

Educational Technology and Society, 19(3), 47–57.

[2] Atmatzidou, S., Demetriadis, S., and Nika, P. (2017). How Does the Degree of Guidance Support Students' Metacognitive and Problem-Solving Skills in Educational Robotics? *Journal of Science Education and Technology*, 1–16. <https://doi.org/10.1007/s10956-017-9709-x>

[3] Brennan, K., and Resnick, M. (2012). New frameworks for studying and assessing the development of computational thinking. Retrieved December 14, 2017, from <https://www.media.mit.edu/publications/new-frameworks-for-studying-and-assessing-the-development-of-computational-thinking/>

[4] Grover, S., and Pea, R. (2013). Computational Thinking in K–12: A Review of the State of the Field. *Educational Researcher*, 42(1), 38–43. <https://doi.org/10.3102/0013189X12463051>

Kong, S.-C. (2016). A framework of curriculum design for computational thinking development in K-12 education. *Journal of Computers in Education*, 3(4), 377–394. <https://doi.org/10.1007/s40692-016-0076-z>

[5] Lye, S. Y., and Koh, J. H. L. (2014). Review on teaching and learning of computational thinking through programming: What is next for K-12? *Computers in Human Behavior*, 41, 51–61. <https://doi.org/10.1016/j.chb.2014.09.012>

[6] National Research Council. (2010). Report of a Workshop on the Scope and Nature of Computational Thinking. National Academies Press.

[7] Papert, S. (1980). *Mindstorms: children, computers, and powerful ideas*. Retrieved May 22, 2018, from https://cn.bing.com/academic/profile?id=d041c558229147ac04a3b561314ae782&encodet=0&v=paper_preview&ndmkt=zh-cn

[8] Sáez-López, J.-M., Román-González, M., and Vázquez-Cano, E. (2016). Visual programming languages integrated across the curriculum in elementary school: A two year case study using “Scratch” in five schools. *Computers and Education*, 97, 129–141. <https://doi.org/10.1016/j.compedu.2016.03.003>

[9] Shim, J., Kwon, D., and Lee, W. (2017). The Effects of a Robot Game Environment on Computer Programming Education for Elementary School Students. *IEEE Transactions on Education*, 60(2), 164–172. <https://doi.org/10.1109/TE.2016.2622227>

[10] Utting, I., Cooper, S., Kölling, M., Maloney, J., and Resnick, M. (2010). Alice, Greenfoot, and Scratch – A Discussion. *Trans. Comput. Educ.*, 10(4), 17:1–17:11. <https://doi.org/10.1145/1868358.1868364>

[11] Wallace Feurzeig, and Seymour A. Papert. (2011). Programming-languages as a conceptual framework for teaching mathematics: Interactive Learning Environments: Vol 19, No 5. Retrieved May 12, 2018, from <https://www.tandfonline.com/doi/abs/10.1080/10494820903520040>

[12] Wing, J. (2006). Computational thinking. *Communications of the ACM*.

[13] Kong, S., (2016). A framework of curriculum design for computational thinking development in K-12 education. *Journal of Computers in Education*. 10.1007/s40692-016-0076-z.

[14] Calao, L. A., Moreno-León, J., Correa, H. E., & Robles, G. (2015). Developing mathematical thinking with scratch. In *Design for Teaching and Learning in a Networked World*, Cham: Springer (pp.17–27)

[15] Román-González, M., Pérez-González, Juan-Carlos and Jiménez-Fernández, C., 2017. Which cognitive abilities underlie computational thinking? Criterion validity of the Computational Thinking Test. *Computers in Human Behavior*, Volume 72, pp. 678-691.