

## Research on Educational Technology (MA)

### Aim of training

#### **Aim of the study program:**

The aim of the course is to develop students' research-related competences and show current trends in educational technology research. The course also provides students with an understanding on how to use digital tools for visualizing and reporting numerical information, and design measures to evaluate the success of technology initiatives. After a short introduction to the basics of education research, students will learn about quantitative and qualitative research methods related to digital technology in education. Students then will transform their own ideas and questions into research topics and research questions. After learning how to design research by studying the literature, previous research, and exploring research methods related to educational technology, as a final outcome, each student will write a research proposal with a well described aim, a short literature review, and planned methods of their research and expected results.

#### **Expected learning outcomes and related competencies**

##### Knowledge:

- Has knowledge of the latest results of research in education science and its neighbouring fields and the relevant pedagogical innovations; and is able to analyse and interpret them critically.
- Has an understanding of the general theories of communication and their forms of application in vertical and horizontal directions.
- Has knowledge of the terminology of education science in his/her mother tongue and at least in one foreign language.

##### Skills:

- Is able to make choices from relevant viewpoints while gathering information about the field of education science and its neighbouring disciplines using national and international databases; and is able to independently use and apply this information in work.
- Is able to compare research results with pedagogical practice.
- Is able to formulate practical implementation proposals.
- Is able to plan and carry out smaller research projects independently or in a group, is able to use accurately the quantitative and qualitative research methods, applies mathematical statistical methods with confidence.
- Is able to prepare professional materials according to independently chosen aspects, to present and analyse research results with objectivity, to write shorter professional texts independently.

Attitude:

- Has professionally established critical approach and committed to professional analysis based on values and knowledge.
- Considers important the social scientist perspective in their professional identity, is open towards the interdisciplinary approach of education science.

Autonomy and responsibility:

- Takes the proactive role in making phenomena understood, encouraging responsible thinking and applies a scientific-professional viewpoint in their decisions and actions.
- Makes individual decisions based on professional opinion, and prioritizes delivering opinion and acting based on research.

## Main topics

### Main contents

1. Introduction to educational research
2. The research design
3. Research questions
4. Searching and critical review of literature
5. Empirical methods in education related to educational technology
6. Qualitative and quantitative methods
7. Introduction to data analysis and management
8. Data analysis in practice
9. Academic writing
10. Academic presentations

### Planned teaching and learning activities

Class discussions, individual work, groupwork and homework.

## Evaluation

### Requirements, type and aspects of evaluation:

- Writing a research proposal (2500-3000 words) (template required)
- Presenting the written research proposal, using relevant ICT tools (10-15 minutes)
- Active participation at least 80% of the classes (based on HKR, up to 3 classes missing). Participation is a part of the final mark.

Type of evaluation: practice-based mark

The evaluation of the achievement during the semester:

1. Research Proposal - 60%
2. Presentation - 20%
3. Active participation in the classes, group and individual tasks, homework - 20%

Total obtainable points: 100%

Course grades:

- 5 (100-90%),
- 4 (90-80%),
- 3 (80-70%),
- 2 (70-60%),
- 1 (below 60%)

## Reading

- American Psychological Association (2010). *Publication manual of the APA (6th edition)*. Washington, DC: Author. [Retrieved from: <http://coral.wcupa.edu/other/APA6thEdition.pdf>]
- Cohen, L., Manion, L., & Morrison, K. (2013). *Research methods in education*. Routledge.
- Onwuegbuzie, A. J., Leech, N. L., & Collins, K. M. (2012). Qualitative analysis techniques for the review of the literature. *The qualitative report*, 17(28), 1. [Retrieved from: <http://nsuworks.nova.edu/cgi/viewcontent.cgi?article=1754&context=tqr>]
- Pallant, J. (2013). *SPSS survival manual*. McGraw-Hill Education (UK).
- Ross, S. M., Morrison, G. R., & Lowther, D. L. (2010). Educational Technology Research Past and Present: Balancing: Rigor and Relevance to Impact School Learning. *Contemporary Educational Technology*, 1(1). [Retrieved from: <http://cedtech.net/articles/11/112.pdf>]

### **Further resources:**

- American Psychological Association - Ethical Principles of Psychologists and Code of Conduct - <http://www.apa.org/ethics/code/>
- Science Direct – <http://www.sciencedirect.com/>
- ResearchGate – <http://www.researchgate.com/>
- Google Scholar - <https://scholar.google.com/>
- Sample Research Proposals - <http://www.education.uwa.edu.au/students/research/sample-proposals>