程奕泓

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教育背景

波士顿学院 (Lynch 教育与人类发展学院) 09/2018–09/2022
教育学博士

明尼苏达大学双城校区 (教育与人类发展学院) 09/2015–05/2017
教育学硕士

明尼苏达大学双城校区 (文理学院) 09/2011–05/2015
物理学学士

专业方向

STEM 教育，课程设计和评估、教育测量

研究经历

教育研究院 **清 华 大 学**
博士后 - 水木学者 05/2023 至今

- 协助清华大学国家卓越工程师学院开发卓越工程师素养评估工具
- 协助清华大学附属小学开展主题教学教-学-评一体化工作
- 推进人工智能素养测评工具的汉化和信效度检验工作

Scheller 教师教育项目实验室 (STEP) Lab **麻 省 理 工 学 院**
EdAI 日常 AI 教育项目 05/2020 至今

- 参与设计“数字化/AI 素养（DAILy）”课程
- 参与培训美国多地中小学教师开展 DAILy 课程
- 参与开发、检验、和优化人工智能素养测评工具

创新城市科学教育实验室 (I-USE Lab) **波士顿学院**
小型自动化智能温室项目 09/2018 至今

- 参与设计新手友好型融合环境科学与计算机科学的项目式学习（PBL）
- 参与培训并辅助波士顿周边地区中学教师开展小型自动化智能温室项目
- 参与开发、检验、和优化计算机思维测评工具

期刊发表

[1] **Cheng, Y.**, and Xiao, X. (2024). *When non-discriminative items reveal misconceptions about AI: Findings from cognitive interviews.* Revised manuscript under review.

[2] **Cheng, Y.**, and Xiao, X. (2024). *What AI literacy, What AI concepts: Analysis of an AI concept inventory.* Revised manuscript under review.

[3] Gu, L., **Cheng, Y.**, Yuan, J., and Wang, C. (2024). *Is psychological help a proprietary for low-capacity graduate students*. Revised manuscript under review.

[4] Wang, T., Gu, L., and **Cheng, Y.** (2024). *Multiple institutional logics of talent cultivation in church universities: A case study of the University of Notre Dame*. Revised manuscript under review.

[5] Xiao, X., and **Cheng, Y.** (2024). *Different genders, different paths to self-efficacy: An analysis of the moderating and mediating effects of environmental factors on the relationship between gender and self-efficacy*. Revised manuscript under review.

[6] Xiao, X., and **Cheng, Y.** (2024). *Tutorial on Bayesian Growth Mixture Modeling: Applications in reading development and depression.* Revised manuscript under review.

[7] Xiao, X., Li, Z., Liu, Y., and **Cheng, Y.** (2024). *Identifying sensitive periods for the impact of physical abuse on psychopathology symptoms*. Revised manuscript under review.

[8] **Cheng, Y.**, Xiao X., Jackson, D., Shah, S. A., Abdus-Sabur, F., Hira, A., Zhang, H., and Barnett, M. (2024). *Competent but anxious Smart Greenhouse Makers: Findings from a physical computing project*. Accepted for publication in Journal of Science Education and Technology.

[9] Su, B., Xiao, X., **Cheng, Y.**, Liu, C., and Yang, C. (2024). *Trajectories of depressive symptom among college students in*

China during the COVID-19 pandemic: Association with suicidal ideation and insomnia symptoms. Accepted for publication in Suicide and Life-Threatening Behavior.

[10] Xiao, X., Xue, M., & **Cheng, Y.** (2023). Bayesian partial credit model and its applications in science education. *Contemporary Trends and Issues in Science Education*, *57*, 77 – 96.

[11] Zhang, H., Lee, I., Ali, S., DiPaola, D., **Cheng, Y.**, & Breazeal, C. (2023). Integrating ethics and career futures with technical learning to promote AI literacy for middle school students: An exploratory study. *International Journal of Artificial Intelligence in Education,* 1-35.

[12] Jackson, D., **Cheng, Y.**, Meng, Q., and Xu, Y. (2022). "Smart" greenhouses and pluridisciplinary spaces: Supporting adolescents' engagement and self-efficacy in computation across disciplines. *Disciplinary and Interdisciplinary Science Education Research, 4*(1), 1-15.

[13] Jackson, D., & **Cheng, Y.** (2021). Maintaining pluralism when embedding computational thinking in required science and engineering classes with young adolescents. *Computer Science Education,* 1-25. Routledge.

[14] Xiao, X., & **Cheng, Y.** (2021). Movie title keywords: A text mining and exploratory factor analysis of popular movies in the United States and China. *Journal of Risk and Financial Management, 14*(2).

[15] Asante, C. K., Semerjian, A., Xu, Y., Jackson, D., **Cheng, Y.**, Chasen, A., Shah, A., Brett, J., and Broadstone, M. (2021). An integrated STEM and computing curriculum for the human-technology frontier. *Connected Science Learning*, *3*(2).

会议发表

[1] **Cheng, Y.**, Zhou, X., Zhang, H., Zheng, R., Moore, K., Perret, B., Pu, G., and Lee, I. *Learning to teach artificial intelligence concepts and ethical issues: A professional development program for middle school teachers.* Presented at Educational Advances in Artificial Intelligence 2022.

[2] Lee, I., Zhang, H., Moore, K., Zhou, X., Perret, B., **Cheng, Y.**, Zheng, R., and Pu, G. (2022). AI Book Club: An innovative professional development model for AI education. *In Proceedings of the 53rd ACM Technical Symposium on Computer Science Education,* 202-208.

[3] Jiang, S., Desportes, K., Bergner, Y., Zhang, H., Lee, I., Moore, K., **Cheng, Y.**, Perret, B., Walsh, B., Guggenheim, A., Dalton, B., Forsyth, S., Yeh, T., Akram, B., Yoder, S., Finzer, W., Chao, J., Rosé, C. P., Payne, W., Castro-Norwood, F., & McDermott, K. (2022). Agents, models, and ethics: Importance of interdisciplinary explorations in AI education. In *Proceedings of the 16th International Conference of the Learning Sciences-ICLS 2022, pp. 1763-1770.*

[4] **Cheng, Y.**, & Jackson, D. (2021). From "in a sleep" to "stayed everyday": *Engaging students and teachers with micro:bit smart-greenhouses.* In *Proceedings of the 14th International Conference on Computer-Supported Collaborative Learning-CSCL 2021*.

[5] **Cheng, Y.**, Zhang, H., Jackson, D. W., Lee, I. A., Brown, N. J. S., Szendey, O., Ali, S., and DiPaola, D. (2020). *Raising minoritized middle schoolers' AI career awareness and adaptability: Findings from two online summer camps.* Presented at American Educational Research Association.

[6] Ali, S., DiPaola, D., Lee, I., Jackson, D., Kiel, J., Beal, K., Zhang, H., **Cheng, Y.**, Breazeal, C. (2021). Adapting K-12 AI learning for online instruction. In *Proceedings of German Journal of Artificial Intelligence 2/2021*.

[7] **Cheng, Y.** (2019). *Toward culturally competent teacher preparation programs: A literature review of empirical examples.* Presented at Learning Sciences Graduate Student Conference, Chicago, IL, United States.

[8] Zhang, H., & **Cheng, Y.** (2019). *Interdisciplinary approaches to teaching computational environmental science.* Presented at National Science Foundation STEM+C PI Summit, Washington, DC.

教学经历

Springfield 公立学区 Springfield，马萨诸塞州，美国

ChangeMakers 指导教师 09/2021-05/2022

- 带领 Springfield 学区内的中学生学习模块化编程语言
- 引导学生根据自身需要自主开发模块化编程的实际应用
- 鼓励学生思考如何使用编程解决社会问题

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Lasell 大学 Newton, 马萨诸塞州, 美国

ED342_344 讲师 01/2020-05-2021

- 为波士顿周边地区学前和小学师范生讲授 STEM 教育理论和方法
- 为学生讲解前沿科学教育标准
- 辅导学生设计 STEM 项目式学习活动

波士顿学院 Newton, 马萨诸塞州, 美国

EESC182 助教 01-2019-05-2019

- 为波士顿学院非 STEM 专业本科生讲解必备科学常识
- 辅导学生掌握基本编程知识
- 开发多个低成本动手实践活动

Waltham 公立学区 Waltham, 马萨诸塞州, United States

课后 STEM 项目指导教师 09/2018-09/2019

- 协助 Waltham 学区中学教师开展课后科学探索小组
- 带领学生使用 3D 打印和激光切割进行艺术创作
- 带领学生操作无人机采集分析当地水样

TRiO 明尼苏达大学分部 Minneapolis, 明尼苏达州, 美国

TRiO 学术辅助服务中心助理 01/2017-05/2017

- 调研低收入家庭大学生学术上遇到的困难
- 结合定性和定量数据分析中心组织的辅导课程的短期和长期效果
- 基于数据分析结果提出课程设计和教学方法的改进措施

明尼阿波利斯社区与技术大学 Minneapolis, 明尼苏达州, 美国

无障碍中心助理 01/2016-01/2017

- 调查全校职工参与文化胜任力相关职业培训的情况
- 运用质性研究方法发掘培训中出现的主要问题
- 向校领导汇报调查结果并协助其制定改进方案