Curriculum Vitae

Bailing Lyu

Contact information:
Auburn University
College of Education
Department of Educational Foundations, Leadership, and Technology
College of Education Building
Auburn, AL 36830, USA
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Email: bal0067@auburn.edu

EDUCATION

PhD of Educational Psychology 2019-2024
Pennsylvania State University. State College, PA
Conferred: August 2024

Master of Educational Psychology 2017-2018
George Mason University. Fairfax, VA

Bachelor of Administration 2012-2016
North China University of Water Resources and Electric Power. Zhengzhou, Henan, China

Bachelor of Economics 2014-2016
Zhengzhou University. Zhengzhou, Henan, China

ACADEMIC POSITIONS

Tenure-Track Assistant Professor
(Aug. 2025-Present)

Auburn University
College of Education
Department of Educational Foundations, Leadership, and Technology
Auburn, Alabama

Postdoctoral Research Associate
(Jan. 2024-Jul. 2025)

The University of Utah
College of Education
Department of Educational Psychology
Salt Lake City, Utah

RESEARCH INTEREST

- Generative AI in Education
- Learning from Multiple Resources (e.g., texts, visuals, videos)
- STEM Education
- Learning Analytics

PUBLICATIONS

ARTICLES PUBLISHED IN REFEREED JOURNALS

1. **Lyu, B.,** Campos Oaxaca, G. S., & McCrudden, M. T. (2026). Role of pre-reading task instructions in reading comprehension: a systematic review. *Discourse Processes,* 1-42. https://doi.org/10.1080/0163853X.2026.2623401
2. Lyu, B., Yao, Z., & McCrudden, M. T. (2026). Purpose instructions and task models in multiple-text reading. *Learning and Instruction, 104*, 102347. https://doi.org/10.1016/j.learninstruc.2026.102347
3. **Lyu, B.,** Li, C., Li, H., & Xing, W. (2025). Exploring students' participation in online mathematical discussions using educational big data: A communicative ecology perspective. *Educational Technology & Society*, *29*(2), 171-190. https://doi.org/10.30191/ETS.202604_29(2).RP10
4. **Lyu, B.,** Li, C., Li, H., & Xing, W. (2025). The effects of text-based conversational teachable agents' communicative features on student math learning: Tone style and emoji use. *Journal of Research on Technology in Education*, 1-23. https://doi.org/10.1080/15391523.2025.2511313
5. **Lyu, B.,** Li, C., Li, H., Oh, H., Song, Y., Zhu, W., & Xing, W. (2025). The role of teachable agents' personality traits on student-AI interactions and math learning. *Computers & Education*, *234*, 105314. https://doi.org/10.1016/j.compedu.2025.105314
6. **Lyu, B** & McCrudden, M. T. (2025). The effects of the topic-specific and topic-general prior knowledge on learning from multiple complementary texts. *Learning and Individual Differences*, *118*, 102624. https://doi.org/10.1016/j.lindif.2024.102624
7. Li, C., & **Lyu, B.** (2025). Investigating the motivational and knowledge affordances of conversational AI using induction, concretization and exemplification in math learning. *British Journal of Educational Technology*. https://doi.org/10.1111/bjet.13612
8. Song, Y., Li, C., Xing, W., **Lyu, B.,** & Zhu, W. (2025). Investigating perceived fairness of AI prediction system for math learning: A mixed-methods study with college students. *The Internet and Higher Education*, *65*, 101000. https://doi.org/10.1016/j.iheduc.2025.101000
9. Song, Y., Li, C., Ma, Y., **Lyu, B.,** Zhu, W., Li, H., & Xing, W. (2025). Exploring Effective Tutoring Strategies in Asynchronous Online Mathematical Discussions: Insights from Ordered Network Analysis. *Journal of Science Education and Technology*, 1-21. https://doi.org/10.1007/s10956-025-10233-0
10. **Lyu, B**., Li, C., Li, H., Zhu, W., & Xing, W. (2024). Explaining technical, social, and discursive participation in online mathematical discussions. *Distance Education*, 1-24. https://doi.org/10.1080/01587919.2024.2399151
11. Li, C., Xing, W., Song, Y., & **Lyu, B**. (2024). RICE AlgebraBot: Lessons learned from designing and developing responsible conversational AI using induction, concretization, and

exemplification to support Algebra learning. *Computers and Education: Artificial Intelligence*, 100338. https://doi.org/10.1016/j.caeai.2024.100338

12. McCrudden, M. T., Huynh, L., **Lyu, B**., Kulikowich, J. M., & McNamara, D. S. (2024). Coherence building while reading multiple complementary documents. *Contemporary Educational Psychology*, 102266. https://doi.org/10.1016/j.cedpsych.2024.102266
13. **Lyu, B**., McCrudden, M.T., & Bohn-Gettler, C. (2023). The effects of purpose instructions and strategy-focused instructions on reading processes and products. *Reading and Writing*. https://doi.org/10.1007/s11145-023-10464-w
14. **Lyu, B**., Grossnickle Peterson, E., & List, A. (2023). Using PowerPoint to assess students' learning from multiple texts. *Contemporary Educational Psychology*. https://doi.org/10.1016/j.cedpsych.2023.102204
15. List, A., Campos G., Lee, H.Y., Du, H., & **Lyu, B**., (2023). Critical culturalized comprehension: Exploring culture as learners thinking about texts. *Educational Psychologist*. https://doi.org/10.1080/00461520.2023.2266028
16. McCrudden, M. T., Kulikowich, J. M., **Lyu, B**., & Huynh, L. (2022). Promoting integration and learning from multiple complementary texts. *Journal of Educational Psychology*. https://doi.org/10.1037/edu0000746
17. List, A., Lee, H. Y., Du, H., Campos G., **Lyu, B**., Falcon, A. L., & Lin, C. J. (2022). Preservice teachers' recognition of source and content bias in educational application (app) reviews. *Computers in Human Behavior*, 107297. https://doi.org/10.1016/j.chb.2022.107297
18. List, A., Du, H., & **Lyu, B**. (2021). Examining undergraduates' text-based evidence identification, evaluation, and use. *Reading and Writing*, 1-31. https://doi.org/10.1007/s11145-021-10219-5
19. McCrudden, M. T., Huynh, L., **Lyu, B**., & Kulikowich, J. M. (2021). Bridging Inferences and Learning from Multiple Complementary Texts. *Discourse Processes*, 1-20. https://doi.org/10.1080/0163853x.2021.1924586

IN-PROGRESS MANUSCRIPT FOR JOURNAL PBUILICATION

1. Li, H., Xing, W., Li, C., & **Lyu, B.** (revision). I hear your struggle: Enhancing middle school mathematics engagement and learning outcomes through teachable agent voice design. Submitted to *Computer & Education.*
2. Li, H., Guo, R., Li, C., **Lyu, B.,** Castaneda-Rios, M., Li, M., (revision) Generative AI-supported multimodal mathematical stories: The effects of mathematical disposition and material characteristics on Students' multidimensional engagement. Submitted to *Journal of Educational Computing Research.*
3. Xing, W., Li, C., Li., H., Zhu, W., **Lyu, B**., & Yan, Z. (under review). Knowledge Graphs as Structured External Memory to Enhance Large Language Models' Mathematical Concept Answering. Submitted to *International Journal of Artificial Intelligence in Education.*
4. **Lyu, B.,** Li, C., Li, H., & Xing, W. (under review). Shaping student emotions and mathematics learning through AI: Pedagogical agents with distinct personality traits. Submitted to *Education and Information Technologies.*
5. **Lyu, B.** & Son, S. (under review). Implications of artificial intelligence in digital assessment of early vocabulary skills: A narrative review. Submitted to *Journal of Research on Technology in*

Education

6. Li, H., Li, C., **Lyu, B.,** & Zhang, F. (under review). A multimodal cognitive co-evolution framework for learning analytics in K-12 mathematical story learning: Theoretical construction and application. Submitted to *Journal of Learning Analytics*.
7. Li, H., Xing, W., Li, C., **Lyu, B.,** & Zhang, F. (under review). From psychological readiness to mathematical learning transfer: Generative learning consistency from video preparation to AI teaching dialogues. Submitted to *Journal of Computer Assisted Learning*.
8. **Lyu, B.,** Campos G., & Zheng Y. (in progress). Comparing AI- and instructor-provided task instructions: Implications for students' reading processes and comprehension.
9. **Lyu, B**., Li, H., Li, C., Zheng Y., & Jin, C. (in progress). From prompts to pedagogy: A theoretical framework for AI-generated interactive visuals in teaching and learning. Submitted to *Journal of Computer Assisted Learning.*
10. Li, C., & **Lyu, B.** (in progress). The role of AI-powered segmented videos in students' AI literacy learning.
11. **Lyu, B.,** & Li, C. (in progress). How students process AI-powered segmented videos: An examination of their video-viewing strategies.
12. **Lyu, B.,** Li, C., & Li, H. (in progress). The interplay between pedagogical agents' instructional, cognitive, and pastoral conversational strategies and students' engagement and mathematics learning.
13. **Lyu, B**., List, A., Jin, C., Campos G., Du, H., & Lee, HY. (in progress). Understanding students' reasoning about data visualization. Submitted to *Learning & Instructions.*
14. **Lyu, B** & McCrudden, M. T. (in progress). Learning from a statistics text: An investigation of students' reading strategies.
15. **Lyu, B.,** Li, C., Zheng Y., & Li, H. (in progress). The influence of students' personality on their learning processes and outcomes in the context of AI-support mathematics education.

PAPERS PUBLISHED IN REFEREED CONFERENCE PROCEEDINGS

1. **Lyu, B.,** Li, C., Yao, Z., Li, H., & Guo, R. (2026, April). How Pedagogical Agents' Instructional, Cognitive, and Pastoral Conversational Strategies Interactively Shape Students' Learning. In *Proceedings of the LAK26: 16th International Learning Analytics and Knowledge Conference* (pp. 859-867).
2. **Lyu, B.,** Li, C., Li, H., & Guo, R. (2026, April). Designing AI Teachable Agents with Personality: Supporting Student Emotions in Mathematics Learning. In *Proceedings of the LAK26: 16th International Learning Analytics and Knowledge Conference* (pp. 868-875).
3. Li, H., Xing, W., Li, C., & Lyu, B. (2025, December). Fusing structured data with vision-language transformer for social media popularity prediction. In *Proceedings of the 14th International Conference on Computational Data and Social Networks* (CSoNet). (**BEST PAPER AWARD**)
4. Li, H., Xing, W., Li, C., & **Lyu, B**., (2025, December). Tackling Low-Resource K-12 Hand-Drawn Mathematics VQA: Unified Regularization with Compute-Aware Expert Token Architecture. *IEEE BigData 2025 Conference: LLMs, Big Data, and Multilinguality for All*.

5. **Lyu, B.,** Li, C., Li, H., Xing, W., Gülfidan, G., & Wu, L. (2025, July). Text-Based Teachable Agents in Math Learning: Examining the Effects of Tone and Emojis on Student-Agent Interaction and Knowledge Application. In *International Conference on Artificial Intelligence in Education* (pp. 134-147). Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-98459-4_10 **(BEST PAPER NOMINATION)**
6. Li, H., Xing, W., Zhu, W., Li, C., **Lyu, B.,** Liu, Z., & Heffernan, N. (2025, July). Leveraging Multi-modality and Collaborative Filtering for Supporting Automatic Scoring in Mathematics Education. In *International Conference on Artificial Intelligence in Education* (pp. 313-320). Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-99264-3_39
7. Li, H., Xing, W., **Lyu, B**., Zhu, W., Liu, Z., & Li, H. (2025, July). An Automated Aesthetic Assessment Framework of Mathematical Story Images Validated by Click Counts. In *Proceeding of the 12th Annual Meeting of the ACM Learning @ Scale Conference*. 202-206. https://doi.org/10.1145/3698205.3733923
8. **Lyu, B.,** Li, C., Li, H., Oh, H., Song, Y., Zhu, W., & Xing, W. (2025, March). Exploring the role of teachable AI agents' personality traits in shaping student interaction and learning in mathematics education. In *Proceedings of the 15th International Learning Analytics and Knowledge Conference*. 887-894. https://doi.org/10.1145/3706468.3706532
9. Zhu, W., Xing, W., **Lyu, B.,** Li, C., Zhang, F., & Li, H. (2025, March). Bridging the gender gap: The role of AI-powered math story creation in learning outcomes. In *Proceedings of the 15th International Learning Analytics and Knowledge Conference*. 918-923. https://doi.org/10.1145/3706468.3706539 **(BEST PAPER NOMINATION)**
10. Li, H., Xing, W., Li, C., Zhu, W., Lyu, B., Zhang, F., & Liu, Z. (2025, March). Who should be my tutor? Analyzing the interactive effects of automated text personality styles between middle school students and a mathematics chatbot. In *Proceedings of the 15th International Learning Analytics and Knowledge Conference*. 910-917. https://doi.org/10.1145/3706468.3706537
11. **Lyu, B**., Li, C., Li, H., & Xing, W. (2024, July). Roles of joining time, technology use, and social interaction in sustaining student participation in an online mathematics discussion board. In *Proceeding of the 11th Annual Meeting of the ACM Learning @ Scale Conference*. 398-402. http://doi.org/10.1145/3657604.3664672.
12. **Lyu, B**., Li, C., Li, H., & Xing, W. (2024, July). Interplay among students' technical, social, and content-related participation patterns in an online mathematical discussion board. In *Proceeding of the 11th Annual Meeting of the ACM Learning @ Scale Conference*. 466-470. http://doi.org/10.1145/3657604.3664696.

PAPERS PRESENTED AT REFEREED PROFESSIONAL CONFERENCES

1. Li, C., **Lyu, B.,** Gülfidan, G., Wu, L. & Guo, R. (2026, April). *LLM-Generated Knowledge Graphs for Analyzing the Association between Student Participation and Learning in Online Math Discussions.* Accepted for 2026 American Educational Research Association (AERA). Los Angeles, California.
2. **Lyu, B.,** Li, C., Gülfidan, G., Wu, L. & Guo, R. (2026, April). *From Emotion to Learning: How Teachable Agents' Personality Shapes Math Learning.* Accepted for 2026 American Educational Research Association (AERA). Los Angeles, California.
3. Gülfidan, G., Li, C., **Lyu, B.,** & Wu, L. (2026, April). *Exploring Tutoring Strategies and Dropout Patterns in Online Math Learning via Big Data and LLMs.* Accepted for 2026

American Educational Research Association (AERA). Los Angeles, California.

4. Li, H., Xing, W., Li, C., & **Lyu, B.** (2025, Dec). *Fusing Structured Data with Vision-Language Transformer for Social Media Popularity Prediction.* 14th International Conference on Computational Data and Social Networks (CSoNet). Danang, Vietnam.
5. Li, H., Xing, W., Li, C., & **Lyu, B**., (2025, Dec). *Tackling Low-Resource K-12 Hand-Drawn Mathematics VQA: Unified Regularization with Compute-Aware Expert Token Architecture.* IEEE BigData 2025 Conference: LLMs, Big Data, and Multilinguality for All (LLMs4ALL 2025). Macau, China.
6. **Lyu, B.,** Li, C., Li, H., Xing, W. (2025, Oct). *The Impact of Teachable Agents' Personality Traits on Students' Math Learning Experiences.* Paper presented at 2025 Association for Educational Communications and Technology (AECT). Las Vegas, NV, USA.
7. **Lyu, B.,** Li, C., Li, H., Xing, W., Gülfidan, G., & Wu, L. (2025, Oct). *Teachable Agents as Learning Partners: How Tone and Emojis Shape Student Interaction and Knowledge Application.* Paper presented at 2025 Association for Educational Communications and Technology (AECT). Las Vegas, NV, USA.
8. Gülfidan, G., Li, C., **Lyu, B.,** & Wu, L. (2025, Oct). *Exploring Tutoring Strategies and Student Dropout: AI-Integrated Survival Analysis with LLMs using Educational Big Data.* Paper presented at 2025 Association for Educational Communications and Technology (AECT). Las Vegas, NV, USA.
9. Li, C., **Lyu, B.,** Yan, Z., Wu, L.& Gülfidan, G. (2025, Oct). *Associating Social Roles with Knowledge Structure Construction in Online Math Discussions Based on LLM-Generated Knowledge Graphs.* Paper presented at 2025 Association for Educational Communications and Technology (AECT). Las Vegas, NV, USA.
10. Li, C., & **Lyu, B.** (2025, Oct). *Exploring Students' Motivation and Learning Outcomes with Conversational AI in Math Education: An Experimental Study.* Paper presented at 2025 Association for Educational Communications and Technology (AECT). Las Vegas, NV, USA.
11. Wu, L. Li, C., **Lyu, B.,** & Gülfidan, G. (2025, Oct). *Enhancing Fairness in AI-Based Text Classification for Mathematics Education.* Paper presented at 2025 Association for Educational Communications and Technology (AECT). Las Vegas, NV, USA.
12. **Lyu, B.,** Li, C., Li, H., Xing, W., Gülfidan, G., & Wu, L. (2025, July). *Text-Based Teachable Agents in Math Learning: Examining the Effects of Tone and Emojis on Student-Agent Interaction and Knowledge Application.* 2025 International Conference on Artificial Intelligence in Education (AIED). Palermo, Italy.
13. Li, H., Xing, W., Zhu, W., Li, C., **Lyu, B.,** Liu, Z., & Heffernan, N. (2025, July). *Leveraging Multi-modality and Collaborative Filtering for Supporting Automatic Scoring in Mathematics Education.* 2025 International Conference on Artificial Intelligence in Education (AIED). Palermo, Italy.
14. Li, H., Xing, W., **Lyu, B**., Zhu, W., Liu, Z., & Li, H. (2025, July). *An Automated Aesthetic Assessment Framework of Mathematical Story Images Validated by Click Counts.* 12th Annual Meeting of the ACM Learning @ Scale Conference. Palermo, Italy.
15. **Lyu, B**., Li, C., Li, H., & Xing, W. (2025, April). *From Newcomers to Old-Timers: Previous Participation Patterns Predict Future Participation in Online Mathematical Discussions.* 2025 American Educational Research Association (AERA). Denver, Colorado.
16. **Lyu, B**., & McCrudden, M. T. (2025, April). *Learning from a Statistics Text: An Investigation of Students' Reading Strategies.* 2025 American Educational Research Association (AERA).

Denver, Colorado.

17. Li, C., **Lyu, B**., Song, Y., & Xing, W. (2025, April). *Examining Students' Motivation and Knowledge Outcomes with Conversational AI in Math Learning through An Experimental Study.* 2025 American Educational Research Association *(AERA)*. Denver, Colorado.
18. Son, S., Li, C., & **Lyu, B.** (2025, April). *Artificial Intelligence in Digital Assessment of Preschool Vocabulary Skills: A Narrative Review.* 2025 American Educational Research Association *(AERA)*. Denver, Colorado.
19. Song, Y., Li, C., Ma, Y., **Lyu, B**., Zhu, W., Li, H., & Xing, W. (2025, April). *What Tutoring Strategies Impact Student' Success and Knowledge Representation in Online Mathematical Discussions?* 2025 *American Educational Research Association (AERA)*. Denver, Colorado.
20. **Lyu, B**., Li, C., Li, H., Oh, H., Song, Y., Zhu, W., & Xing, W. (2025, March). *Exploring the Role of Teachable AI Agents' Personality Traits in Shaping Student Interaction and Learning in Mathematics Education.* 2025 International Conference on Learning Analytics & Knowledge (LAK 2025).
21. Zhu, W., Xing, W., **Lyu, B**., Zhang. F., Li, C., & Li, H. (2025, March) *Bridging the Gender Gap: The Role of AI-Powered Math Story Creation in Learning Outcomes*. 2025 International Conference on Learning Analytics & Knowledge (LAK 2025).
22. Li, H., Xing, W., Li, C., Zhu, W., **Lyu, B**., Li, H., Yan, Z., & Liu, Z. (2025, March). *Who Should Be My Tutor? Analyzing the Interactive Effects of Automated Text Personality Styles Between Middle School Students and a Mathematics Chatbot.* 2025 International Conference on Learning Analytics & Knowledge (LAK 2025).
23. Song, Y., Li, C., Ma, Y., Zhu, W., **Lyu, B**., Li, H & Xing, W. (2024, Oct). T*he Impact of Tutoring Strategies on Success and Knowledge Representation in Asynchronous Online Math Discussions.* Paper presented at 2024 Association for Educational Communications and Technology (AECT). Kansas City, MO, USA.
24. **Lyu, B**., Li, C., Li, H., & Xing, W. (2024, Oct). *Exploring sustained participation in online mathematical discussions: considering entry time and social interactions.* Paper presented at 2024 Association for Educational Communications and Technology (AECT). Kansas City, MO, USA.
25. Li, C., Xing, W. Song, Y., & **Lyu, B.** (2024, Oct) *A Design-Based Research Study on Conversational Artificial Intelligence to Support Math Learning.* Paper presented at 2024 Association for Educational Communications and Technology (AECT). Kansas City, MO, USA.
26. **Lyu, B**., Li, C., Li, H., & Xing, W. (2024, July). *Roles of Joining Time, Technology Use, and Social Interaction in Sustaining Student Participation in an Online Mathematics Discussion Board.* 11th Annual Meeting of the ACM Learning @ Scale Conference.
27. **Lyu, B**., Li, C., Li, H., & Xing, W. (2024, July). *Interplay among Students' Technical, Social, and Content-Related Participation Patterns in an Online Mathematical Discussion Board.* 11th Annual Meeting of the ACM Learning @ Scale Conference.
28. **Lyu, B**., & McCrudden, M. T., (2024, July). *Examining the Effect of Task Instructions and Task Model on Multiple Documents Reading*. Paper presented virtually at the Annual Meeting of the Society for Text & Discourse.
29. **Lyu, B**., & McCrudden, M. T., (2024, July). *What is the Effect of Types of Task Instructions on Reading: A Systematic Review*. Paper presented virtually at the Annual Meeting of the Society

for Text & Discourse.

30. **Lyu, B**., Kulikowich, J. M., McCrudden, M., & McNamara, D. (2023, August). *Sample Size Considerations with Prior Knowledge in MD*. Paper presented at the 2023 American Psychological Association Annual Meeting, Washington, DC, United States.
31. McCrudden, M., Kulikowich, J. M., **Lyu, B**., & Pyres, M. (2023, August). *Study of Transfer Effects with Non- Normal Distributions.* Paper presented at the 2023 American Psychological Association Annual Meeting, Washington, DC, United States.
32. McCrudden, M., Kulikowich, J. M., **Lyu, B**., & Pyres, M. (2023, June). *Does Presentation Order of Scientific Principles Affect Reading Processes and Learning?* Paper presented at the 33rd Annual Meeting of the Society for Text & Discourse, Oslo, Norway.
33. Kulikowich, J. M., **Lyu, B**., & McNamara, D. (2023, June). *Statistical Effects of Prior Knowledge in Multiple Document Comprehension: Methodological Considerations*. Paper presented virtually at the Annual Meeting of the Society for Text & Discourse, Oslo, Norway.
34. **Lyu, B**., & McCrudden, M. (2022, July). *The Effects of Task Instructions on Text Processing and Learning.* Paper presented virtually at the 32nd Society for Text and Discourse Annual Meeting, Atlanta, GA, United States.
35. **Lyu, B**., Gross Nickle Peterson, E., & List, A. (2022, July). *Using PowerPoint to Assess Students' Learning from Multiple Texts.* Society for Text and Discourse Annual Meeting, Atlanta, GA, United States.
36. Huynh, L., McCrudden, M., McNamara, D., & **Lyu, B**. (2022, April). *Self-Explanation: Supporting Comprehension of Multiple Complementary Texts*. 103rd Annual Meeting of the American Educational Research Association, San Diego, CA.
37. McCrudden, M., Kulikowich, J. M., **Lyu, B**., & Huynh, L. (2021, July). *Text Presentation Order and Intertext Inferences between Complementary Texts* [Conference session]. Society for Text and Discourse Annual Meeting, Atlanta, GA, United States.
38. List, A., Kim, A., **Lyu, B**., Campos, G., Lee, H., & Du, H. (2021, July). *Sourcing in Pre-Service Teacher's Evaluations of Technology Application for Classroom Use* [Conference session]. Society for Text and Discourse Annual Meeting, Atlanta, GA, United States.
39. List, A., Campos, G., Lee, H., **Lyu, B**., & Du, H. (2021, August). *Video as A Modality for Introducing Students to Affectively-Laden Issues in Bioethics* [Conference session]. The European Association for Research on Learning and Instruction (EARLI). Online.
40. McCrudden, M., Kulikowich, J. M., Mohan, A., Huynh, L., & **Lyu, B**. (2021, April). *Domain-Specific Multiple Text Comprehension*. Roundtable session presented virtually at the 102nd Annual Meeting of the American Educational Research Association.
41. Huynh, L., **Lyu, B**., & McCrudden, M., (2020, July). *Bridging Inferences from Examples to Principles Support Near Transfer* [Conference session]. Society for Text and Discourse Annual Meeting, Atlanta, GA, United States.

BOOK CHAPTER

1. Li, C., & **Lyu, B.** (2025). Examining the relationship between social roles and knowledge structures in online math discussions: An LLM-powered knowledge graph approach. In R. Zheng (Ed), *The Intersection of AI and Student Development in Learning.* IGI Global.

http://doi.org/10.4018/979-8-3373-2927-7.ch006

TEACHING EXPERIENCE

TEACHING IN HIGHER EDUCATION

ERMA 7310: Design and Analysis in Education II (Graduate level)
- Instructor
- Spring, Summer 2026
- *Auburn University –Auburn, AL*

ERMA 7300: Design and Analysis in Education I (Graduate level)
- Instructor
- Fall 2025
- *Auburn University –Auburn, AL*

ED PS 2140/6141 Technology in Elementary Classroom (Undergraduate level)
- Co-Instructor
- Spring 2025
- *The University of Utah – Salt Lake City, UT*

ED PS 7960 Special Topics: Learning Analytics and AI in Education (Graduate level)
- Co-Instructor
- Fall 2024
- *The University of Utah – Salt Lake City, UT*

EDPSY 101 Statistical Data in Education (Undergraduate level)
- Instructor and Teaching Assistant
- Fall 2022-Spring 2024: Five semesters
- *The Pennsylvania State University – University Park, PA*

EDPSY 506 Advanced Statistics in Education (Graduate level)
- Teaching Assistant
- Fall 2022
- *The Pennsylvania State University – University Park, PA*

EDPSY 14 Learning and Instruction (Undergraduate level)
- Teaching Assistant
- Fall 2021, Spring 2022: Two semesters
- *The Pennsylvania State University – University Park, PA*

OTHER TEACHING EXPERIENCE

11th Graders Chinese Teacher (K-12 levels)
- Fall 2019-Fall 2021: Four semesters
- *Happy Valley Chinese School – State College, PA*

Adult Chinese Teacher

- Spring 2019
- *Wei Hua Chinese School – Fairfax, VA*

Students Success Coach (K-12 levels)
- Spring 2019
- *George Mason University – Fairfax, VA*

Academic Mentor (K-12 levels)
- Spring 2019
- *George Mason University – Fairfax, VA*

PROFESSIONAL SERVICE

CONFERENCE REVIEWER EXPERIENCE

- American Educational Research Association (AERA)
- Learning Analytics and Knowledge (LAK)
- Association for Educational Communications and Technology (AECT)
- Artificial Intelligence in Education (AIED)

JOURNAL REVIEWER EXPERIENCE

- *Computers & Education*
- *Contemporary Educational Psychology*
- *Journal of Educational Psychology*
- *Learning and Individual Differences*
- *The Internet and Higher Education*
- *Journal of Research on Technology in Education*
- *Acta Psychologica*
- *Applied Cognitive Psychology*
- *Educational Technology Research and Development*
- *Journal of Psycholinguistic Research*
- *Humanities & Social Sciences Communications*

PROFESSIONAL AFFILIATIONS

- American Educational Research Association (AERA)
- Association for Educational Communications and Technology (AECT)
- International Conference on Artificial Intelligence in Education (AIED)
- Learning Analytics and Knowledge (LAK)
- Learning @ Scale (L@S)
- Society for Text and Discourse (ST&D)
- American Psychological Association (APA)