

Jianjun Xiao

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PhD candidate in Internet Education at Beijing Normal University, focusing on online learning, learning analytics, and artificial intelligence in education.

Experience in leading research projects, publishing SSCI/CSSCI papers, presenting at international conferences, developing educational AI software, and reviewing for international journals.

EDUCATION

• Beijing Normal University	PhD Candidate in Internet Education	Beijing	Sep 2023–Jun 2027 (expected)
• Beijing Normal University	M.S. in Educational Technology	Beijing	Sep 2020–Jun 2023
• Linyi University	B.Ed. in Educational Technology	Shandong	Sep 2014–Jun 2018

RESEARCH INTERESTS & METHODS

Research Interests: Online Learning Interaction | Collaborative Problem Solving | Human–AI Collaborative Learning

Methods: Network Analysis | Text Mining & Computational Linguistics | Learner Behavior Modeling | Explainable AI

RESEARCH PROJECTS

- PI** | Automatic Assessment and Improvement Pathways of cMOOC Learner Interaction Levels Based on Dual Networks 2023–2025
 - BNU Doctoral Interdisciplinary Research Fund (BNUXKJC2305)
 - Led project implementation and developed an interaction-level assessment model integrating social-network and learning-behavior features for automatic evaluation of learner interaction levels.
- Educational Reform and Innovative Management in the “Internet+” Era 2019–2023
 - Key Program of the National Natural Science Foundation of China (71834002)
 - Designed and developed a cMOOC platform supporting multiple iterations of China’s first cMOOC.
 - Built the data-collection system for the cMOOC learning environment, yielding more than 1.2 million standardized learning-behavior records.
- Analysis and Intervention of Online Collaborative Role Interaction Based on Social–Behavioral–Cognitive–Emotional Attributes 2022–2025
 - National Natural Science Foundation of China (62207003)
 - Developed an explainable role-recognition model using multidimensional features to automatically identify learners’ collaborative roles.

RESEARCH & DEVELOPMENT EXPERIENCE

- Research Assistant & R&D Engineer | Research Center of Distance Education, Beijing Normal University** Jan 2019–Aug 2020
- Led the design and development of a cMOOC platform, iterating features based on WordPress and the WeChat ecosystem.
 - Supported nine cMOOC runs serving 16,712 learners in total.
- Team Lead | Spark Training Camp, iFLYTEK** Aug 2023
- Led a six-member team to evaluate Spark Large Language Model 2.5 and design and develop an LLM-powered shopping plugin.
 - Won third prize twice in the training-camp and entrepreneurship-camp competitions.

SELECTED PUBLICATIONS

- Xiao, J.** (2026, **sole author**). Exploring Interaction Patterns in Open Learning Environments: Integrating Network Dynamics and Cognitive Engagement. *Interactive Learning Environments* (SSCI Q1).
- Tian, Y., & **Xiao, J.** (2025, **corresponding author**). The Measurement and Characteristic Analysis of Learner Interaction Levels in cMOOCs Based on Path Analysis. *Interactive Learning Environments* (SSCI Q1).
- Wang, C., & **Xiao, J.** (2025, **corresponding author**). A Role Recognition Model Based on Students’ Social-Behavioral-Cognitive-Emotional Attributes during Collaborative Learning. *Interactive Learning Environments* (SSCI Q1).
- Wang, C., & **Xiao, J.** (2023, **corresponding author**). Who will participate in online collaborative problem solving? A longitudinal network analysis. *Interactive Learning Environments* (SSCI Q1).
- Xu, Y., Chen, L., & **Xiao, J.** (2022). Design Strategies for Connectivist Online Courses: Based on Five Iterations of cMOOC Design. *China Distance Education* (CSSCI, in Chinese).

CONFERENCE PAPERS & ACADEMIC PRESENTATIONS

- Xiao, J.**, Wang, C., & Zhang, W. (2026). Modeling Collaborative Problem Solving Dynamics from Group Discourse: A Text-Mining Approach with Synergy Degree Model. *LAK26*, Bergen, Norway. (CORE A, Full Research Paper)
- Xiao, J.**, Gao, D., Ouyang, Z., & Tian, Y. (2026). A Study on the Behavioral Transition Patterns of Student Agency and Agent Authority in Human-AI Dialogic Learning: Insight from Transition Network Analysis. *2026 Sino-UK Digital Education Innovation Forum*, Cambridge, UK. (Young Scholar Discovery & Innovation Certificate)
- Xiao, J.** (2023). Design and Development of a Connectivist Learning Platform. *ASSERT2023*, Kansai University, Japan. (Young Scholar Award)
- Xiao, J.**, & Wang, C. (2025). The Effects of Technological Affordances on Knowledge Creation among cMOOC Learners: Integrating Heterogeneous Interaction Network Analysis and Group Communication Analysis. *2025 Annual Conference of the Learning Sciences Division*, China Association of Higher Education. (Outstanding Paper, in Chinese)

SOFTWARE & INTELLECTUAL PROPERTY

Open-Source Software

- GCA Analyzer: Group Communication Analysis Tool (Python Package) 2025
 - A group-discourse analysis tool developed with large language models and computational linguistics; over 10,000 cumulative downloads as of Sep 2026.
- AICO: An Artificial Intelligence Text-coding Officer (Desktop Application) 2024
 - An LLM-based application for educational text classification.

Invention Patents

- Method for Constructing Knowledge Graphs for Blended Courses Based on Large Language Models (CN202511103999.7, granted) 2025
- Method for Explainable Recognition of Learner Collaborative Roles Based on Multidimensional Features (CN202510203770.4, substantive examination) 2025

HONORS & AWARDS

Academic Honors

- Candidate for Student Member of the Executive Committee (1 of 3), Society for Learning Analytics Research (SoLAR) Jan 2026
- Learning Analytics and Knowledge Doctoral Consortium Scholarship, Society for Learning Analytics Research (SoLAR) Apr 2026
- Second Prize, Graduate Academic Innovation Award, Beijing Normal University 2025, 2026

Competition Honors

- First Prize, AI-Empowered Online Teaching Achievement Innovation Competition, China Association for Educational Technology 2025
- Bronze Award & Feishu Special Award, Global Digital Intelligence Education Innovation Competition (Team Lead) 2025
- Third Prize, "Spark Cup" Cognitive Large Model Scenario Innovation Competition (Team Lead) 2023

University-Level Honors

- First-Class Academic Scholarship, Beijing Normal University 2021, 2024, 2025
- Second-Class Innovation & Entrepreneurship Scholarship for Discipline Competitions (Team Lead), Beijing Normal University 2024
- Second-Class Innovation & Entrepreneurship Scholarship for Discipline Competitions (Team Lead), Linyi University 2017

ACADEMIC SERVICE

Editorial Board Member

- Contemporary Education and Teaching Research 2025

Reviewer for International Journals

2021–Present

- Reviewer for 13 international journals, including Computers & Education, Interactive Learning Environments, and Humanities & Social Sciences Communications.

ADDITIONAL PUBLICATIONS

1. Bai, Y., & **Xiao, J.** (2021). The impact of cMOOC learners' interaction on content production. *Interactive Learning Environments* (SSCI Q1).
2. Bai, Y., Xu, Y., & **Xiao, J.** (2022). The influencing factors of interaction and perceived value of cMOOC learners. *Interactive Learning Environments* (SSCI Q1).
3. Bai, Y., Chen, L., Zhou, X., **Xiao, J.**, & He, X. (2025). The evolution of cMOOC learners' resource use behaviour. *Interactive Learning Environments* (SSCI Q1).
4. Kong, X., Fang, H., Chen, W., **Xiao, J.**, & Zhang, M. (2025). Examining human-AI collaboration in hybrid intelligence learning environments: Insight from the Synergy Degree Model. *Humanities and Social Sciences Communications* (SSCI Q1, A&HCI).
5. Wang, C., Xu, Y., & **Xiao, J.** (in press). Who will be the group leader in collaborative problem solving? An empirical study based on structural hole theory. *Educational Technology & Society* (SSCI Q1).
6. Wang, D., Zhang, Y., **Xiao, J.**, Wang, X., & Xu, Y. (2022). Connectivist Learning Pathways and Learner Development. *Open Learning Research* (in Chinese).