

專任教師

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## 研究領域

- 學術及教育專業專長：教師發展、教學科技創新、知識翻新、學習科學、混合研究
- 歷年開課名稱：學習科學:理論與實踐（英語授課） Learning Sciences: Theory and Practice  
、教育概論（雙語）、教學原理（雙語）。

## 研究成果

### ●(A)期刊論文

Scharber, C., & Peterson, L., **Chang, Y.-H.**, Barksdale, S., & Sivaraj, R. (2021). Possibilities in K-12 computer science education: Computing as critical literacy. *Pedagogies: An International Journal*, 16(2), 136-151.

<https://doi.org/10.1080/1554480X.2021.1914055>

Barksdale, S., Scharber, C., & **Chang, Y.-H.** (2021). Team Mensa: A case study of supporting middle school girls' interest in computer science through an informal learning program. *Journal of Research on Technology in Education*. <https://doi.org/10.1080/15391523.2020.1864239> [SSCI; 2020 JCR in Education & Educational Research, Impact Factor: 2.043, Rank: 159/264, Q3]

Ouyang, F., & **Chang, Y.-H.**, Scharber, C., Jiao, P., & Huang, T. (2020). Examining the instructor-student collaborative partnership in an online learning community course. *Instructional Science*.

<https://doi.org/10.1007/s11251-020-09507-4> [SSCI; 2020 JCR in Education & Educational Research, Impact Factor: 2.62, Rank: 108/264, Q2]

Ouyang, F., & Chang, Y.-H. (2019). The relationships between social participatory roles and cognitive engagement levels in online discussions. *British Journal of Educational Technology*, 50(3), 1396-1414.

<https://doi.org/10.1111/bjet.12647> [SSCI; 2020 JCR in Education and Educational Research, Impact Factor: 4.929, Rank: 19/264, Q1]

Chang, Y.-H., & Peterson, L. (2018). Pre-service teachers' perceptions of computational thinking. *Journal of Technology and Teacher Education*, 26(3), 353-374.

Chen, B., Chang, Y.-H., Ouyang, F., & Zhou, W. (2018). Fostering student engagement in online discussion through social learning analytics. *The Internet and Higher Education*, 37, 21-30. <https://doi.org/10.1016/j.iheduc.2017.12.002> [SSCI; 2020 JCR Education and Educational Research, Impact Factor: 7.178, Rank: 5/264, Q1]

Lin, P. Y., Chang, Y.-H., Lin, H. T., & Hong, H. Y. (2016). Fostering college students' creative capacity through computer-supported knowledge building. *Journal of Computers in Education*, 4(1), 43-56.

<https://doi.org/10.1007/s40692-016-0063-4>

Hong, H. Y., Chang, Y.-H., & Chai, C. S. (2014). Fostering a collaborative and creative climate in a college class through idea-centered knowledge-building. *Instructional Science*, 42(3), 389-407. <http://dx.doi.org/10.1007/s11251-013-9289-y> [SSCI; 2020 JCR in Education and Educational Research, Impact Factor: 2.62, Rank: 108/264, Q2]

## ●(B)研討會論文

Chen, B., Chang, Y.-H., & Groos, D. (2020, November) *Crisscrossing Information Spaces with the IdeaMagnets Tool*. Paper presented at the 2020 Knowledge Building Summer Institute, Online due to COVID-19.

Ouyang, F., Chang, Y.-H., & Scharber, C. (2020). Can an Instructor and Students Build Collaborative Partnership in an Online Course? In *Proceeding of 14th International Conference of the Learning Sciences (ICLS)*. Nashville, TN: International Society of the Learning Sciences.

Chen, B., Chang, Y.-H., & Groos, D. (2020). Bridging Public Discourse and Knowledge Building Discourse in Science Classrooms with the IdeaMagnets Tool. In *Proceeding of 14th International Conference of the Learning Sciences (ICLS)*. Nashville, TN: International Society of the Learning Sciences.

Chang, Y.-H., Barksdale, S., Peterson, L. & Scharber, C. (2019). Development of Girls' Interests and Identities in Computer Sciences within an CSCL Environment. In Lund, K., Nicolai, G. P., Lavoué, E., Hmelo-Silver, C., Gweon, G., & Baker, M. (Eds.), *A Wide Lens: Combining Embodied, Enactive, Extended, and Embedded Learning in Collaborative Settings*, 13th International Conference on Computer Supported Collaborative Learning (CSCL) (2), 825-826. Lyon, France: International Society of the Learning Sciences.

Chang, Y.H., & Chen, B.D. (2019, April). *Teachers as Co-designers of a Knowledge Building Environments*. Paper presented at Knowledge Building Summer Institute, Toronto, Canada.

Scharber C., Peterson, L., Chang, Y.H., Barksdale, S., Constantine, A., Sivaraj, R. & Englund, J. (2019).

Computational Participation & Computer Science with Middle School Girls. In Lund, K., Niccolai, G. P., Lavoué, E., Hmelo-Silver, C., Gweon, G., and Baker, M. (Eds.), *A Wide Lens: Combining Embodied, Enactive, Extended, and Embedded Learning in Collaborative Settings, 13th International Conference on Computer Supported Collaborative Learning (CSCL) (2)*, 616-619. Lyon, France: International Society of the Learning Sciences.

- Scharber C., **Chang, Y.H.**, Barksdale, S., Peterson, L., Sivaraj, R., Constantine, A. & Englund, J. (2019). SciGirls Code: Computational Participation for Middle School Girls. In Proceedings of *the Association for Computing Machinery's Special Interest Group on Computer Science Education (SIGCSE) 2019*. <https://doi.org/10.1145/3287324.3293800>
- Chang, Y.-H.** & Peterson, L. (2018). 'It opens up a new way of thinking, but...': Implications from pre-service teachers' awareness of computational thinking. In *Proceedings of International Conference on Computational Thinking Education 2018*.
- Chang, Y.-H.** (2018). A Learning Sciences Perspective on the Development of Teachers' Digital identity. In Kay, J. & Luckin, R. (Eds.), *Rethinking Learning in the Digital Age: Making the Learning Sciences Count, 13th International Conference of the Learning Sciences (ICLS) (3)*, 1731-1732. London, UK: International Society of the Learning Sciences.
- Lin, P-Y., Ma, L., **Chang, Y.H.**, Lin, C-P. (2018). Improving Elementary Students' Literacy Through Knowledge Building. In Kay, J. & Luckin, R. (Eds.), *Rethinking Learning in the Digital Age: Making the Learning Sciences Count, 13th International Conference of the Learning Sciences (ICLS) (3)*, 1527-1528. London, UK: International Society of the Learning Sciences.
- Nielsen-Winkelman, T. & **Chang, Y. H.** (2016). Decoding the Mystery of Technology Integration: Decision-Making and Identities with Elementary Pre-Service Teachers. In *Proceedings of Society for Information Technology & Teacher Education International Conference 2016* (pp. 2229-2236). Chesapeake, VA: Association for the Advancement of Computing in Education (AACE).
- Chang, Y.-H.**, Hong, H.Y., Hua, L.Y. & Hung, G.T. (2015). Fostering more self-reflective understanding of teaching knowledge in a knowledge building environment. In S. Carliner, C. Fulford & N. Ostashewski (Eds.), *Proceedings of EdMedia: World Conference on Educational Media and Technology 2015* (pp. 129-134). Association for the Advancement of Computing in Education (AACE).
- Hong, H.Y., Huang, T. W., **Chang, Y. H.** & Hung, G.T. (2015). Enhancing reading comprehension through computer-supported collaborative learning. In S. Carliner, C. Fulford & N. Ostashewski (Eds.), *Proceedings of EdMedia: World Conference on Educational Media and Technology 2015* (pp. 44-46). Association for the Advancement of Computing in Education (AACE).
- Chang, Y. H.** & Hong, H.Y. (2011) The effects of idea-centered knowledge building on group learning. *The 15th global Chinese conference on computers in education (GCCCE)*. ISBN: 978-1-4244-9237-4. Hangzhou, China. (Excellent Paper Award of 2011).
- Chang, Y. H.** & Hong, H.Y. (2010). The creative power of online collaborative environment: Using Knowledge Forum as an example. In L. Dirckinck-Holmfeld, V. Hodgson, C. Jones, M. de Laat, D. McConnell, & T. Ryberg (Eds.), *A research-based conference on networked learning in higher education and lifelong learning. Proceedings of the Seventh International Conference on Networked Learning* (pp. 39-46). ISBN: 978-1-86220-2252. Aalborg, Denmark.

## ●(C)專書及專書論文

- Hong, H.Y., & **Chang, Y.-H.** (2018). From methods to theories: Approaches to develop digital learning theories. In Sung, Y. T. (Eds), *Advanced Research Methodology for e-Learning*. ISBN: 9789862661758. Taipei, Taiwan: Edubook. [written in Traditional Chinese] 洪煌堯、張宇慧 (2018)。從方法到理論：數位學習理論的檢驗與建立。在宋曜廷(主編)，數位學習進階研究方法(頁 3-30)。高教出版社。
- Lin, P. Y., **Chang, Y.-H.**, Lin, H. T., & Hong, H.Y. (2017, March). Fostering college students' creative capacity through computer-supported knowledge building activities. In M. A. Runco. (4th ed.), *Creativity and Education* (vol.3, pp. 65-78). New Delhi: SAGE Publications Ltd. (Reprinted from *Journal of Computers in Education*, 4(1), 43-56).

## ●(D)榮譽及獎項

*Received at the Ministry of Education, Taiwan.* 教育部 106 年公費留學獎學金 (教育學群)

- Grantee of Government Scholarship to study abroad. 2017-2019

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- Grantee of Graduate Study 2014-2016  
攻讀博士學位傅爾布萊特獎助金
- Grantee of Foreign Language Teaching Assistant, FLTA, 2012-2013  
教師赴美進修暨協助華語教學獎助計畫