

Research Methods in Speech Therapy

Code: 101691
ECTS Credits: 6

Degree	Type	Year	Semester
2500893 Speech therapy	FB	2	1

Contact

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Use of Languages

Principal working language: catalan (cat)
Some groups entirely in English: No
Some groups entirely in Catalan: Yes
Some groups entirely in Spanish: No

Teachers

José María Losilla Vidal

Prerequisites

The student is assumed to have knowledge about the basic concepts of research methods that are taught in the subject Introduction to scientific methodology and psychological processes.

The student is not assumed to have special knowledge of mathematics except to know the basic notions of data analysis taught in the Access to University Course and/or in secondary education in the different curricula. However, it is essential to have basic user computer knowledge

Objectives and Contextualisation

At the end of the course the student will be able to:

1. Understand the assumptions on which the logic of scientific research is based.
2. Differentiate the methodological alternatives used in speech therapy research.
3. Know the characteristics of the designs commonly used in speech therapy.
4. Appraise the research process using the main quality criteria.
5. Distinguish the level of measurement with which some data have been obtained, as an essential requirement for selecting properly the corresponding graphical analyses and the statistics or indices to be calculated.
6. Use descriptive statistical indices in order to summarize the data and correctly interpret the results obtained.
7. Know the basic methodological vocabulary in Catalan, Spanish and English.
8. Perform basic data analyses using statistical analysis software.

Competences

- Demonstrate an understanding and correct use of the terminology and methodology of speech-therapy research.
- Evaluate the scientific production that supports speech therapists' professional development.

- Find, evaluate, organise and maintain information systems.
- Innovate in the methods and processes of this area of knowledge in response to the needs and wishes of society.
- Managing communication and information technologies.
- Reflect on and research into language and its treatment so as to help develop the profession.
- Students can apply the knowledge to their own work or vocation in a professional manner and have the powers generally demonstrated by preparing and defending arguments and solving problems within their area of study.
- Students must be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.
- Students must develop the necessary learning skills in order to undertake further training with a high degree of autonomy.

Learning Outcomes

1. Analyse a situation and identify points for improvement.
2. Argue suitably using within the framework of statistical thought.
3. Assess the usefulness of various theoretical models of language pathology, and methods and tools derived from each of these.
4. Critically and thoughtfully evaluate scientific literature, placing it within an epistemological framework.
5. Discriminate between applied research using different research methods and techniques to search for evidence in speech therapy.
6. Draw reasoned conclusions on the advantages and limitations of different methodological approaches to addressing applied problems.
7. Explain critically and in a reflective manner the characteristics, advantages and limitations of scientific methodology in the field of speech therapy.
8. Explain the application of the scientific method for obtaining and accumulating evidence in speech therapy.
9. Formulate and test hypotheses about the demands and needs of recipients, and concerning research.
10. Identify situations in which a change or improvement is needed.
11. Interpret the content and scope of a claim by scientific evidence and the most adequate type of study to address this.
12. Managing communication and information technologies.
13. Properly identify the key components that are involved and participate in the process of scientific research.
14. Propose new experience-based methods or alternative solutions.
15. Search, evaluate, organise and maintain information systems.
16. Set out reasoned proposals on methods of acquiring new evidence in speech therapy.
17. Students can apply the knowledge to their own work or vocation in a professional manner and have the powers generally demonstrated by preparing and defending arguments and solving problems within their area of study.
18. Students must be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.
19. Students must develop the necessary learning skills in order to undertake further training with a high degree of autonomy.
20. Use strategies pertaining to scientific method in the search for evidence in speech therapy.

Content

1. Principles of research methodology

Quantitative and qualitative methods, designs, and techniques in speech therapy research

Evidence-based practice

2. Experimental designs

Unifactorial between-subject vs. within-subject experimental designs

Factorial experimental designs

3. Quasi-experimental designs

Experiment vs. Quasiexperiment

Pre-experimental and quasi-experimental designs

4. Single case designs

5. Ex post facto" designs

6. Survey designs

7. Observational method

8. Qualitative and mixed methods

9. Data processing

Structure of a data matrix

Reading and defining variable properties

Creation of variables

Case selection

10. Data analysis

Univariate statistical description

Bivariate statistical description

Methodology

On this course we propose different activities based on active learning methodologies focused on the student. In this way a "hybrid" approach is outlined in which we combine traditional didactic techniques with other resources aimed at encouraging meaningful learning.

N.B. The proposed teaching and assessment methodologies may experience some modifications as a result of the restrictions on face-to-face learning imposed by the health authorities. The teaching staff will use the Moodle classroom or the usual communication channel to specify whether the different directed and assessment activities are to be carried out on site or online, as instructed by the Faculty

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Class lessons 1/1 group	34.5	1.38	1, 15, 5, 6, 7, 8, 16, 9, 13, 10, 11, 14, 19, 17, 18, 2, 20, 12, 4, 3
Class lessons 1/4 group	10	0.4	1, 15, 5, 6, 7, 8, 16, 9, 13, 10, 11, 14, 19, 17, 18,

Type: Supervised			
Review of integrated problems	5	0.2	1, 15, 5, 6, 7, 8, 16, 9, 13, 10, 11, 14, 19, 17, 18, 2, 20, 12, 4, 3
Tutorship	5	0.2	
Type: Autonomous			
Abstracts, diagrams and conceptual maps	11.5	0.46	5, 6, 7, 8, 16, 9, 13, 11, 19, 18, 2, 20, 4, 3
Assessment. Critical reading	3	0.12	1, 5, 6, 7, 8, 16, 9, 13, 10, 11, 14, 19, 17, 20, 4, 3
Comprehensive and critical reading of materials	36	1.44	1, 15, 5, 6, 7, 8, 16, 9, 13, 10, 11, 14, 19, 17, 2, 20, 12, 4, 3
Tutorial-based training in software: data process and analysis	30	1.2	15, 5, 6, 16, 9, 13, 11, 14, 19, 18, 2, 20, 12
Virtual tutorials with teachers and peers	12	0.48	

Assessment

Evidences

Type 1

- Assessment 1 (Ev1).
- Assessment 2 (Ev2).

Exceptionally, students who do not attend one of these evidences (Ev1 or Ev2) due to compelling circumstances may be allowed to provide the missing evidence during the reassessment week. They must provide documentary proof of the circumstances that justify their absence, and the decision on whether they are allowed to reset the examination will be taken by the teaching team.

Block 2

- Assessment 3 (Ev3). This activity is designed to set the pace of work, to reward continuous work, to consolidate concepts in a practical way and to answer questions that arise before taking Ev1.

* No unique final synthesis test for students who enrol for the second time or more is anticipated.

Definition of evaluable student

A student is considered evaluable when he/she has submitted evidence of learning with a weight equal to or greater than 4 points.

Definition of passing grade

A student has passed the course when he/she meets the following two conditions:

- He/she has obtained a minimum score of 5 points.
- In each of the type 1 evidence (Ev1, Ev2) he/she has obtained a minimum score of 3 points out of 10. In case of not reaching these requirements, the maximum score to be recorded on the student's academic transcript ("actas") will be 4.9 points.

Reassessment

On the date set by the Faculty, the type 1 evidences will be reassessed, by means of a theoretical-practical test of individual authorship. The following two conditions must be met for students to be eligible for

reassessment:

- a) Not reaching the criteria established to pass the subject, but achieving a final grade of at least 3.5 points
- b) Have submitted evidence with a weight equal to or greater than 2/3 of the total grade.

The grade of the evidence reassessed will be Pass if the score is greater than or equal to 5 points, or Fail if not.

*In this link you can check the evaluation guidelines of the Faculty of Psychology:

<https://www.uab.cat/web/estudiar/graus/graus/avaluacions-1345722525858.htm>

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Evidencia 1 (Assessment 1). Written individual in-person test. Contents: Foundations of Research methods. First assessment period.	5 points	1.5	0.06	1, 5, 6, 7, 8, 16, 9, 13, 10, 11, 14, 17, 18, 20, 4
Evidencia 2 (Assessment 2). Individual written virtual test. Contents: Data processing and analysis. Second assesment period.	5 points	1.5	0.06	1, 15, 5, 16, 13, 10, 11, 14, 18, 2, 20, 12
Evidencia 3 (Assessment 3). Practical exercise. Individual, written, virtual. Near the first assessment period.	0,5 points	0	0	5, 7, 8, 16, 9, 13, 19, 20, 3

Bibliography

Basic bibliography:

Portell, M., & Vives, J. (2019). *Investigación en psicología y logopedia: introducción a los diseños experimentales, cuasi-experimentales y ex post facto*. Servei de publicacions. Universitat Autònoma de Barcelona.

Losilla, J.M. & Vives, J. (2020). *Proceso y análisis de datos con Jamoi*. Universitat Autònoma de Barcelona.

Complementary bibliography:

Babbie, E. (2000). México: Thomson. Fundamentos de la investigación social. Thomson.

Gambara, H. (2002). (3ª Ed.). Métodos de investigación en Psicología y Educación. Cuaderno de prácticas. McGraw Hill.

Hernández, R. y Mendoza, C. P. (2018). Metodología de la investigación: Las rutas cuantitativa, cualitativa y mixta. McGraw-Hill.

León, O. y Montero, I. (2015). (4ª ed.). Madrid: Métodos de investigación en Psicología y Educación. McGrawHill.

Moreno, R., Martínez, R.J. y Chacón, S. (2000). Fundamentos metodológicos en psicología y ciencias afines. Pirámide.

Shaughnessy, J.J, Zechmeister, E.B i ZechMesiter, J.S (2007). Métodos de investigación en Psicología (7a Ed.). McGraw Hill

Solanas, A., Salafranca, L., Fauquet, J. y Núñez, M.I. (2005). Estadística descriptiva en Ciencias del Comportamiento. Thomson

Software

Data analysis block: Jamovi