Organization Experience

AIESEC Local Committee Bandung, Indonesia

July 2016 – Dec 2016

Vice President of External Relations

- Maintained strategic partnerships with advisory boards, six university networks, media outlets, and community organizations
- Directed leadership development for four managers, 12 staff, and two organizing-committee teams within the partnerships division.
- Initiated and executed three flagship external events: the “Walk for SDGs” campaign for the United Nations Sustainable Development Goals, “Bandung Community Gathering” in partnership with CIMB Niaga, and “Start-up Hours” in collaboration with 1000 Startup Digital Bandung.

July 2015 – June 2016 *Manager of Incoming Global Volunteer*

- Coordinated social and educational projects involving over 15 international undergraduate volunteers at Indonesian schools and orphanages.
- Led a team of 4 staff and 8 organizing committee members to manage the youth exchange program activity.

References

Dr. Elizabeth Barnes
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Professor, Seoul National University

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