

Georgios Kritikos - Short CV

Studies

Bachelor of Science (BSc) in Physics

Aristotle University of Thessaloniki, 2001

Master of Science (MSc) "Electronic Physics (Radioelectrology)"

Aristotle University of Thessaloniki, 2004

Master of Education (MEd) "Models of design and development of educational units"

University of the Aegean, 2006

Doctorate (PhD) "Analogical reflection and metacognitive skills development through collaborative modelling activities in Physics"

Supervisor: Prof. Dimitracopoulou Angelique, University of the Aegean, 2013

Post-Doctoral Research

"Educational Engineering"

Supervisor: Prof. Kalavasis Fragkiskos, University of the Aegean, 2016–2020

Research Interests

Science Education

Educational Engineering

Digital Educational Environments

Interdisciplinary approach of Maths and Science in Education

Systems Theory in Education

STEAM Education

ICT in Education

Reflection & Metacognition

Electromagnetic pollution & Biological effects of electromagnetic radiation

Teaching Experience

Graduate programme of the depart. of pre-school education sciences and educational design, University of the Aegean

- Didactics of Science
- Learning within Science
- Applied Didactics of Information and Communication Technologies and of Interdisciplinary Approach: Practice B' Phase

Post-graduate programme "Didactics of Mathematics, Science, and Information and Communication Technologies in Education: Interdisciplinary approach", University of the Aegean

- Didactics of Mathematics and Science: An interdisciplinary approach
- Contemporary directions and applications of research in Didactics of Mathematics and Science
- Observation - interdisciplinary design methodology for the practice
- Adapted methodology in the thematic areas of master thesis

Post-graduate programme "Models of design and development of educational units", University of the Aegean

- Educational Engineering

Post-graduate programme "Environmental Education", University of the Aegean

- Introduction to the Environmental Sciences
- Environmental Issues in the Perspective of Sustainable Development

Indicative Publications

Papers in Refereed Journals

Kritikos, G., Moutsios-Rentzos, A., & Kalavasis, F. (2022). Management of Fraction Notation when Solving Physics Problems by First-Year Education Students. *Research on Science and Technology Education*, 2(2), 20-42. DOI: 10.12681/riste.30645. [GR]

Kritikos, G., & Dimitracopoulou, A. (2017). Secondary Students' Analogical Reflections on Unfamiliar Scientific Concepts. *The International Journal of Technologies in Learning*, 24(2), 25-36. doi:10.18848/2327-0144/CGP/v24i02/25-36.

Kritikos, G., & Dimitracopoulou, A. (2014). The Impact of the Analogical Reflection on the Metacognitive Awareness. *The International Journal of Science, Mathematics and Technology Learning*, 20(4), 39-50. doi:10.18848/2327-7971/CGP/v20i04/49049.

Chapters in Edited Books

Kritikos, G. (2022). Citizen Science in the context of actions against the Climate Crisis. In V. Papavasileiou, G. Xanthakou, & M. Kaila (Eds.), *Climate Crisis and... Crises. Critical crossroads of decisions and actions in the here and now* (pp. 192-208), Athens, Greece: Diadrasi. [GR]

Kritikos, G., & Kalavasis, F. (2021). Educational Engineering: Transforming the school unit into a learning organisation through interdisciplinary reflections. In A. Kontakos & F. Kalavasis (Eds.), *Issues of Educational Design* (Vol. 12, pp. 127-152), Athens, Greece: Diadrasi. [GR]

Kritikos, G., & Moutsios-Rentzos, A. (2018). Engineering of the interdisciplinary reflections within the school unit. In A. Kontakos & F. Kalavasis (Eds.), *Issues of Educational Design* (Vol. 10, pp. 111-126), Athens, Greece: Diadrasi. [GR]

Papers in Refereed International Conferences

Kritikos, G., Moutsios-Rentzos, A., Pinnika, V., & Kalavasis, F. (2020). Interdisciplinary Reflective Tool on School Science and Mathematics. In O. Levrini, & G. Tasquier (Eds.), *Proceedings of the ESERA 2019 Conference: The beauty and pleasure of understanding: engaging with contemporary challenges through science education*, Part 14 (co-ed. C. Fazio, & M. Welzel-Breuer) (pp. 1764-1773). Bologna, Italy: University of Bologna, ISBN 978-88-945874-0-1.

Kritikos, G., Moutsios-Rentzos, A., & Kalavasis, F. (2019). Educators' relationship with Mathematics through digital storytelling: Focusing on their reflections. In A. Moutsios-Rentzos, A. Giannakouloupoulos, & M. Meimaris (Eds.), *Proceedings of the International Digital Storytelling Conference: Current trends in digital storytelling: Research & Practices* (pp. 462-464). Zakynthos, Greece: Technological Educational Institute of Ionian Islands.

Kritikos, G., & Dimitracopoulou, A. (2011). ART (Analogical Reflection Tool): using analogies to promote reflection in science education. In W. Reinhardt, T. Ullmann, P. Scott, V. Pammer, O. Conlan, & A. Berlangue (Eds.), *Proceedings of the 1st European Workshop on Awareness and Reflection in Learning Networks* (pp. 130-137). Workshop held in the 6th European Conference on Technology Enhanced Learning: Towards Ubiquitous Learning, Palermo, Italy, ISSN 1613-0073.

Papers in Refereed Pan-Hellenic Conferences

Kritikos, G., & Moutsios-Rentzos, A. (2019). The anxiety of future kindergarten teacher for Mathematics and Natural Sciences. In M. Kampeza, A. Vellopoulou, A. Giannopoulou, S. Deli, E. Didachou, E. Katsikonouri, V. Mantzouratou, & S. Saiti (Eds.), *Proceedings of the 12th Pan-Hellenic Conference OMEP "Enhancing interaction, supporting the expression: challenges and prospects in learning and teaching children of kindergarten and first-school age"* (pp. 512-523). Patra: University of Patra, ISBN: 978-618-84599-2-2. [GR]

Kritikos, G., Moutsios-Rentzos, A., & Kalavasis, F. (2021). Supporting interdisciplinary reflections in the modern teaching of Mathematics and Science: between live and distance learning. In A. Sofos, A. Costas, G. Fouzas, & V. Paraschou. *Proceedings of the 1st International Conference «From the 20th to the 21st century in 15 days: The abrupt transition of our educational reality to digital environments. Attitudes-Perceptions-Scenarios-Perspectives-Proposals, 3-5 July 2020»* (pp. 266-274). Electronic edition: Hellenic Documentation Center. [GR]

Kritikos, G., Kostas, A., Kontakos, A., Kalavasis, F., & Vitsilaki, C. (2021). The Teacher during the transition of the school unit to the emergency online education: Reflections in the context of fast-paced training program of the University of the Aegean. In A. Sofos, A. Costas, G. Fouzas, & V. Paraschou. *Proceedings of the 1st International Conference «From the 20th to the 21st century in 15 days: The abrupt transition of our educational reality to digital environments. Attitudes-Perceptions-Scenarios-Perspectives-Proposals, 3-5 July 2020»* (pp. 542-554). Electronic edition: Hellenic Documentation Center. [GR]