

Weber, Stefka: Kreatives Handeln und Bildungsorientierte visuelle Programmiersprachen

Beitrag aus Heft »2021/05 Wieselattitüden – oder vom Wesen (medialer) Kreativität«

Auf welche Weise können bereits in der Entwicklung medialer Produkte mit Programmierwerkzeugen kreative Herangehensweisen sichtbar werden? Erkenntnisse, die auf dem aktuellen Forschungsstand sowie den Ergebnissen qualitativer Interviews basieren, liefern Hinweise zur Beantwortung dieser Frage. Zudem dienen diese der Gewinnung neuer Impulse für einen möglichen Einsatz von Programmierwerkzeugen in der praktischen pädagogischen Arbeit.

In what ways can creative approaches already become visible in the development of media products with programming tools? Findings based on the current state of research and results of qualitative interviews provide indications to answering this question. In addition, these serve to gain new impulses for a possible use of programming tools in practical pedagogical work.

Literatur:

Aufenanger, Stefan (2020). Fördern digitale Medien Kreativität? Begriffsdefinition und Ansätze für Schule und Unterricht. In: Lernen in der digitalen Welt. (1) S. 1–7.

Braun, Daniela/Krause, Sascha/Boll, Astrid (2019). Handbuch Kreativitätsförderung: in der Kita. Freiburg: Verlag Herder.

Brodbeck, Karl-Heinz (1995). Entscheidung zur Kreativität. Darmstadt: Wiss. Buchges.

Brodbeck, Karl-Heinz (2000). Mut zur eigenen Kreativität: wie wir werden, was wir sein können. Freiburg im Breisgau: Herder.

Coenraad, Merijke/Palmer, Jen/Weintrop, David/Eatinger, Donna/Crenshaw, Hoang/Zachary, Pham/Franklin, Diana (2021). The Effects of Providing Starter Projects in Open- Ended Scratch Activities. S. 38–44 in Proceedings of the 52nd ACM Technical Symposium on Computer Science Education. Virtual Event USA: ACM.

Cropley, Arthur J. (1990). Kreativität im Alltag: Über Grundsätze kreativitätsorientierten Lehrens und Lernens. International Review of Education 36(3), S. 329–44. DOI: 10.1007/BF01876001.

Csikszentmihalyi, Mihaly (2010). Kreativität: wie Sie das Unmögliche schaffen und Ihre Grenzen überwinden. Stuttgart: Klett-Cotta.

Dilts, Robert B./Epstein, Todd/Dilts, Robert W. (2000). Know-how für Träumer: Strategien der Kreativität, NLP & Modellierung, Struktur der Innovation. Paderborn: Junfermann.

FabLearn (2018). Maker education in the Netherlands – state of play and lessons for the future. [makered.nl/wp-content/uploads/2018/09/FabLearn-PaperPresentation-def. pdf](https://www.makered.nl/wp-content/uploads/2018/09/FabLearn-PaperPresentation-def.pdf) [Zugriff: 30.09.2021]

Gardner, Howard/Simon, Andreas (1999). Kreative Intelligenz: was wir mit Mozart, Freud, Woolf und Gandhi gemeinsam haben. Frankfurt/Main: Campus-Verl.

Gläser, Jochen/Laudel, Grit (2006). Experteninterviews und qualitative Inhaltsanalyse als Instrumente rekonstruierender Untersuchungen. Wiesbaden: VS Verlag für Sozialwissenschaften.

Guilford, Joy Paul (1977). Way beyond the IQ: Guide to Improving Intelligence and Creativity; Tab. Buffalo, N. Y.: Creative Education Foundation.

Guilford, Joy Paul (1968). Intelligence, Creativity and Their Educational Implications. Place of publication not identified: Edits Pub.

Israel-Fishelson/Arnon Hershkovitz, Rotem/Eguíluz, Andoni/ Garaizar, Pablo/Guenaga, Mariluz (2021). The Associations Between Computational Thinking and Creativity: The Role of Personal Characteristics. Journal of Educational Computing Research 58(8), S. 1415–47. DOI: 10.1177/0735633120940954.

Kafai, Yasmin (1994). Minds in Play: Computer Game Design As A Context for Children's Learning. DOI: 10.4324/9780203052914.

Karossa, Nadja/Ferdinand, Joseph/Fischer, Christian (2020). Programmieren kinderleicht: Schnelle Erfolgserlebnisse mit Scratch. [https:// lead-schule.agentur-meilenstein.de/ blog/ scratch/](https://lead-schule.agentur-meilenstein.de/blog/scratch/) [Zugriff: 30.09.2021]

Maloney, John/Resnick, Mitchel/Rusk, Natalie/Silverman, Brian/Eastmond, Evelyn (2010). The Scratch programming language and environment. ACM Transactions on Computing Education,10(4), S. 1-15. DOI: 10.1145/1868358.1868363.

Mayer, Frederick (1979). Kreativität, Illusion oder Wirklichkeit. Wien [u.a.] Europaverl.

Mayring, Philipp (2003). Qualitative Inhaltsanalyse: Grundlagen und Techniken. Weinheim: Beltz.

Md Ibharim, Laili Farhana/Yatim, Maizatul Hayati Mohamad/ Zain, Nor Zuhaidah, Mohamed/Azizan, Ummu Husna/ Fabil, Norasikin (2021). Development of Rubric to Measure Children's Creativity in Game Design. The International journal of Multimedia & Its Applications 13(2), S. 27–34. DOI: 10.5121/ijma.2021.13203.

Montiel, Hugo/Gomez-Zermeño, Marcela Georgina (2021). Educational Challenges for Computational Thinking in K–12 Education: A Systematic Literature Review of "Scratch" as an Innovative Programming Tool. Computers 10(6), S. 69. DOI: 10.3390/computers10060069.

Resnick, Mitchel (2006). Computer as Paint Brush: Technology, Play, and the Creative Society. DOI: 10.1093/

acprof:oso/9780195304381.003.0010.

Resnick, Mitchel (2007). All I really need to know (about creative thinking) I learned (by studying how children learn) in kindergarten. *Creativity and Cognition 2007, CC2007 – Seeding Creativity: Tools, Media, and Environments*, S. 1–6. DOI: 10.1145/1254960.1254961.

Resnick, Mitchel (2007a). Sowing the Seeds for a more Creative Society. *Learning and Leading with Technology*, S. 35. DOI: 10.1145/1518701.2167142.

Resnick, Mitchel/Silverman, Brian. 2005. Some reflections on designing construction kits for kids. In *Proceedings of the 2005 conference on Interaction design and children (IDC '05)*. Association for Computing Machinery, New York, NY, USA, 117–122. DOI: 10.1145/1109540.1109556

Resnick, Mitchel/Maloney, John/Monroy-Hernandez, Andres/ Rusk, Natalie/Eastmond, Evelyn/Brennan, Karen/Millner, Amon/Rosenbaum, Eric/Silver, Jay/Silverman, Brian/Kafai, Yasmin (2009). Scratch: Programming for all. *Communications of the ACM*, 52(11), S. 60–67.

Karossa, Nadja/Ferdinand, Joseph/Fischer, Christian (2020). Programmieren kinderleicht: Schnelle Erfolgserlebnisse mit Scratch. [https:// lead-schule.agentur-meilenstein.de/ blog/ scratch/](https://lead-schule.agentur-meilenstein.de/blog/scratch/) [Zugriff: 30.09.2021]

Maloney, John/Resnick, Mitchel/Rusk, Natalie/Silverman, Brian/Eastmond, Evelyn (2010). The Scratch programming language and environment. *ACM Transactions on Computing Education*, 10(4), S. 1-15. DOI: 10.1145/1868358.1868363.

Mayer, Frederick (1979). *Kreativität, Illusion oder Wirklichkeit*. Wien [u.a.] Europaverl.

Mayring, Philipp (2003). *Qualitative Inhaltsanalyse: Grundlagen und Techniken*. Weinheim: Beltz.

Md Ibharim, Laili Farhana/Yatim, Maizatul Hayati Mohamad/ Zain, Nor Zuhaidah, Mohamed/Azizan, Ummu Husna/Fabil, Norasikin (2021). Development of Rubric to Measure Children's Creativity in Game Design. *The International journal of Multimedia & Its Applications* 13(2), S. 27–34. DOI: 10.5121/ijma.2021.13203.

Montiel, Hugo/Gomez-Zermeño, Marcela Georgina (2021). Educational Challenges for Computational Thinking in K–12 Education: A Systematic Literature Review of "Scratch" as an Innovative Programming Tool. *Computers* 10(6), S. 69. DOI: 10.3390/computers10060069.

Resnick, Mitchel (2006). Computer as Paint Brush: Technology, Play, and the Creative Society. DOI: 10.1093/acprof:oso/9780195304381.003.0010.

Resnick, Mitchel (2007). All I really need to know (about creative thinking) I learned (by studying how children learn) in kindergarten. *Creativity and Cognition 2007, CC2007 – Seeding Creativity: Tools, Media, and Environments*, S. 1–6. DOI: 10.1145/1254960.1254961.

Resnick, Mitchel (2007a). Sowing the Seeds for a more Creative Society. Learning and Leading with Technology, S. 35. DOI: 10.1145/1518701.2167142.

Resnick, Mitchel/Silverman, Brian. 2005. Some reflections on designing construction kits for kids. In Proceedings of the 2005 conference on Interaction design and children (IDC '05). Association for Computing Machinery, New York, NY, USA, 117–122. DOI: 10.1145/1109540.1109556

Resnick, Mitchel/Maloney, John/Monroy-Hernandez, Andres/ Rusk, Natalie/Eastmond, Evelyn/Brennan, Karen/Millner, Amon/Rosenbaum, Eric/Silver, Jay/Silverman, Brian/Kafai, Yasmin (2009). Scratch: Programming for all. Communications of the ACM, 52(11), S. 60–67.