

# Zacharoula Smyrnaiou

## Professor

School of Philosophy – Department of Educational Studies  
with cognitive subject

### «Contemporary Learning Theories and Science Education »

Vice President of the B.O.D. of

(Government Gazette 204 / 16.02.2021)

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## Studies

- BA in Science (1991–1995, NKUA)
- MSc in Informatics (1997–1999, NKUA)
- (D.E.A) in Science Education (Teaching Science Specialisation), (1999–2000, Université Paris V (Sorbonne), France)
- Doctorate Degree in Science Education specializing in the use of ICT Tools in Science Education (Thèse de Doctorat) (Dissertation title: 'Modelling - the contribution of educational software, 2000–2003, Université Paris V (Sorbonne), France).

## Main scientific / research interests

- Planning, Designing and Use of digital tools and appropriate didactic approaches in learning various subject domains.
- Digital Transformation of Education: scientific frameworks and research projects of digitalization, study of advanced technologies (artificial intelligence, augmented reality, virtual reality, robotics, internet of things, etc.)
- Contemporary theoretical frameworks such as instrumental genesis, representation (mental, embodied, or through a semiotic system), connectionism, mobile learning etc.
- Innovation in education (Innovative Pedagogy): methodological design and introduction of innovative pedagogical frameworks, strengthening Research and Development in Education through the promotion of research in the field of educational innovation, with the aim of developing new educational technologies, tools and methods that will improve the learning process and positively influence the educational community.
- Innovative approaches to learning and teaching (Creativity, Embodied Learning, Interest, Argumentation, game-based learning, socio-emotional learning, work-based learning and connection of education to workplaces, theories of transversal skills)
- Developing Research fields in Science Education such as STEM, STEAM, and Neuro-education
- Basic Approaches to Science Teaching such as inquiry-based learning and creativity-enriched inquiry-based learning.
- Responsible Research and Innovation and Science with and for Societies (Swafs).
- Planning tools for Qualitative Research.

## Teaching during the current period

### (α) Undergraduate courses :

- [Educational Psychology \(or Educational Psychology Applications\)](#)
- [Contemporary learning theories](#)

### (β) Postgraduate courses:

- [“Educational Curricula, Teaching, Learning and Assessment”](#) in the Postgraduate Program *“Teaching Humanities and Intercultural Education”* (Government Gazette 4394, issue B' 10.7.20240), in both specializations: a. *“Teaching Humanities and Educational Assessment”* and b. *“Intercultural Education”* (Sociocultural and Pedagogical Analysis of Diversity and Human Rights in Education, the Labor Market and Society).
- [“Introductory Course on Digital Technologies in Education: Pedagogical Utilization of Technologies”](#) in the Postgraduate Program *“Teaching Humanities and Intercultural Education”* (Government Gazette 4394, issue B' 10.7.20240), in both specializations: a. *“Teaching Humanities and Educational Assessment”* and b. *“Intercultural Education”* (Sociocultural and Pedagogical Analysis of Diversity and Human Rights in Education, the Labor Market and Society).

- “Science Education” in Postgraduate Program in Digital Transformation and Educational Practice (UNIWA-NKUA-ASPETE)
- “Teaching Methodology” Doctoral Programme Course, Dental School, (NKUA)

## Participation in Research programs

- ✚ **2023-2025:** SUB.7 Development of Innovation Centers in 13 Regional Directorates, 3.2 - Strengthening the digital capabilities of education and modernization of vocational education and training, 16676 - DIGITAL TRANSFORMATION OF EDUCATION, Employment, Skills, Social Cohesion (2023-2025), as Vice President at the Diophantos Institute of Digital Education.
- ✚ **2024:** #GIL4W - Greek Innovation Lab for Women: Knowledge Transfer Partnership with a Norwegian Policy Entity to Enhance Women's Expertise in R&I and Entrepreneurship in Greece”, Code with MIS code 5161673, MIS: 5161728 version: 1.0 - EP:39 - Ax:BR\_NFP - NFP - Bilateral Relations at National Level - Inv: 5678 - AA: 5618, as Vice President at the Diophantos Institute of Technology.
- ✚ **2022:** “Tackling gender based cyberviolence among adolescent girls and young women — TRACeD” (Project: 101049706 — TRACeD — CERV-2021-DAPHNE) (2022), as Vice President at the Diophantos Institute of Technology.
- ✚ **2022-2023:** “Children's University” within the framework of the implementation of the Project “Innovation Center of the Attica Region” with MIS code 5030984 of the OP “Attica 2022-2023”.
- ✚ **2020-2023:** “Loop”. Scaffolding in Teachers Development: Mentoring and Mentors in Induction Programs. Funding body: European Union, Erasmus+
- ✚ **2021-2022:** - **Mobility for learners and staff** – Higher Education Student and Staff Mobility (2021-2022) National and Kapodistrian University of Athens (As. Prof. Z. Smyrniou) & UNIVERSITE SAVOIE MONT BLANC (Prof. Christophe Roche), Funding body: European Union, Erasmus+ Programme Key Action 1
- ✚ **2020-** «Kids University» in the context of the implementation of the Operation “Innovation Center of the Attica Region” by the Regional Development Funds (RPFs) with Code Number OPS, (MIS) 5030984- ΕΠ «Attica 2014-2020». Funding body: Decentralised Administration of Attica
- ✚ **2020 Platform 21+ Lab’** project of the Institute of Educational Policy (IEP) (<http://iep.edu.gr/en/>; <http://iep.edu.gr/el/psifiako-apothetirio/skill-labs>).
- ✚ **2018-2019** “In- Service Training of Teachers in the Utilisation and Application of Digital Technologies in the Teaching Practice, B- Level ICT Teacher Training)”. Funding body: European Union, Erasmus+: ΕΣΠΑ
- ✚ **2015-2018:** ‘CREATIONS’, Funding body: European Union, Horizon 2020, H2020-SEAC-2014-1 CSA (Project No: 665917)
- ✚ **2015-2018:** ‘DESCI’. Developing and Evaluating Skills for Creativity and Innovation. Funding body: European Union, Erasmus+
- ✚ **2014-2017:** ‘PLAY4GUIDANCE’. Funding body: European Union, Erasmus+
- ✚ **2014-2020:** ‘Learning Science Through Theater2’ (<http://lstt2.weebly.com/>), that runs in the framework of Creations project). National Project in collaboration with Science View.
- ✚ **2014-2016:** ‘European Student Parliaments on Science2’. National Project in collaboration with Science View.
- ✚ **2014-2015:** “Design of Educational and Informational Guide and Material & Training Studies Program” the implementation of which has been assigned to KESD by the Contracting Authority, the Ministry of Education and Religions. “Development and Operation of a Network for the Prevention and Response of School Violence and Bullying”

## Selected Recent Publications

1. Smyrniou, Z., & Georgakopoulou, E. (2025). THE INNOVATION CENTERS IN 13 REGIONS OF GREECE: APPLYING MULTISENSORY LEARNING IN EDUCATIONAL PRACTICE. EDULEARN25 Proceedings, 1, 6410–6414. <https://doi.org/10.21125/edulearn.2025.1576>
2. Georgakopoulou, E., & Smyrniou, Z. (2025). SEMIOTIC PEDAGOGY AND DIGITAL SEMIOTICS: THEORIES OF REPRESENTATIONS THROUGH DIFFERENT SEMIOTIC SYSTEMS IN THE DIGITAL ERA. EDULEARN25 Proceedings, 1, 5606–5611. <https://doi.org/10.21125/edulearn.2025.1387>
3. Smyrniou, Z., & Kotsari, K. (2025, June). Shaping the Future: Greece’s Innovation Centers as Hubs for Sustainable Practices in Constructionist Education. In Constructionism Conference Proceedings (Vol. 8, pp. 151-164). <https://doi.org/10.21240/constr/2025/8.X>
4. Kotsari, K., & Smyrniou, Z. (2025). Fostering Creativity and Inclusion. Constructionism Conference Proceedings, 8, 543–545. <https://doi.org/10.21240/constr/2025/116.x>
5. Smyrniou Z., Georgakopoulou E. & Georgiou M. (2025). Empowering students’ digital literacy in the AI era through the creation of Innovation Centers. NARST 2025.
6. Asimakopoulos, Z., Smyrniou, Z. (2025). Skills that students develop when engaging in a Cross disciplinary approach of knowledge and the contribution of digital and blended learning environments. *International Journal of Science, Engineering and Technology*. ISSN (Online): 2348-4098 [https://www.ijset.in/wp-content/uploads/IJSET\\_V13\\_issue2\\_340.pdf](https://www.ijset.in/wp-content/uploads/IJSET_V13_issue2_340.pdf)

7. Φουντάνα Μ., Σμυρναίου Ζ., Κωστίκας Ι. (2025). Από τη Σύλληψη στην Υλοποίηση: Η Καινοτομία στα Κέντρα Καινοτομίας δεν Σχεδιάζεται Μόνη της, 14ο Πανελλήνιο Συνέδριο με Διεθνή Συμμετοχή "Οι ΤΠΕ στην Εκπαίδευση", 31 Οκτ - 02 Νοε 2025, Ρόδος
8. Κότσαρη, Κ. & Σμυρναίου, Ζ. (2025). Η ΤΕΧΝΗΤΗ ΝΟΗΜΟΣΥΝΗ ΩΣ ΕΡΓΑΛΕΙΟ ΣΥΝΕΡΓΑΣΙΑΣ ΚΑΙ ΜΑΘΗΣΗΣ ΣΤΙΣ ΦΥΣΙΚΕΣ ΕΠΙΣΤΗΜΕΣ ΓΙΑ ΜΑΘΗΤΕΣ ΜΕ ΑΥΤΙΣΜΟ: ΠΡΟΣΕΓΓΙΣΕΙΣ ΚΑΙ ΚΑΙΝΟΤΟΜΙΕΣ ΣΤΗΝ ΕΙΔΙΚΗ ΑΓΩΓΗ (153). Στο 11ο Διεθνές Επιστημονικό Συνέδριο του Ινστιτούτου Ανθρωπιστικών και Κοινωνικών Επιστημών (ΙΑΚΕ), 8 - 11 Μαΐου 2025, με θέμα: «ΚΟΙΝΟΤΗΤΕΣ ΔΗΜΙΟΥΡΓΙΑΣ: Συμμετοχή και πρωτοβουλία στις θεσμικές συλλογικότητες: Κοινωνία, εκπαίδευση, πολιτική διαβούλευση».
9. Ασημακόπουλος Ζώης και Σμυρναίου Ζαχαρούλα (2025). Εφαρμογές Εκπαιδευτικής Ρομποτικής και Τεχνητής Νοημοσύνης στην μελέτη εννοιών και φαινομένων των Φυσικών Επιστημών. 14ο Πανελλήνιο Συνέδριο ΕΝΕΦΕΤ, Θεσσαλονίκη, 12-14 Απριλίου 2025.
10. Β. Δελής, Χ. Λιάπης, Μ. Παρασκευάς, Ζ. Σμυρναίου (2025). Η Εκπαίδευση στην Εποχή της Τεχνητής Νοημοσύνης: Προκλήσεις, Ευκαιρίες και ο Ρόλος του ΙΤΥΕ "Διόφαντος" στη Διαμόρφωση του Ψηφιακού Μέλλοντος της Εκπαίδευσης. «ΗΛΕΚΤΡΟΝΙΚΗ ΜΑΘΗΣΗ ΚΑΙ ΑΝΟΙΚΤΟΙ ΕΚΠΑΙΔΕΥΤΙΚΟΙ ΠΟΡΟΙ», ΚΟΡΙΝΘΟΣ, 29-30 ΜΑΡΤΙΟΥ 2025

## Webpages

<http://users.uoa.gr/~zsmyrnaiou/>

<http://www.ppp.uoa.gr/an8ropino-dynamiko/melh-dep/tomeas-paidagwgikis/zaxaroula-smyrnaiouy.html>

[http://www.linkedin.com/profile/view?id=163101634&trk=tab\\_pro](http://www.linkedin.com/profile/view?id=163101634&trk=tab_pro)

<http://uoa.academia.edu/ZacharoulaSmyrnaiou>

[https://www.researchgate.net/profile/Zacharoula\\_Smyrnaiou](https://www.researchgate.net/profile/Zacharoula_Smyrnaiou)

<http://scholar.google.gr/citations?user=TPkKhggAAAAJ&hl=en&oi=ao>

<https://publons.com/researcher/3289233/zacharoula-smyrnaiou/peer-review/>

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## Detailed CV