INSTITUTO POLITÉCNICO DE BRAGANÇA

Course Unit	Methodology of Research in Educational Technology		Field of study	Educational Sciences		
Master in	Information and Communication Technologies- Education and Training		School	School of Education		
Academic Year	2023/2024	Year of study	1	Level	2-1	ECTS credits	9.0
Type	Annual	Semester	-	Code	1083-622-1003-00-23		

Workload (hours)	243	Contact hours	T	-	TP	53	PL	-	TC	-	S	10	E	-	OT	18	O	-

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s)	Elza da Conceição Mesquita, Vítor Manuel Barrigão Gonçalves

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:
1. To know the different paradigms of research mobilizing the epistemological and methodological foundations that guide them
2. To understand the importance of the literature review to guide research decisions
3. To formulate problems and research objectives and, from them, select the plans of research, data collection techniques and decide on their treatment
4. To develop academic writing skills

Prerequisites

Before the course unit the learner is expected to be able to:
Not applicable.

Course contents

1. Epistemological questions in research 2. The positivist paradigm of quantitative research 3. From the interpretive paradigm to qualitative research 4. From the social critical paradigm to multi methodological or mixed plans

Course contents (extended version)

1. Epistemological questions in research
   - Paradigms in research: positivist paradigm, interpretive paradigm, social critical paradigm
   - From foundations to the methodological research options: quantitative, qualitative, praxiological
   - Concerns and ethical limits in research
2. The positivist paradigm of quantitative research
   - Research plans
   - The research problem
   - The review of the literature
   - The research hypotheses
   - The definition of variables
   - The sample
   - Data collection
   - Data processing: Descriptive statistics and inferential statistics (using SPSS or equivalent)
   - The internal and external validity of the investigations
   - The presentation and discussion of results
3. From the interpretive paradigm to qualitative research
   - Research plans
   - The emergence of the research problem
   - The review of the literature
   - The definition of research objectives
   - Group of participants
   - Data collection
   - Data analysis procedures (using NVivo, WebQDA, MaxQDA or other QAD program)
   - The validation of qualitative research
   - Presentation of data (traditional writing and postmodern writing)
4. From the social critical paradigm to multi methodological or mixed plans
   - Research plans
   - The definition of research problems, oriented for action, for change and for evaluation
   - The review of the literature
   - The participatory dimension of research projects
   - Definition of research objectives committed politically and ideologically
   - Collection and processing of data (mixed approaches)
   - Validation and co construction of research results
   - The quality of critical social research processes

Recommended reading

1. Amado, J. (2017). Manual de investigação qualitativa em educação, (3.ª ed.). Imprensa da Universidade de Coimbra.
2. Bardin, L. (2015). Análise de conteúdo (4.ª Ed.). Edições 70.
3. Coutinho, M. (2011). Metodologia de investigação em ciências sociais e humanas, teoria e prática. Almedina.
4. Creswell, J. (2014). Research design: Qualitative, quantitative, and mixed methods approaches (4th ed.). SAGE Publication Ltd.
5. Pestana, M. , & Gageiro, J. (2014). Análise de dados para ciências sociais. A complementaridade do SPSS. (6.ª ed.). Edições Sílabo.

Teaching and learning methods

Exploration of themes using active learning methodologies, including project-based learning and problem-based learning. Preparation of reports or research papers. Discussion of topics in small or large groups. Individual work or collaborative work. Resolution of consolidation tasks of the topics covered in the course.

Assessment methods

1. Continuous assessment - (Regular, Student Worker) (Final)
   - Development Topics - 50% (Development of a group work related to one of the topics covered in the course.)
   - Portfolio - 50% (The portfolio is made up of individual tasks to be carried out throughout the school year.)

IPB - School of Education

Information and Communication Technologies- Education and Training - Methodology of Research in Educational Technology - 2023/2024

Assessment methods

2. Assessment by examination - (Regular, Student Worker) (Supplementary, Special)
   - Final Written Exam - 100% (Written test about course contents)

Language of instruction

1. Portuguese
2. Portuguese, with additional English support for foreign students.

Electronic validation

Elza da Conceição Mesquita, Vítor Manuel Barrigão Gonçalves	Maria Raquel Vaz Patrício	Manuel Florindo Alves Meirinhos	Carlos Manuel Costa Teixeira
22-02-2024	23-02-2024	23-02-2024	25-02-2024

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