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Curriculum

Mário Melo is Invited Assistant Professor of Multimedia Communication at ISCTE-Sintra. His research focuses on the design and validation of digital educational resources for teaching Physics, based on the 4C/ID instructional design model. In this context, he is also interested in the development of meta-analysis studies on the efficiency of the 4C/ID model on the ability to transfer learning. The design and validation of multimedia resources built on R. Mayer's Theory of Multimedia Learning and Sweller's Cognitive Load Theory are also preponderant in his research activity.

Research Interests

Education

Academic Qualifications

University/Institution	Type	Degree	Period
Universidade de Lisboa	PhD	TIC na Educação	2018
Universidade de Lisboa	M.Sc.	Tecnologias Educativas	2010

Universidade de Lisboa	Post-graduation	Ciência e Engenharia de Superfícies	2000
Universidade de Lisboa	Licenciate	Ensino da Física e da Química Variante de Física	1999

Teaching Activities

Teaching Year	Sem.	Course Name	Degree(s)	Coord.
2025/2026	2º	Curriculum Development	Bachelor Degree in Digital Educational Technologies;	No
2025/2026	1º	Communication and Multimedia Learning	Bachelor Degree in Digital Educational Technologies;	No
2025/2026	1º	Multimedia Learning	Master Degree in Digital Transformation in Teaching and Learning;	Yes
2024/2025	2º	Curriculum Development	Bachelor Degree in Digital Educational Technologies;	No
2024/2025	1º	Communication and Multimedia Learning	Bachelor Degree in Digital Educational Technologies;	Yes
2024/2025	1º	Multimedia Learning	Post Graduation Program in Digital Transformation in Teaching and Learning;	No
2023/2024	2º	Curriculum Development	Bachelor Degree in Digital Educational Technologies;	No
2023/2024	1º	Communication and Multimedia Learning	Bachelor Degree in Digital Educational Technologies;	Yes
2022/2023	1º	Multimedia Communication		No

Total Citations

Web of Science®	50
Scopus	87

Publications

- **Scientific Journals**

- Scientific journal paper

1	Costa, J. M., Miranda, G. & Melo, M. (2022). The four-component instructional design model (4C/ID): A meta-analysis on use and effect. Learning Environments Research. 25 (2), 445-463 - Times Cited Web of Science®: 37 - Times Cited Scopus: 41

2	Melo, M. & Miranda, G. L. (2018). The effects 0f 4C-ID model approach on acquisition and transfer of knowledge about electric circuits. International Journal of Web-Based Learning and Teaching Technologies. 13 (1), 94-110 - Times Cited Web of Science®: 2 - Times Cited Scopus: 2
3	Melo, M. (2018). The 4C/ID-model in physics education: Instructional design of a digital learning environment to teach electrical circuits. International Journal of Instruction. 11 (1), 103-122 - Times Cited Web of Science®: 11 - Times Cited Scopus: 17
4	Melo, M. & Miranda, G. L. (2018). Modelo instrutivo 4C/ID: Efeitos sobre as abordagens à aprendizagem de alunos do 9º ano. Análise Psicológica. 36 (3), 261-278
5	Melo, M. & Miranda, G. L. (2015). Learning electrical circuits: The effects of the 4C-ID instructional approach in the acquisition and transfer of knowledge. Journal of Information Technology Education: Research. 14, 313-337 - Times Cited Scopus: 20

- Review article

1	Melo, M. & Guilhermina Lobato Miranda (2016). Efeito do modelo 4C/ID sobre a aquisição e transferência de aprendizagem: revisão de literatura com meta-análise. RISTI - Revista Ibérica de Sistemas e Tecnologias de Informação. 18

• Books and Book Chapters

- Book author

1	Guilhermina Lobato Miranda, Rafael, M., Melo, M., Costa, J. M. & Pontes, T. B. (2021). 4C-ID Model and Cognitive Approaches to Instructional Design Technology: Emerging Research and Opportinities. Hershey. Igi global. - Times Cited Google Scholar: 1

• Conferences/Workshops and Talks

- Publication in conference proceedings

1	Melo, M. & Guilhermina Lobato Miranda (2014). Applying the 4C-ID Model to the Design of a Digital Educational Resource for Teaching Electric Circuits. In Habib M. Fardoun; José A. Gallud; (Ed.), Proceedings of the 2014 Workshop on Interaction Design in Educational Environments - IDEE '14. (pp. 8-14). Albacete, Spain: ACM Press. - Times Cited Scopus: 7

Awards

Prémio Instituto de Educação/Caixa Geral de Depósitos (2019)