



Teaching Guide

Identifying Data					2023/24
Subject (*)	Quantitative Research	Code	652536006		
Study programme	Máster Universitario en Dirección, Xestión e Innovación de Institucións Escolares				
Descriptors					
Cycle	Period	Year	Type	Credits	
Official Master's Degree	1st four-month period	First	Obligatory	3	
Language	Spanish				
Teaching method	Face-to-face				
Prerequisites					
Department	Didácticas Específicas e Métodos de Investigación e Diagnóstico en Educación				
Coordinador		E-mail			
Lecturers	,	E-mail			
Web	https://www.udc.es/es/centros_departamentos_servizos/departamentos/departamento/?codigo=D162				
General description	<p>The reality is complex, diverse and difficult to analyze, describe and interpret, which is why it is necessary for you to acquire a series of skills throughout your academic training that will allow you to develop your subsequent professional activity. For such circumstance, the learning and application of diverse methodologies of investigation, that are planned in this matter, will allow in one future to select the most suitable one to solve the problems that will be in their next labor scope. Without forgetting that within your work environment you will have to investigate in order to be able to approach possible solutions that improve the context in which your work activity is developed. The diversity of epistemological conceptions applicable to the different social situations will be a source of information for the researcher, allowing him/her to determine which is the most adequate to solve the problem he/she is facing. The aim is not to establish a priority or an order of importance among the various modes of research, but rather it is the research problem that will determine the choice of one methodology or another, making it more valid for this type of problem. All this has not made sense if we do not ask ourselves and answer the question: what do we want to achieve? There are many instruments that we can use to obtain data and, for each link, it is necessary to have knowledge of the wide range of possibilities. A good professional will be one who knows how to choose, in each circumstance, the methodologies that best suit the situation. Therefore, it is necessary to deepen the knowledge and mastery of the various tools at our disposal. Thus, in this area, the main methodologies that can be applied to the educational field will be analysed, indicating their fundamental characteristics, the advantages and disadvantages they present and the most appropriate circumstances or moments to put them into practice.</p>				

Study programme competences

Code	Study programme competences
A15	E15: Utilizar e analizar ferramentas e instrumentos dixitais para facilitar a comunicación e a xestión nos centros.
A16	E16: Analizar criticamente o papel das tecnoloxías dixitais na innovación educativa.
A25	E25: Coñecer distintos tipos de metodoloxías que se empregan na investigación educativa, considerando a súa pertinencia para a resolución de problemas concretos.
A26	E26: Recoñecer a investigación aplicada ás ciencias da educación como ferramenta continua de innovación e mellora educativa e social.
A36	E36: Establecer un compromiso ético deontolóxico a través dunha vinculación consecuente cos valores éticos da institución e institucionais e xestionar o centro de acordo cos principios éticos coherentes cun sistema democrático.
A37	E37: Coñecer as políticas, os modelos e as prácticas igualitarias de calidade e innovación educativa, para poder implementalas e promovelas nas institucións educativas.
A38	E38: Analizar e interpretar desde técnicas multinivel os caracteres máis relevantes dos sistemas educativos, desde un contexto transnacional global que permita comparacións complexas no ámbito da dirección e supervisión educativa.
A40	E40: Diseñar un proxecto de dirección/investigación nas liñas temáticas establecidas nas diferentes materias do mestrado.
B1	CB6: Posuír e comprender coñecementos que acheguen unha base ou oportunidade de ser orixinais no desenvolvemento e/ou aplicación de ideas, en moitas ocasións nun contexto de investigación.
B2	CB7: Que o estudantado saiba aplicar os coñecementos adquiridos e a súa capacidade de resolución de problemas en contornos novos ou pouco coñecidos dentro de contextos máis amplos (ou multidisciplinares) relacionados coa súa área de estudo.



B3	CB8: Que o estudiantado sexa capaz de integrar coñecementos e enfrontarse á complexidade de formular xuízos a partir dunha información que, sendo incompleta ou limitada, inclúa reflexións sobre as responsabilidades sociais e éticas vinculadas á aplicación dos seus coñecementos e xuízos.
B4	CB9: Que o estudiantado saiba comunicar as súas conclusións e os coñecementos e razóns últimas que as sustentan a públicos especializados e non especializados dun modo claro e sen ambigüidades.
B5	CB10: Que o estudiantado posúa as habilidades de aprendizaxe que lles permitan continuar estudando dun modo que haberá de ser en gran medida autodirixido ou autónomo.
B6	G1: Analizar, organizar, xestionar e interpretar a información e a toma de decisións.
B7	G2: Facilitar a mediación, xestión e resolución de conflitos, fomentando a non violencia, a prevención da conflictividade e a convivencia.
B13	G8: Comunicar obxectivos e estratexias educativas.
B16	G11: Integrar coñecementos e perspectivas para exercer a función directiva de maneira informada, xusta, crítica, comprometida, democrática, distribuída e solidaria.
B17	G12: Adquirir unha formación metodolóxica para realizar investigacións educativas.
B18	G13: Establecer os descritores xerais que caracterizan unha investigación: seleccionar, elaborar, tratar e interpretar os datos, e presentar os resultados de acordo cos propósitos da investigación.
B19	G14: Ensañar e avaliar formulacións de ensino disciplinares ou interdisciplinares en contextos educativos reais, e promover propostas de mellora en relación cos resultados obtidos.
C1	T1: Expresarse correctamente, tanto de forma oral como escrita, nas linguas oficiais da comunidade autónoma.
C3	T3: Empregar as ferramentas básicas das tecnoloxías da información e as comunicacións (TIC) necesarias para o exercizo da súa profesión e para a aprendizaxe ao longo da súa vida.
C4	T4: Desenvolverse para o exercizo dunha cidadanía respectuosa coa cultura democrática, os dereitos humanos e a perspectiva de xénero.
C7	T7: Desenvolver a capacidade de traballar en equipos interdisciplinares ou transdisciplinares, para ofrecer propostas que contribúan a un desenvolvemento sostible ambiental, económico, político e social.
C8	T8: Valorar a importancia que ten a investigación, a innovación e o desenvolvemento tecnolóxico no avance socioeconómico e cultural da sociedade.

Learning outcomes			
Learning outcomes	Study programme competences		
To know the terminology; the different phases of the planned research and the different methodologies in the quantitative field of educational intervention	AC25 AC26 AC40	BC2 BC3 BC4 BC17 BC18 BC19	
Analyze the information collected in the processes of educational intervention, using appropriate analysis techniques	AC15 AC38	BC1 BC5 BC16 BC17 BC18 BC19	CC3 CC7 CC8
Critically assess the knowledge, technology and information available to solve the problems they face from various perspectives, one of which is the gender perspective	AC16 AC36 AC37	BC6 BC7 BC13	CC1 CC4

Contents	
Topic	Sub-topic
THEME 1 - EPISTEMOLOGICAL AND METHODOLOGICAL FOUNDATIONS OF KNOWLEDGE AND EDUCATIONAL PRACTICES	1.1-Nature of educational research 1.2-Methodology in educational research.



THEME 2-Educational Research Process. PROCEDURES AND STRATEGIES FOR COLLECTING QUANTITATIVE INFORMATION. ANALYSIS AND INTERPRETATION OF QUANTITATIVE DATA.	2.1-Problems: needs and questions to investigate. 2.2-Sources of documentation: review of the conceptual and research literature 2.3-Variables, hypothesis and sample of a research 2.4-Data collection techniques: test, scales, questionnaires and interview. 2.5- Research report
Theme 3- METHODOLOGICAL DESIGNS FOR QUANTITATIVE RESEARCH	3.1-Experimental research. 3.2-Ex post facto research.

Planning				
Methodologies / tests	Competencies	Ordinary class hours	Student?s personal work hours	Total hours
Document analysis	A36 A37 B2 B5 C3 C4	1	3	4
Problem solving	A15 A16 A26 B3 B4 B17 B18 B19 C7 C8	2	22	24
Guest lecture / keynote speech	A26 A25 A36 A37 A38 A40 B1 B7 B16 B17 B18	6	13	19
Mixed objective/subjective test	B2 B3 B4 B5 B6 B13 B16 B17 B18 B19 C1 C3 C4 C7	2	10	12
Introductory activities	A25 A38 B1 B6 B13 C1	2	6	8
Personalized attention		8	0	8

(*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies	
Methodologies	Description
Document analysis	Methodology that involves the use of audiovisual and/or bibliographic documents (articles, educational texts, databases, etc.) relevant to the subject matter with activities specifically designed for their analysis (all by means of Campus Virtual) This methodology can be used: as an introduction to a topic, as an application tool, to explain processes that cannot be directly observed, for the presentation of complex situations or as a synthesis of theoretical or practical content (if the classroom is not in session this methodology will be followed in Campus Virtual and by teams)
Problem solving	The aim is to solve different problems that are exposed in relation to the contents of the subject, both from the most theoretical and practical point of view. It will be carried out in the classroom either in person or virtually (team groups) and under the supervision of the teacher. In this way, a continuous evaluation is carried out to check the understanding of the explanation in class and the application of the different situations.
Guest lecture / keynote speech	The different topics of the subject will be exposed, explaining the contents included in a way that allows interaction with the students and clarifying any doubts they may have. The bibliography will be presented to allow us to go deeper into the subjects exposed. For this we will use moodle with power point (if the classes become virtual power point will be with the recording of the explanations)
Mixed objective/subjective test	Test used for the evaluation of learning in both classroom and virtual classes (in the latter through the Campus Virtual application). The questions can be direct or incomplete statements, even questions with several options or alternative answers that provide possible solutions. But only one and the most correct one. IN THIS TEST INCORRECT ANSWERS WILL REMAIN CORRECT.
Introductory activities	An initial evaluation of the students' knowledge of the contents related to the subject will be carried out in order to introduce what will be taught and done in the class (this methodology will always be carried out by Campus Virtual, whether in the classroom or in the virtual classroom)



Personalized attention

Methodologies	Description
Document analysis Problem solving Guest lecture / keynote speech Mixed objective/subjective test Introductory activities	<p>In the personalised attention, the teacher will resolve any doubts the students may have about the different topics to be worked on in the subject. But also any doubts that may arise from the methodologies of the subject. During these sessions, the students' work will be monitored, supervising and guiding more directly the process to be followed in each of the activities carried out.</p> <p>This personalised attention will take place in the teacher's office (P1A19) during the tutoring timetable (due to the health crisis it will be through Teams). This timetable is posted on the board in the lecturers' office, on the department's website and in the Faculty of Education Sciences.</p> <p>Personalised attention will be given vis a vis between the students and the teachers (due to health crisis it will be through Teams). Students must first communicate with the teacher via the Virtual Campus, through the platform enabled for this purpose and where you must specify your full name to facilitate being called. Remember that the teachers are the ones who will set the timetable for @dito tutoring. If students do not request tutoring through this means, the teachers will not attend to them under any circumstances.</p>

Assessment

Methodologies	Competencies	Description	Qualification
Document analysis	A36 A37 B2 B5 C3 C4	<p>This methodology will only be used to evaluate the students' progress in the understanding of the theoretical contents of the subject (both face-to-face and virtual). It will be valued the use of different sources to carry out the tasks within the problem solving methodology. IT IS ESSENTIAL THAT EVERY STUDENT BRINGS TO THE CLASSES THEIR COMPUTER (teachers during the health crisis) AND ALL THE MATERIALS THEY NEED TO CARRY OUT THESE PRACTICES.</p> <p>Non-attendance students will not have this evaluation.</p>	20
Problem solving	A15 A16 A26 B3 B4 B17 B18 B19 C7 C8	<p>This task is intended for a single content of the whole subject. It is intended for students to combine other methodologies such as guided practice (guided worksheets), discussion groups, etc. However, bearing in mind that with the eres, the student will develop purely practical tasks on this subject with the support and supervision of the teacher. The teacher will present to the students the notes of this subject (through the Virtual Campus); first of all the teacher will present the contents of the subject in the sessions and will present guided practices for the students to carry out.</p> <p>The student must carry out all the proposed practices and incorporate them into a single document (the practices will be proposed in the classroom in person or by the health crisis this changes will be presented by Teams to the group of students in person, as a dossier, which will be delivered to the teacher within the established deadline, under the name of "Quantitative Research".</p> <p>Non-attendance students will not be called by teams to carry out these activities. Even the activities that must be included in their dossier will be different from those for on-site students (this material will appear in the Virtual Campus with the indication activities for non-face-to-face students). It is important to communicate before the second class (once the teaching of the master's degree has started) if you are a non-attending student.</p>	40



Mixed objective/subjective test	B2 B3 B4 B5 B6 B13 B16 B17 B18 B19 C1 C3 C4 C7	<p>The examination of the June or July call is what refers to the evaluation of this methodology. It will consist of a number of open answer items, or short answer items or true and false but justifying (the type of questions will be determined by the teaching staff). A question with an incorrect answer subtracts a question with a correct answer. This part is passed when a score of 20 out of 40 points is reached which is the maximum score reached here (no score is kept from any part, in any call, if it is failed).</p> <p>EXPLANATORY NOTE:</p> <p>The DATES OF THE EXAMS OF THE CALLS ARE MARKED BY FACULTY MEETING SO THEY DO NOT MOVE.</p> <p>This examination, if the health crisis situation allows it, will be done in person, if not through Campus Virtual</p> <p>All students (present or not) must take this test)</p>	40
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Assessment comments

In the evaluation of the subject (explained in the section of the teaching guide called "Step 7: Evaluation") the following will be taken into account first:

a) STUDENTS WHO ALWAYS ATTEND THE CLASS (or students with academic dispensation) (students in attendance) are considered to attend 80%, this is equivalent to not having more than 3 unjustified absences. Medical absences are justified (with proof correctly covered by a registered doctor) and absences for work (with proof correctly covered in the work where it is justified that in class hours is being worked) or any other absence always with the approved documentation. The activities carried out in each class must be carried out in the classroom; under no circumstances (with the exception of students with academic dispensation) may they be carried out outside the classroom. Class attendance will be counted from the answers to these activities. No more than two absences will be allowed in each part of the subject (collection techniques and analysis techniques). The grades of the knowledge tests that are carried out in the classes and will not be real until the dossier is delivered (Quantitative Research)

La evaluación de estos estudiantes tiene en cuenta lo siguiente: 1-La prueba mixta; 2-Análisis de fuentes documentales y 3-Resolución de problemas. Las evaluaciones de 2 a 4, ambas inclusive, serán efectivas cuando se presente el expediente (Investigación cuantitativa)

Nota explicativa:

Estos estudiantes permanecerán cara a cara (en las mismas circunstancias o perderán esta categoría) si, debido a la crisis de salud, las clases son virtuales. Ya que las clases serán virtuales pero a través de equipos. Para este enlace, la facultad configurará el grupo en equipos y tendrán clases en el mismo horario que fue aprobado por la junta de la facultad. La evaluación, en estas circunstancias (crisis de salud), siempre será por moodle.

b) Los ESTUDIANTES QUE NO ASISTEN A LA CLASE (estudiantes sin asistencia) se consideran ausentes cuando más del 80% de los estudiantes están ausentes, es decir, tienen más de tres ausencias injustificadas o tienen más de dos ausencias en una de las partes de la asignatura (técnicas para recopilar y / o analizar información). Las ausencias médicas están justificadas (con la prueba cubierta correctamente por un médico registrado) y las ausencias por trabajo (con la prueba cubierta correctamente en el trabajo donde se justifica que en horas de clase se está trabajando), aunque en ningún caso estas pruebas implican la posibilidad de llevar a cabo las actividades de las clases después de la fecha límite. Los estudiantes también pueden elegir esta opción desde el comienzo del curso (el primer día de clase los maestros presentarán esta opción que el estudiante puede elegir).

Estos estudiantes se presentarán a los exámenes de junio o julio. Se recomienda que los alumnos hagan el dossier de la asignatura de forma independiente, ya que serán evaluados en la prueba final de la asignatura (60%), junto con el contenido teórico de la prueba mixta (40%).

Sources of information



<p>Basic</p>	<p>Arnal, J., Del Rincón, D. y Latorre, A. (1992). Investigación educativa. Fundamentos y metodología. Barcelona: Labor.</p> <p>Bisquerra, R. (2004). Metodología de la investigación educativa. Madrid: La Muralla.</p> <p>Colás, P. y Buendía, A. (1992). Investigación educativa. Sevilla: Alfar.</p> <p>De La Orden, A. (1985). Investigación educativa. Diccionario de Ciencias de la Educación. Madrid: Anaya.</p> <p>De la Herrán (Coord.) (2005). Investigar en educación. Fundamentos, aplicaciones y nuevas perspectivas. Madrid: Dilex.</p> <p>Dendaluce, I. (Coord.) (1988). Aspectos metodológicos de la investigación educativa. (II Congreso Mundial Vasco). Madrid: Narcea.</p> <p>Etxeberria, J. y Tejedor Tejedor, F. J. (2005). Análisis descriptivo de datos en educación. Madrid: La Muralla.</p> <p>García, V. (1994). Problemas y métodos de investigación en educación personalizada. Madrid: Rialp.</p> <p>García, M. (2000). Socioestadística. Introducción a la Estadística en Sociología. Madrid: Alianza.</p> <p>García, M (coord.) (2015). El análisis de la realidad social: métodos y técnicas de investigación. Madrid: Alianza</p> <p>Hernández, R., Fernández, C. y Baptista, P. (2003). Metodología de la investigación. (3ª. Edic.). México: McGraw-Hill.</p> <p>Latorre, A. (2003). La investigación-acción. Conocer y cambiar la práctica educativa. Barcelona: Graó.</p> <p>León, O. y Montero, I. (1993). Diseño de investigaciones. Introducción a la lógica de la investigación en Psicología y Educación. Madrid: McGraw-Hill.</p> <p>Losada, J. L. y López, R. (2003). Métodos de investigación en Ciencias Humanas y Sociales. Madrid: Thomson.</p> <p>Orfelio, L (2015). Métodos de Investigación en Psicología y educación: las tradiciones cualitativas y cuantitativa. Madrid: McGrawHill</p> <p>Pérez, G. (Coord.). (2001). Modelos de investigación cualitativa en Educación Social y Animación Sociocultural. Aplicaciones Prácticas. Madrid: Narcea.</p> <p>Rodríguez, G., Gil, J. y García, E. (1996). Metodología de la investigación cualitativa. Málaga: Aljibe.</p> <p>Verd, J.M. (2016). Introducción a la investigación cualitativa: fases, métodos y técnicas. Madrid: Síntesis</p>
<p>Complementary</p>	<p>Almazán, A et al. (2011). Análisis estadístico para la investigación social. Madrid: Garceta</p> <p>Bisquerra, R (1987). Introducción a la estadística aplicada a la investigación educativa. Barcelona: Promociones y Publicaciones Universitarias.</p> <p>Bisquerra, R. (2004). Metodología de la investigación educativa. Madrid: La Muralla.</p> <p>De Lara, E. y Ballesteros, B (2001). Métodos de investigación en educación social. Madrid: Universidad Nacional de Educación a Distancia.</p> <p>De la Herrán (Coord.) (2005). Investigar en educación. Fundamentos, aplicaciones y nuevas perspectivas. Madrid: Dilex.</p> <p>Fox. D.J. (1987). El proceso de investigación en educación. Pamplona: Eunsa.</p> <p>Grim, P. (2010). La certeza absoluta y otras fricciones. Los secretos de la estadística. Barcelona: RBA Libros</p> <p>Monje, C (2011). Metodología de la investigación cualitativa y cuantitativa. Guía didáctica. Recuperado de: https://www.uv.mx/rmipe/files/2017/02/Guia-didactica-metodologia-de-la-investigacion.pdf (consultado: 03/07/2018)</p> <p>Sierra, R. (1987). Técnicas de Investigación social. Teorías y ejercicios. Madrid: Paraninfo</p> <p>Enlaces WEB: Métodos y técnicas de investigación https://www.gestiopolis.com/metodos-y-tecnicas-de-investigacion/ (consultado: 03/07/2018)</p> <p>Métodos de Investigación social: https://metodoss.com/investigacion-social/ (consultado: 03/07/2018)</p> <p>Metodología de la investigación: https://sites.google.com/site/51300008metodologia/caracteristicas-cualitativa-cuantitativa (consultado: 03/07/2018)</p> <p>Aula virtual: https://educacionadistancia.juntadeandalucia.es/profesorado/autoformacion/mod/book/view.php?id=3847&chapterid=3127 (consultado: 03/07/2018)</p> <p>Uso de los métodos cuantitativos y cualitativos en la investigación https://prezi.com/awtmyv2x2_9a/el-uso-de-los-metodos-cuantitativos-y-cualitativos-en-una-investigacion/ (consultado: 03/07/2018)</p>

Recommendations

Subjects that it is recommended to have taken before

Subjects that are recommended to be taken simultaneously

Action Research and Innovation/652536005

Qualitative Research in Education/652536004

Treatment of Qualitative and Quantitative Information in Research within the Management, Evaluation /652536007



Subjects that continue the syllabus

Leadership and Direction of Schools/652536003

Treatment of Qualitative and Quantitative Information in Research within the Management, Evaluation /652536007

Other comments



Comments

The following sources can be consulted:

 <http://www.udc.es/dep/fam>

<http://www.educacion.udc.es>

<http://www-ice.up.es/upc/ice/ice>.

<http://dialnet.inicaja.es>

<http://www.mec.es>

<http://bibloteca.udc.es>

<http://www.um.es/dep/mide/> RIE

<http://www.uv.es/>

<http://www.bne.es>

<http://aera.net>

Faculty

Environmental Committee (GREEN CAMPUS) is recommended:

It

is recommended to send the works telematically and if it is not possible, in the use of plastics, choose double-sided printing, use recycled paper and avoid printing drafts.

 -Sustainable use of resources and prevention of negative impacts on the natural environment should be made.

 -The importance of ethical principles related to sustainability values in personal and professional behaviour must be taken into account.

will

also recommend the use of INCLUSIVE LANGUAGE



(*)The teaching guide is the document in which the URV publishes the information about all its courses. It is a public document and cannot be modified. Only in exceptional cases can it be revised by the competent agent or duly revised so that it is in line with current legislation.