

Yang Liu

[Teaching Portfolio](#) | [Google Scholar](#)

Ph.D. Candidate in Instructional Design, Development and Evaluation, Syracuse University
Graduate Research and Teaching Assistant at school of Education, Syracuse University
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Research Interests

Technology-enhanced Learning Design and Evaluation, Digital Pedagogy, Human Computer Interaction in Education, Learning Science, Theory-based Design, Learning Analytics

Education

2020-2025	Syracuse University Ph.D. in Instructional Design, Development and Evaluation Expected graduation date: August 2025 Dissertation: Exploring Effective Immersive VR Integration to Enhance Pre-Service Teachers' Experiential Learning	Syracuse, US
2019-2020	Syracuse University M.S in Instructional Design, Development& Evaluation	Syracuse, US
2013-2014	University of Bristol M.A in Archaeology for Screen Media	Bristol, UK
2012	Tianjin Normal University B.A in Broadcasting and Communication	Tianjin, China

Grant

2022	Syracuse University Creative Research Grant Project: Exploring the Media Effect of An Immersive Virtual Reality-based Learning on Pre-service Teachers' Deeper Learning P.I.: Yang Liu, Supervisor: Dr. Jing Lei	Awarded \$700
2021-2025	Syracuse University, Professional, Academic, and Creative Work Grant	Awarded \$2600
2024	Summer Dissertation Fellowship	Awarded \$4500
2023	Summer Pre-dissertation Fellowship	Awarded \$4500
2022	Syracuse Respond Grant	Awarded \$2000

Publications

Journal Articles (n=9)

- Liu, Y., & Lei, J. (2025). Adopting Generative AI in Future Classrooms: A Study of Pre-service Teachers' Intentions and Influencing Factors. *Behavioral Science*. (Accepted)
- Liu, Y., Huang, X., & Lei, J. (2025). The effect of immersive virtual reality-enhanced experiential learning on middle school students' knowledge retention, creativity, and perceptions. *Journal of Educational Technology Development and Exchange*. (In press)
- Zhong, L., Cheng, J. M., Liu, Y., Chen, Y. B., & Lei, J. (2025). A systematic review of the theoretical system of pedagogy: Research paradigms, philosophical orientations, and theoretical characteristics—An analysis based on English literature. *E-Education Research*. (Accepted, In Chinese)
- Hou, Y., Patel, J., Dai, L., Zhang, E., Liu, Y., & Zhang, R. (2025). Benchmarking of large language models for the dental admission test. *Health Data Science*. [DOI: 10.34133/hds.0250](https://doi.org/10.34133/hds.0250)
- Melese, F. M., Liu, Y., & Lei, J. (2024). Exploring EdTech policies in Africa. *The Journal of Applied Instructional Design*.13(2). <https://doi.org/10.59668/1269.15693>

Huang, X., Zhao, Q., **Liu, Y.**, Harris, D., & Shawler., M. (2023). Learning in an immersive VR environment: Role of learner characteristics and relations between cognitive and motivational Outcomes. *Journal of Educational Technology Systems*.
<https://doi.org/10.1177/00472395231216943>

Lei, J., **Liu, Y.**, & Salim, Z. (2022). A revised curriculum design framework for emergency remote education: Lessons from parents' perspectives of K-12 online/hybrid instruction during Covid-19. *International Journal of Technology in Teaching and Learning*, 18(2), 101-119.
 DOI: <https://doi.org/10.37120/ijttl.2022.18.2.02>

Guo, W., Zhang, M., Xu, Q., Lei, J., **Liu, Y.** (2021). Simultaneous "Presence" and online "face to Face" -A Review of 26 foreign online synchronous video teaching studies. *Distance education in China*, 553(02), 27–35. <https://doi.org/10.13541/j.carolcarrollnkichinade>.

Liu, Y. (2017). The power of things, the power of storytelling: the talk with Viv Golding. *Chinese Museum*, 3,16-18. (In Chinese)

Under Review
(n=2)

Liu, Y., & Lei, J. (2025). Impact of the 'Learning by Design' Model on Pre-Service Teachers' Self-Efficacy and Interest in Integrating VR Technology: The Role of Prior Teaching and VR Experience. *British Journal of Educational Technology*.

Liu, Y., Huang, X., & Lei, J. (2025). Examining the effects of immersive virtual reality-supported experiential learning on middle school students' creativity performance, flow experience, and perceived learning. *Journal of Educational Technology Systems*.

In Preparation
(n=4)

Liu, Y., & Lei, J. (Working in progress). Exploring Pre-Service Teachers' Learning Processes in AI-Integrated Classrooms: Challenges, Opportunities, and Future Directions.

Huang, X., **Liu, Y.**, Yuvaraja, K. H. & Wang, Y. (Working in progress). Immersive Virtual Reality in S.T.E.M. Education: A Review of Literature.

Chen, Y., **Liu, Y.**, Zhong, L., Cheng, J., & Lei, J. (Working in progress). Classic Instructional theory in the digital age: practical characteristics and adaptability.

Liu, Y., Chen, Y., Zhong, L., Cheng, J., & Lei, J. (Working in progress). Exploring the application and compatibility of emerging instructional theories in the age of AI.

Book Chapters
(n=1)

Yang, X., & **Liu, Y.** (2021). Supporting students' reflection in game-based science learning: A literature review. In R. Li, S. K. S. Cheung, C. Iwasaki, L.-F. Kwok, & M. Kageto (Eds.), *Blended learning: Re-thinking and re-defining the learning process* (pp. 119–131). Springer.
https://doi.org/10.1007/978-3-030-80504-3_10.

**Peer-reviewed
Invited Talk**
(n=1)

Zhong, L., **Liu, Y.**, Chen, Y. & Cheng, J. (2024, Oct1-2). *The shifting research paradigms and theories of learning and instruction in the age of AI*. [Panel discussion]. Association for Educational Communications and Technology, Virtual.

**Peer- Reviewed
Conference**
(n=14)

Liu, Y., & Lei, J. (2025, Oct 20-24) *Exploring Pre-Service Teachers' Learning Processes in AI-Integrated Classrooms: Challenges, Opportunities, and Future Directions* [Paper presentation]. 2025 International Convention of the Association for Educational Communications and Technology, Las Vegas, NV, USA.

Liu, Y., & Lei, J. (2025, April 23-27) *"Learning by Design' Model's Impacts on Pre-Service Teachers' Self-Efficacy and Interest in VR Integration* [Paper presentation]. 2025 Annual Meeting of the American Educational Research Association, Denver, CO, USA.

Liu, Y., & Lei, J. (2024, Oct 19-23). *Impact of Embedded Prompts in Immersive VR Environment on Pre-service Teachers' Learning and Reflective Thinking* [Paper presentation]. 2024 International Convention of the Association for Educational Communications and Technology, Kansas, MO, USA.

Liu, Y., Wu, Q., & Lei, J. (2023, Oct 15-19). *Explore Pre-service teachers' perceptions towards using Immersive Virtual Reality as a teaching and learning tool* [Paper presentation]. 2023

International Convention of the Association for Educational Communications and Technology, Orlando, FL, USA.

Liu, Y., Lei, J., & Melese, F. (2023, Oct 15-19). *An analysis of Artificial Intelligence (AI) in National Educational Technology Plans in 20 Countries* [Paper presentation]. 2023 International Convention of the Association for Educational Communications and Technology, Orlando, FL, USA.

Melese, F., **Liu, Y.,** & Lei, J. (2023, Oct 15-19). *Exploring ICT in education policies in Africa* [Paper presentation]. 2023 International Convention of the Association for Educational Communications and Technology, Orlando, FL, USA

Liu, Y., Liu, R., & Lei, J. (2023, April 13-16). *Examining middle school students' creativity and perceived learning through Immersive Virtual Reality-based learning in STEAM Lessons* [Paper presentation]. 2023 Annual Meeting of the American Educational Research Association, Chicago, IL, USA. (Note: The paper was selected for *AERA Annual Meeting Best Paper Competition*, 2023)

Lei, J., **Liu, Y.,** & Melese, F. (2023, April 13-16). *Global trends and challenges: An analysis of national educational technology plans in 20 countries* [poster session]. 2023 Annual Meeting of the American Educational Research Association, Chicago, IL, USA.

Liu, Y., Liu, R., & Lei, J. (2022, April 23). *Integrating Immersive Virtual Reality into STEAM lessons: Promoting students' cognitive competencies development and learning experience* [Paper presentation]. 2022 Annual Meeting of the American Educational Research Association, San Diego, CA, USA.

Lei, J., **Liu, Y.,** & Salim, Z. (2022, April 21). *Lessons from parents' perspectives on K-12 Online remote instruction during COVID-19: A revised curriculum framework* [Poster session]. 2022 Annual Meeting of the American Educational Research Association, San Diego, CA, USA.

Liu, Y., Liu, R., & Lei, J. (2021, November 5). *The effect of an experiential learning theory-based immersive virtual reality learning environment on students' learning performance* [Paper presentation]. 2021 International Convention of the Association for Educational Communications and Technology, Chicago, IL, USA.

Lei, J., Salim, Z., & **Liu, Y.** (2021, November 5). *Technological challenges and pedagogical lessons: Understanding K-12 online learning from parents' perspective* [Paper presentation]. 2021 International Convention of the Association for Educational Communications and Technology, Chicago, IL, USA.

Lei, J., Wang, Q., Chen., J. Yang., T. & **Liu, Y.** (2021, July 7-9). *How the design features affect student learning outcomes in MOOCs: Meta-analysis of peer-reviewed empirical studies from 2009-2020*, [Paper presentation]. 2021 World Education Research Association Focal Meeting, Santiago de Compostela, Spain.

Soendermannn., M., & **Liu, Y.** (2016). *The Opportunities and Challenges of Cultural and Creative Industries in Europe and Macao under the Belt and Road Initiative*, The Macao cultural industry Conference, Macao, CHN. (In Chinese)

Public Media (n=4)

Liu, Y. (2019, October 30). A case study on public heritage conversation practice- Heritage Eye APP, WMWB WeChat platform, <https://mp.weixin.qq.com/s/0PfD529kGD4ZtNTBkEOP2w> (In Chinese).

Liu, Y. (2019, May 6). A case study on public heritage conversation practice- 'Know Your Place' Bristol, WMWB WeChat platform, <https://mp.weixin.qq.com/s/pVHCt2plzylwLZzKZMqZ0A> (In Chinese).

Liu, Y. (2019, March 6). Five questions to understand the digital heritage, WMWB WeChat platform <https://mp.weixin.qq.com/s/EQcdjYkVIK1CzfDXh2AFWg> (In Chinese).

Zhen, M, **Liu, Y.,** & Shang, C. (2016 March 18). Creativity in Arts: Let the Classical Arts Live in The Present, Wellspring Movement, <https://mp.weixin.qq.com/s/ej0AqF0F6WoL2BBUbxB4JQ>(In Chinese).

Working Experience

- 2022-Present **Instructional Designer, Instructor & Evaluator**
School of Education, Syracuse University
- Independently teach two undergraduate teacher licensure courses: *Integrating Tech into Instruction I & II* (in-person/hybrid), and Co-teach one undergraduate teacher licensure course: *Digital Pedagogy* and *Assistive Technologies* (DPAT) (in-person/hybrid)
 - Led curriculum updates, and redesigned ITII-I & II sessions I" to align with national instructional design standards (e.g., ISTE, UDL).
 - Collaborated with faculty across departments to design and develop new course (DPAT).
 - Developed semester-long course plans, including needs assessments guided by the ADDIE model to customize content.
 - Supervised graduate teaching assistants and mentored co-instructors.
 - Integrated VR/AI tools and redesigned assessments based on learning analytics.
 - Led assessment alignment with accreditation standards in multiple pilot courses.
 - Led the instructional design and coordination for undergraduate EdTech courses with over 80 pre-service teachers annually.
 - Designed evaluation survey on Qualtrics by employing theory-based instruments and rubrics.
 - Conducted ongoing evaluation of digital learning tools' effectiveness using learning analytics; results guided iterative improvements and strategic adoption.
- 2022-2023 **Instructional Designer & Co-instructor**
School of Education, Syracuse University
- Co-teach one graduate-level online course: *Educational Technology in International Settings*
 - Design, develop, implement, and evaluate the courses
 - Facilitate online class activities and discussion, grade assignments with feedback, and host office hour
- 2020 **Instructional Designer**
School of Education, Syracuse University
- Design and develop a Universal Design for Learning unit for several graduate-level courses
 - Design and create instructional and assessment materials
- 2019-2020 **Instructional Designer & Evaluator**
East China Normal University, Syracuse University
- Designed and tested VR learning modules for middle school science aligned with National Learning standards.
 - Evaluated learning outcomes with pre-/post-tests and one-on-one interview.
- 2015-2017 **Instructor**
Arts and Media College, Henan University
- Teach undergraduate courses (in person): *Documentary Production*, *Video Editing*, *Television Producing and Directing*, and *Broadcasting Technology Practice*
 - Mentor undergraduate students for group projects

Research Experience

- 2024-2027 **Education Ecosystem in the Digital Era, Tsinghua University**
Researcher for the sub-project: Instructional Theory in Digital Education
P.I.: Dr. Xibin Han, Co-P.I.: Dr. Jing Lei
Topic exploration and justification, literature review, data analysis, manuscript writing
- 2023-2024 **Immersive Virtual Reality-based Learning Design in STEM Education, Syracuse University**
Researcher, P.I.: Dr. Xiaoxia Silvie Huang
Topic justification, literature review, data pre-processing, coding, results analysis and visualization, manuscript writing
- 2022-2023 **EdTech National Plan Investigation Project, Syracuse University**
Research assistant, P.I.: Dr. Jing Lei

	Literature review, qualitative and quantitative content analysis, findings visualization using Python with matplotlib, manuscript writing
2020-2021	COVID-19 Remote Education Project, Syracuse University Research assistant, P.I.: Dr. Jing Lei Literature review, qualitative content analysis with MaxQDA, figure design, manuscript writing
2019-2020	Meta-Analysis of MOOCs Design Features Project, Syracuse University Research assistant, P.I.: Dr. Jing Lei Data collection, data pre-processing, coding, statistical analysis with Python and visualization findings with Tableau, manuscript writing
2015-2019	Wellspring Movement Media, Archaeology and Museology School, Peking University Researcher and co-editor in ‘Wellspring Movement’ & ‘Digital Heritage’ Public Media sections Content curation, consultation, independent research, content planning, writing, and editing

Awards

2020	IDD&E Outstanding Master Student Award, Syracuse University, US (\$350)
2014	Honor of Merit Student, Bristol University, UK
2012	The Top-grade Scholarship, Tianjin Normal University, CHN (CNY 1200)
2011	The Second-grade Scholarship, Tianjin Normal University, CHN (CNY 1000)
2010	The Third-grade Scholarship, Tianjin Normal University, CHN (CNY 800)
2010	A superior of Top 20 in National “Xiaqing” Speech Competition, CHN
2009	The runner-up of the Tianjin First Host Competition, CHN
2009	Honor of Merit Student, Tianjin Normal University, CHN

Core Skills

- Statistical Analysis Software: Python, SPSS, AMOS, SAS, SmartPLS
- Qualitative Analysis Software: MaxQDA, Nvivo
- Learning Analytics & Visualization Tools: Python, Tableau
- Instructional Design Tools: Articulate Rise & 360. Camtasia, Insta360, Pano2VR, Adobe Premier Pro.
- Learning Platforms: Blackboard, Canvas, Moodle
- Programming: Python, R, HTML

Certificates

- Certificate in University Teaching (US)
- CITI Human Research Certificate (US)
- Higher Education Institute Teaching Certificate (CHN)
- National Broadcaster Qualification Certificate (Grade: A, CHN)

Professional Services

2023-present	Reviewer for AECT Conference proceeding papers
2022-2023	Committee for China Association for Educational Technology (CAET) Annual Meeting of Game-based Learning
2022	Reviewer for "Gamified Learning and Future Education" Academic Conference of CAET
2024-present	Member of International Society of the Learning Sciences (ISLS)
2020-present	Member of American Educational Research Association (AERA)
2020-present	Member of Association for Educational Communications and Technology (AECT)

Leadership & Community Services

2021-2022	Student Representative, School of Education Assembly Meeting, Syracuse university, US
2019-2020	Student Representative, MS &CAS students in IDD&E program, Syracuse university, US
2014	Social Media Team manager, Berkeley Castle Annual Excavation social media team, UK
2014	Researcher, the 'Know Your Bristol on The Move' program, Bristol Record Office, UK
2012	Chinese language tutor, Morehead State University Oversea Program, US&CHN