UTPL
La Universidad Católica de Loja

Vicerrectorado de Modalidad Abierta y a Distancia

Introduction to Educational Research

Didactic guide

UTPL

Facultad Ciencias Sociales, Educación y Humanidades

Introduction to Educational Research

Didactic guide

Carrera	PAO Nivel
Pedagogía de los Idiomas Nacionales y Extranjeros	V

Autor:

Fabián Marcelo Paredes Zúñiga

EDUC_3180

Universidad Técnica Particular de Loja

Introduction to Educational Research

Guía didáctica

Fabián Marcelo Paredes Zúñiga

Diagramación y diseño digital

Ediloja Cía. Ltda.
Marcelino Champagnat s/n y París
edilojacialtda@ediloja.com.ec
www.ediloja.com.ec

ISBN digital - 978-9942-25-999-8

Año de edición: noviembre, 2020

Edición: primera edición reestructurada en enero 2025 (con un cambio del 50%)

Loja-Ecuador

Índice

1. Information data

1.1 Subject presentation

1.2 UTPL Generic Competencies

- Critical and reflective thinking
- Orientation to research and innovation
- Ethical behavior, organization, and time planning

1.3 Professional Profile Competencies

To conduct research and innovation projects aimed at diagnosing and addressing situations and issues related to the profession and the context. These projects promote interculturality, inclusion, democracy, methodological flexibility in training processes, personalized learning, and interactions in virtual and/or onsite settings.

1.4 Issues Addressed in the Course

Limited knowledge of educational research approaches, designs, techniques, and instruments.

2. Learning Methodology

Introduction to Educational Research is a course intended for students to examine education and learning matters. Also, this course seeks to explain how learning develops through an individual's life. To successfully achieve the course objectives, we have established a methodology that will enable the students to work through the contents and activities smoothly.

This course considers the constructivist method, which improves students' learning level based on providing students with essential tools to build their knowledge. The activities proposed will help you learn to interpret information and acquire skills to obtain significant learning. Not to forget that the professor will guide you in this entire process.

Moreover, the course's formative process considers three essential Teaching activities, Application and experimentation activities, and autonomous activities.

Teaching activities are carried out through the teacher and students' interaction by means of technological resources such as Zoom and Canvas tools. The course set up allows collaborative work, which will help the students develop the activities in an environment that provides a better learning experience.

The application activities are designed for the students to develop their critical thinking skills. These activities are specific and explained in detail, so they know what they ought to carry out. Some of the activities are analysis of specific information through videos or scholarly work, and participation in discussions.

In the autonomous work, students will develop proposed activities own their own by recalling the information learned each week. This work will allow them to build knowledge by learning in a self- regulated way, researching, and reflecting on the materials provided.

It is essential to point out that students are not alone through this process, and they can reach their professor through telephone calls and chat to present their queries during the tutorials set time.






3. Didactic guidelines by learning outcomes

First bimester

Learning outcome 1:

Distinguishes key epistemological concepts as the basis of research and its relationship with research and knowledge.

Based on the following learning outcome, the student will be able to distinguish key epistemological concepts as the basis of research and understand their relationship with research and knowledge. This achievement will be realized through a detailed exploration of fundamental epistemological concepts, such as the nature of knowledge, the validity of sources, and research methodology. The practical application of these concepts will enable the student to develop a critical understanding of knowledge construction in their field of study, rigorously evaluating the epistemological foundations of research and its impact on generating valid and reliable knowledge. This reflective approach will contribute to the improvement of the quality and robustness of conducted research.

Contents, resources and recommended learning activities

Recuerde revisar de manera paralela los contenidos con las actividades de aprendizaje recomendadas y actividades de aprendizaje evaluadas.

Week 1

Unit 1. Introduction to Educational Research and Ethical Considerations in Research

The contents of week 1 include specific information, resources, and activities about epistemology as the basis of research, which means that you will learn about the nature and origins of human knowledge. Also, the activities proposed require the use of your critical thinking skills to develop arguments and express ideas about epistemology and the scientific method.

1.1 Epistemology Foundations

When we talk about research, we give very little attention to its origins. To understand how research develops, we need to delve into the subject matter. Epistemology refers to the philosophical principles and theoretical foundations, methodology, strategies, and research instruments.

According to Gadea et al. (2019), every human being has in mind their need for reflection, interest to know, and understanding of the sense and value of sciences. The starting point of the aspects mentioned above is the explanation and points of view of different authors and the most relevant theories in thought development

Before deepening our understanding of the epistemology foundations, it is essential to know the definition of epistemology. Gadea et al. (2019), explains that epistemology derives from the word “episteme”, which means “knowledge” or “understanding”, and the word “logia”, which means “science” or “study”. Therefore, epistemology translates to the scientific study of knowledge.

Moreover, Ceberion and Watzlawick (1998, as cited in Gadea et al., 2019) explain that the term epistemology derives from the Greek episteme, which means knowledge and is a branch of philosophy that deals with all the elements that seek the acquisition of knowledge and investigates the fundamentals, limits, methods, and validity of knowledge.

Furthermore, Parra (2000) defines epistemology as the science of science. Its objective is to examine the foundations of a particular discipline critically. In a more general sense, epistemology is understood as the theory of science. The author also explains that Epistemology means science's logic because science is conceived as structured and systematic.

Also, Cortes and Gil (1997, as cited in Gadea et al., 2019) share Piaget's definition of Epistemology, which says that epistemology is the study of the passage from lesser states knowledge to forms of more advanced knowledge. Piaget also wonders about how the subject goes from one level of knowledge to another, focusing more on the process of acquiring knowledge and not what the knowledge itself is.

Dear students, now that we have reviewed and learned the definition of epistemology, we will go back to its foundations. In this respect, Gadea et al. (2019), states that since its inception, human beings have always needed to ask themselves: Who are they and their dimensions as a person? Why is knowledge essential to understanding a part of the whole? In this sense, without a doubt, they need to have a comprehensive vision of themselves to interact with others and achieve a better understanding of reality.

To understand this better, the authors cite the following extract from the encyclical letter Fides et ratio from John Paul II:

Men have many means to progress in knowing the truth so that his existence can be more and more human. Among these stands out the philosophy that directly contributes to formulating the question about life's meaning and finding the answer; this, in effect, is configured as one of humanity's noblest

tasks. Questioning oneself about the reasons for things is inherent to one's sense; the answers given are framed in a horizon that evidences the complementarity of the different cultures in which men live.

To end this epistemology foundations section, Gadea et al. (2019), explain that the senses of certainty, truth, and conscience start from various manifestations of human thought that imply reflection of one's perceptions of reality with their environment, impressions of the things learned, which reflects from his existence and the different ways of conceiving knowledge

Finally, I encourage you to read the first two paragraphs in the following article Understanding in Epistemology, and compare it to what has been presented in this week of study.

1.2 Importance of Epistemology

After learning the definition and foundations of epistemology, it is essential to focus on the importance of this branch of philosophy on research in general. According to Parra (2000), epistemology is understood as the pivotal point of knowledge since its beginnings to the present day. Since the Greek's early thoughts, the metaphysical growth in the Middle Ages to the predominance of rationalism in modern times and the new theoretical constructions of contemporary philosophy. Also, the author states that the importance of epistemology centers on the structure of science.

In addition, Parra (2000) refers to the information provided by Barragan (1983), who says that epistemology is the central part of philosophy. From this field, efforts to solve problems like nature, possibility, and origins and essence of knowledge have been most concentrated. On the other hand, at the level of particular sciences, epistemology occupies a vital place today because it seeks to establish valid thought conditions. Also, because it makes a necessary disassembly of scientific theories, it analyzes the scientific method and ensures knowledge accuracy.

In this respect, Gadea et al. (2019), states that the importance of epistemology centers on how the human being has transformed or understood his environment by way of experimental and hermeneutical methods in the need to explain causes and essences phenomena.

Finally, Quintero (2007) explains that epistemology is crucial since it is a discipline interested in the dynamics of science to build knowledge, study the logic and mechanisms used by each of them to support reasoning, the validity of criteria, the of production of knowledge to understand it, support it and give alternatives for its accurate and reliable realization. The information provided by the author suggests that epistemology is a field interested in the particular and peculiar dynamics of knowledge

1.3 The Paradigms of Epistemology

Dear students, as we have previously learned, Epistemology is the study of knowledge, which examines how we come to understand the world and justify our beliefs. This field is foundational in research, shaping methodologies and guiding how scholars interpret findings. Within epistemology, three primary paradigms—positivism, interpretivism, and critical theory—offer distinct approaches to understanding knowledge. Each paradigm reflects unique perspectives on reality, research methods, and goals, making them essential tools for researchers across disciplines (Bryman, 2016; Creswell, 2018).

Positivism

Positivism is rooted in the belief that reality is objective and can be observed, measured, and explained through empirical evidence. This paradigm emphasizes using scientific methods to discover truths about the world, often employing quantitative approaches such as experiments, surveys, and statistical analysis. Positivists strive for objectivity, ensuring that the researcher remains a neutral observer whose influence does not alter the data. Their goal is to uncover cause-and-effect relationships, allowing predictions and generalizations (Bryman, 2016).

Key characteristics of positivism include its focus on empiricism, where knowledge is derived from sensory experiences and measurable evidence, and replication, ensuring that findings can be reproduced under similar conditions. While positivism has been widely used in fields like natural sciences and psychology, it has limitations. Critics argue that it oversimplifies complex social phenomena by focusing solely on observable data, often ignoring the rich context of human experiences (Creswell, 2018).

Interpretivism

In contrast to positivism, interpretivism views reality as socially constructed and multifaceted. This paradigm emphasizes understanding the subjective meanings individuals attach to their experiences and the contexts in which these meanings are formed. Interpretivists often immerse themselves in the settings they study, employing qualitative methods such as interviews, focus groups, and ethnography to collect data (Geertz, 1973).

Interpretivism values subjectivity, acknowledging that both the researcher's perspective and the participants' viewpoints influence the research process. Contextual understanding is paramount, as interpretivists seek to interpret behavior and motivations within specific cultural, historical, or social frameworks. This paradigm excels at providing deep, nuanced insights into human behavior and complex phenomena. However, its findings are often criticized for lacking generalizability and for the potential biases introduced by the researcher's subjective interpretation (Denzin & Lincoln, 2018)

Critical Theory

Critical theory offers a transformative approach to epistemology, focusing on uncovering and challenging power dynamics, inequality, and oppression within societies. Unlike positivism and interpretivism, critical theory is explicitly political, aiming not only to understand the world but also to change it (Habermas, 1984).

Researchers using critical theory often collaborate with participants as co-creators of knowledge, employing participatory methods and a mix of qualitative and quantitative approaches. They critique how power and ideology shape knowledge, seeking to empower marginalized groups and advocate for social change. Critical theory's strengths lie in its ability to expose hidden structures of power and promote actionable research. However, it is sometimes viewed as overly subjective or ideological, with practical applications limited by the complexity of addressing entrenched social inequalities (Kincheloe & McLaren, 2005).

To sum up the three paradigms of epistemology positivism, interpretivism, and critical theory provide invaluable frameworks for understanding knowledge and conducting research. Positivism's focus on objectivity and measurement offers clarity and predictability, while interpretivism's emphasis on meaning and context enriches our understanding of human experiences. Critical theory pushes the boundaries further, advocating for transformation and justice. By recognizing the strengths and limitations of each paradigm, researchers can select the approach that best suits their objectives and the questions they seek to answer (Creswell, 2018).

1.4 The Scientific Method

According to Mertler and Charles (2008), the scientific method is applied as a strategy when we need to answer questions and resolve issues. Its purpose is to discover valid facts and relationships. The author emphasizes that facts do not necessarily denote truths. Such facts are not unchangeable; they are seen as agreements concerning observations made by impartial observers. An example of facts in the scientific method can be the following:

"A teacher analyzes the scores students usually get in the subject of natural science and determines an average score of 9 out of 10, which will become a fact. However, two new students have been enrolled in the class. These students come from a rural school where natural science is not profoundly taught; therefore, these students' grades affect the average score making the previous score no longer a fact."

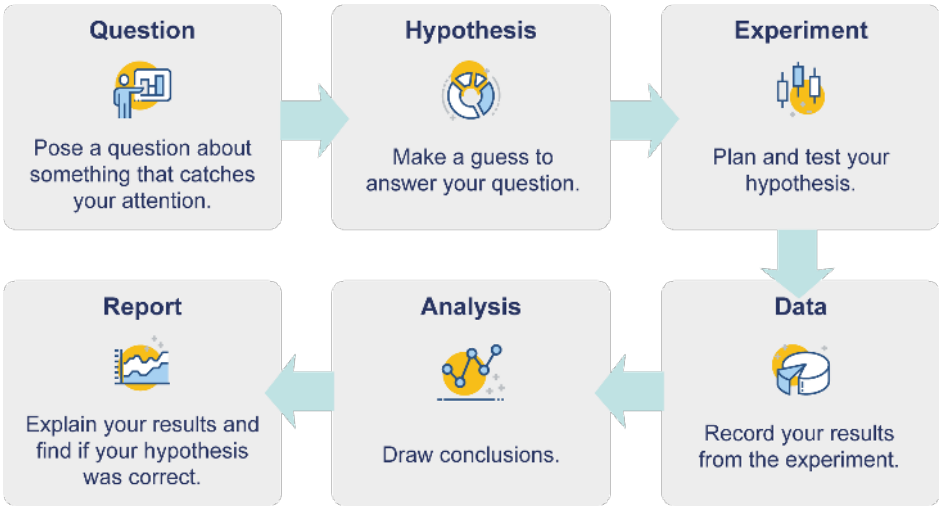
With the example in mind, Mertler and Charles (2008) explain that these facts can give us an understanding of conditions and events.

It is essential to note that the scientific method follows a set of steps that can be better understood by analyzing the following flowcharts:

General view:

Figure 1

Scientific Method's Steps

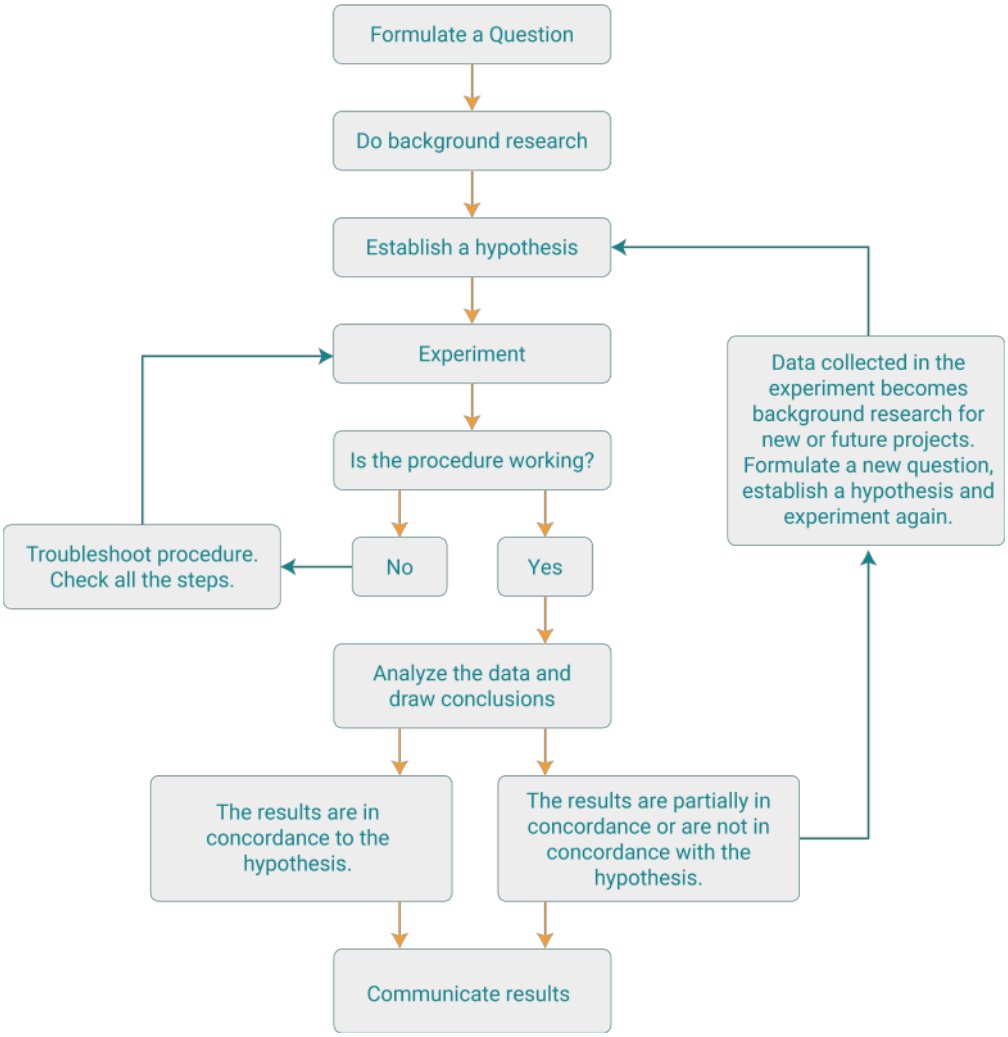


Note. Paredes, F., 2025.

Detail view:

Figure 2

Detailed Scientific Methods Steps



Note. Adapted from *Steps of the Scientific Method* [Illustration], by A. Cowen, n.d., Science Buddies.

After analyzing the flowcharts information, I invite you to reinforce what you know about this method by clicking on the following video about the Scientific Method, which explains the scientific method's process.

To wrap up I invite you to review and analyze the Main Activity of the Intro to the Scientific Method exercise, to practice the steps of your scientific methods.

Dear students, keep always in mind that the scientific method characterizes scientific knowledge and non-common knowledge. To understand this better, let us ponder the information in Table 1.

Table 1

Differences between scientific and common knowledge

Scientific knowledge	Common knowledge
• Predominantly objective • Answers how and why • Practical and theoretical • Precise • Uses technical language • Universal • Based on testing • According to the scientific method • Predictive	• Subjective • Answer how • Practical • Inaccurate • Uses common language • It is not valid in a universal way • Based on beliefs and experience • It is acquired at random

Note. Based on information found in Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research, by Cresswell, J., & Guetterman, T., 2019. Pearson Education.

Recommended learning activities

It is time to apply your knowledge through the activities that have been proposed below:

1. After studying the epistemology foundations, we can notice that information related to philosophy may sometimes be challenging to understand. Therefore, to help you comprehend, I advise you to summarize the information studied in your words. The summary you do now will allow you to recall this content when needed.

2. In this activity, you will share your ideas of the content learned by answering this one question: Why is epistemology important in science?
3. Now it is time to test what you learned about the scientific method by applying the experimentation steps. Remember that this method can be applied to elementary issues and the most complex research. We will think of something simple, like problems sending a message using a social network. For the exercise, use the empty flowchart provided. In case you need more information that can help you develop this activity, click on this video: Using Celery to Teach Scientific Method to examine an easy and creative example that relates the use of celery to explain the scientific method. So, the exercise is:

   Issue: I am trying to send a message through a social network, but it does not appear to reach the recipient

   Question

   _____

   Hypothesis

   _____

   Experiment

   _____

   Data

   _____

   Analysis

   _____

   Report

Note. Please complete the activities in a class notebook or Word document.

So far, so good. After studying the content and carrying out the activities in week 1, I can assure you that you now understand the definition, foundations, and importance of epistemology. Also, by finishing reading the last chart, you can apply the scientific method to any issues you may face. Let's continue.

Learning Outcome 2:

Explains when each of the three major research paradigms would be appropriate to apply in EFL research

The learning outcome focuses on enabling students to understand and analyze situations where different research paradigms are suitable for application in English as a Foreign Language (EFL) research. Through practical examples and critical analysis, students will develop a solid understanding of when and why to choose a particular paradigm based on the objectives and nature of research in the field of teaching English as a foreign language

Contents, resources and recommended learning activities

Recuerde revisar de manera paralela los contenidos con las actividades de aprendizaje recomendadas y actividades de aprendizaje evaluadas.

Week 2

Unit 1. Introduction to Educational Research and Ethical Considerations in Research

1.5 Important Ethical Issues in Conducting Research.

Ethics is a term we often hear, it is present in many aspects of human behavior, but rarely do we think of the meaning of ethics. To start studying this week's content, we must start with the definition of ethics. Even though many definitions can be found, all of them reach the same thought. Before showing you a video of the definition of ethics, it is fitting to know its origin; Ethics comes from the Greek word ethos, which means character. Note that the same ethic is present in every field of study.

Now, with the word character in mind, let us analyze the information provided in this video titled Ethics | Biology | FuseSchool.

After learning the meaning of ethics, we will focus on the relationship between ethics and research. Creswell and Guetterman (2019) explain in their book that professional associations provide specific guidelines for people who participate in research. The guidelines they present have the objective of avoiding unethical work. One of these professional associations is the American Psychological Association, which we will reference in the study of this week's content since it is the guidelines we follow in our academic work and research.

Before continuing, it is paramount that we set boundaries now regarding the field of studies. Since this course is called Introduction to Educational Research, from now on the content will relate to education, which means that we will focus on students and educational institutions.

In their book, Cresswell and Guetterman (2019) also say that people who are about to carry out research studies must be aware of the ethical guidelines before beginning their work. In this respect, the individuals need to understand the study's purpose, how the results will be used, and the consequences these results will yield. The authors note that ethical behavior must prevail during the entire process of the study. Focusing on ethical issues in data collection, Cresswell and Guetterman (2019) explain that the researcher must respect the place where the research is taking place. The following is a list of ethical behaviors to avoid any issues in the research site:

- Show respect to the site by not being disruptive and make sure the access has been granted by a school official (gatekeeper).
- During data collection, you may not deprive the participation of any individual.
- You must provide the research site with real results.
- Do not pressure any of the participants to sign consent forms.
- Respect the norms of indigenous cultures.

Regarding issues in data reporting, Cresswell and Guetterman (2019) explain in their book that researchers have to respect audiences. The audience is the people who will read and use the information from our work. Therefore, keep in mind the following:

- Honestly, report your data
- Do not plagiarize work from other authors.
- Credit authors when you use their information.
- Avoid jargon.
- Publish your results even if they are contrary to accepted standards.

With the overall idea of ethics and ethical issues, there is a need to cover publishing's legal aspects. The American Psychological Association (2009) explains that most of the information in their manual addresses the scientific writing style and not the writer's wrongdoings. The American Psychological Association (2009) also states that they provide guidelines to deliver information that creates clear communication. Also, they present basic ethical and legal regulations that scholarly research should follow.

These principles should guarantee the accuracy of scientific knowledge, the protection of the rights of the individuals participating in the research, and the protection of intellectual work.

1.6 Plagiarism and self-plagiarism

One of the most common mistakes in scientific writing is Plagiarism; sometimes, writers may not be aware of this fault. Therefore, it is important to understand the word plagiarism. The American Psychological Association (2009) explains that this word is the act of not giving credit to other people's ideas and using them as our own. It is important to always credit our sources by summarizing, paraphrasing, and citing them. To comprehend this better, let us analyze these videos about understanding plagiarism and how to avoid plagiarism.

Another mistake that we often engage in is **Self-plagiarism**, which The American Psychological Association (2009) defines as the action of using our previous work as new work. Let me rephrase this information in easier words, Self-plagiarism would be using parts of work that we have done before and include it in new work. Basically, the purpose of producing scientific and scholarly works is to present fresh information so though speak. For more explanation, let us analyze the content in this video titled Self Plagiarism What Is It.

To conclude this topic, take a minute to analyze the example below (table 2) of a paragraph that has been summarized and paraphrased.

Table 2

Difference between original text and paraphrase

Original text	Paraphrase
The ESP practitioner is often involved in various types of evaluation, including both the testing of students and their evaluation of courses in teaching materials. Tests are conducted to assess whether students have the requisite of language in skills to undertake a particular academic course or carrier, and - usually but not necessarily at the end of the course - the level of their achievement. Duddley- Evans, T. & St John, M. (1998). Developments in English for Specific Purposes: A multi-disciplinary approach. Cambridge University Press.	According to Duddley- Evans and St John (1998), ESP specialists usually evaluate learners and course materials. Assessing learners will yield essential information about the language knowledge they possess to undertake a specific course or career. The author notes that the assessment, not always happen at the end of a course.

Note. Paredes, F. 2023.

1.7 Using APA style 7th edition

As you have read in the information provided in this week of study, The American Psychological Association (APA) has been the reference of all the content explaining plagiarism. Previously, I mentioned that this was the format we follow at UTPL for scholarly work. Keep in mind that different associations present their writing style guidelines, such as the Modern Language Association (MLA) and the Chicago/Turabian Citation Style, but we do not make use of them.

As noted before, we need to give credit to the academic work we use as a source of information. Therefore, the best way to learn to cite and to reference this work is by analyzing examples. It is important to note that there are different ways of citing, depending on the source of information we desire to use in our academic or scientific work.

Now let us move on to the examples:

- **Intext citing at the beginning of the paragraph.**

According to Duddley-Evans and St John (1998), ESP specialists usually evaluate learners and course materials. Assessing learners will yield essential information about the language knowledge they possess

to undertake a specific course or career. The author notes that the assessment does not always happen at the end of a course.

- **Intext citing in the middle of the paragraph.**

ESP specialists usually evaluate learners and course materials. Assessing learners will yield essential information about the language knowledge they possess to undertake a specific course or career (Duddley-Evans and St John, 1998). The author also notes that the assessment, not always happens at the end of a course.

- **Intext citing at the end of the paragraph.**

ESP specialists usually evaluate learners and course materials. Assessing learners will yield essential information about the language knowledge they possess to undertake a specific course or career. The author notes that the assessment, not always happen at the end of a course (Dudley- Evans and St John, 1998).

- **Short quotations**

According to Dudley-Evans and St John (1998), "The ESP practitioner is often involved in various types of evaluation, including both the testing of students and the evaluation of courses and teaching materials." (p.17)

They stated, "The ESP practitioner is often involved in various types of evaluation, including both the testing of students and the evaluation of courses and teaching materials." (Duddley-Evans and St John, 1998, p.17

- **Long quotations**

According to Duddley-Evans and St John (1998), ESP specialists usually evaluate learners and course materials. Assessing learners will yield essential information about the language knowledge they possess to undertake a specific course or career. The author notes that the assessment, not always happen at the end of a course. In addition, Duddley-Evans and St John explain the following:

> The first role is important in countries such as the UK, USA, Australia, and New Zealand, where large numbers of international students do postgraduate courses or research. For the purpose of assessing, whether these students will be able to cope from a language point of view, a number of internationally recognized and validated tests exist, notably the British and Australian International English Language Service (IELTS), the NEAB's Test in ESOL and the American TOEFL Test. All but the TOEFL test have an ESP orientation. (p.17)

The authors also mention that ESP teachers need to decide on evaluations to assess their students' knowledge.

Reference list

- *Book (two authors):*

Duddley- Evans, T. & St John, M. (1998). *Developments in English for Specific Purposes: A multi-disciplinary approach*. Cambridge University Press.

- *Book (one author):*

Richards, J. (2005). *Professional Development for Language Teachers Strategies for Teacher Learning*. Cambridge University Press.

- *Research study:*

Kalay, D. (2017). What Makes an Effective EFL Teacher? Investigations on Student and Teacher Perspectives. *International Periodical for the Languages, Literature and History of Turkish or Turkic*, 12 (15), 421-444. http://dx.doi.org/10.7827/TurkishStudies.12187

Important: Sources of information may differ depending on the number of authors and types of academic and scientific works. Therefore, it would be very complicated to remember how to cite them all correctly. The best way to cite sources according to its type is to check for specific examples on the web. To find formats and examples, you can visit the following webpage called APA STYLE.

Recommended learning activities

It is time to apply your knowledge through the activities that have been proposed below:

1. Analyze again the video Ethics | Biology | FuseSchool, I encourage you to do your best in defining ethics in your own words, starting the paragraph with: “For me ethics is …”
2. To test the understanding of the content you watched in the videos: understanding plagiarism, how to avoid plagiarism and Self Plagiarism

What Is It . I invite you to write key information or examples of when we engage in plagiarism, saying to yourself: “I would be plagiarized and self-plagiarized when: …”

3. To practice your APA style 7th ed. citation skills, I encourage you to do the following exercises:

   • Summarize and paraphrase the extract below.

   Computer evolves learners in communicative exchanges is using the computer. CMC is a text-based medium that may amplify opportunities for students to pay attention to linguistic form as well as providing a less stressful environment for second language practice and production.

   Book: Second Language Research

   Authors: Alison Mackey and Susan M. Gass Year: 2005

   • Unscramble the pieces of information to correctly cite a scientific article in a reference list.

   Reference list

   _____

   http://dx.doi.org/10.6018/reifop.20.1.229641

   _____

   Revista Electrónica Interuniversitaria de Formación del Profesorado,

   _____

   (2016).

   _____

   The textbook as an object of study and teaching resource for learning: strengths and weaknesses

Fernández, P.

201-217

20(1),

Note. Please complete the activities in a class notebook or Word document.

4. To evaluate the learning acquired on this topic, I invite you to develop the self-assessment presented below.

Self-assessment 1

Self-assess your knowledge by choosing the correct answer.

1. Epistemology is a branch of _____ that seeks the acquisition of knowledge and investigates the fundamentals, limits, methods, and validity of knowledge.

   a. Psychology.
   b. Philosophy.
   c. Ethics.

2. ____ can be understood as the scientific study of knowledge.

   a. Educational Research.
   b. Epistemology.
   c. Etymology.

3. The word Epistemology derives from the Greek words.

a. Logia which means knowledge and episteme that means science.
b. Episteme which means understanding and Logia that means study.
c. Episteme which means science.

4. The importance of epistemology relies on _____.

a. Establishing valid thought conditions.
b. Explaining effects of science.
c. Studying common knowledge.

5. Epistemology centers on how the human being has transformed or understood his environment in the need to _____.

a. Explain essences phenomena.
b. Explain effects of the scientific method.
c. Explain causes and essences phenomena

6. The purpose of the scientific method is discovering _____

a. Invalid facts and relationships.
b. Valid facts and invalid relationships.
c. Valid facts and relationships.

7. The logical steps of the scientific method are:

a. Question, Hypothesis, Experiment, Analyze, Data and Report.
b. Question, Experiment, Hypothesis, Data, Analyze, Report.
c. Question, Hypothesis, Experiment, Data, Analyze, Report.

8. _____ is universal, based on testing, uses technical language, precise, answer how and why.

a. Common knowledge.
b. Scientific knowledge.
c. Qualitative research.

9. The first step of research is _____ .

a. Making a guess to answer your question.
b. Reporting your results.
c. Posing a question about something.

10. The scientific method is applied _____ issues.

a. As an instrument when we need to ask questions and resolve.
b. As a strategy when we need to ask questions and make.
c. As a strategy when we need to answer questions and resolve.

Ir al solucionario

Contents, resources and recommended learning activities

Week 3

Unit 2. Designing a Research Project (Part 1)

2.1 Characteristics of quantitative and qualitative research

Dear students, in this unit, we will learn key elements that are the basis of a research project. When we start research, we will stumble upon many terms, words, and information unfamiliar to us. Two of those terms that we will hear very often in research are Quantitative and Qualitative Research. Before we start learning about these two approaches, we need to be informed of the definition of research.

Have you ever thought of what research means?

Creswell and Guetterman (2019) define research as “a process of steps used to collect and analyze information to increase our understanding of a topic or issue.” (p.3)

Now that we are aware of the definition of research, we will learn about Quantitative and **Qualitative** research. We need to decide between these two approaches or the mix of both approaches according to the research type we will carry out. Each one of them has its unique characteristics. However, before we go over the characteristics, I want to tell you to always keep in mind that Quantitative is associated with quantity and deals with information in the form of numbers. Qualitative is associated with information or attributes of things that cannot be measured using numbers.

To learn both approaches' characteristics, let us read and analyze the information that Adjei (2017) presents in his book through the following infographic called quantitative and qualitative characteristics.

Quantitative and Qualitative Characteristics

In addition to the infographic above, I exhort you further revise the first chart titled Comparison of qualitative & quantitative research.

To deepen your knowledge about the approaches, I also invite you to study what Creswell and Guetterman (2019) explain in their book:

Quantitative Research Characteristics

- The research problem is described by tendencies or the relation between variables.
- Purpose statements, research questions, and hypotheses are precise, narrow, measurable, and observable.
- Instruments are used to collect data from a large number of participants.
- The data is analyzed statistically to compare groups of participants, analyze trends, and relate variables. The results from the analysis are compared with prior predictions and previous research.
- An unbiased approach is used when writing the research report.

Qualitative Research Characteristics

- It focuses on the detailed study of the central phenomenon.

- The literature is not as extensive as the other approach, and it justifies the problem.
- The research questions and purpose statement are set in an open-ended way to capture the participants' views.
- The data collected is in the form of words or images for a reduced number of participants.
- It uses text analysis to interpret the findings.
- Flexibility in the structure of the report.

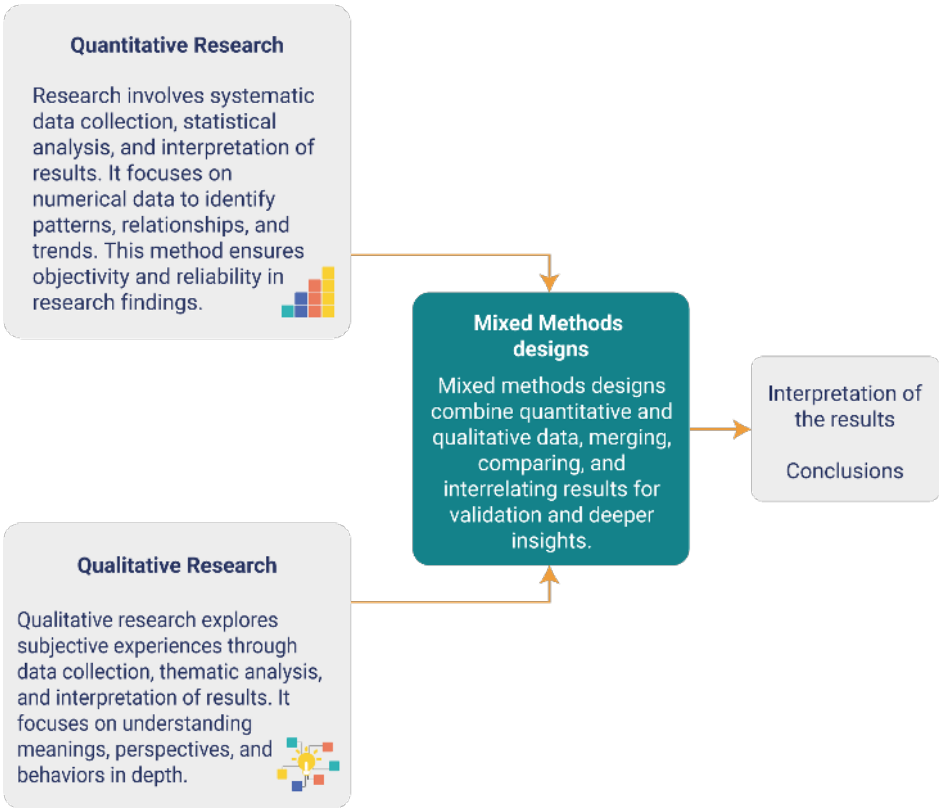
After analyzing the information in both charts, you now have an idea of both approaches. With the information we just learned, we will focus on the **Mixed methods design**, which is a mix of the Quantitative and Qualitative approaches. According to what Creswell and Guetterman (2019) explain in their book, this method is used when you have collected quantitative and qualitative data. Working with the two types of data, you can offer a better comprehension of the research problem. Using this method can be very useful when you want to use the strengths of both qualitative and quantitative approaches.

It is essential to mention that many researchers use this method nowadays because of the reasons I have explained before. For example, you can analyze numerical results and then reinforce your analysis with the qualitative data collected. Think of this as a potent mix.

To help you have a clearer picture of the mixed methods design, let us analyze the following Figure 3:

Figure 3

Mixed methods design



Note. Paredes, F., 2025.

For further information read pages 113-115 in the following document titled Mixed Methods Research in Education: Capturing the Complexity of the Profession.

In the information presented above, you may have read the term **variable.** Every time we talk about research questions and hypotheses, we will refer to variables. Therefore, it is pertinent to understand what a variable is.

Essentially, there are two types of variables: dependent and independent. To know more about these variables, I exhort you to watch this video about CAC Dependent and Independent Variables.

Recommended learning activity

It is time to apply your knowledge through the activity that has been proposed below:

After watching the video about CAC Dependent and Independent Variables., let us practice what we have learned about variables by carrying out the exercises suggested by the teacher in the video. The activity requires you to identify the dependent and independent variables and write them in the horizontal and vertical axis. Keep in mind that the independent variable goes on the horizontal axis.

- Weight loss / Physical activity
- Positive feedback / Self-confidence
- Headache / Aspirin

Note. Please complete the activity in a class notebook or Word document.

How did you do in the activity? I bet you did great! Let us continue with the next topic in Unit 2

Contents, resources and recommended learning activities

Week 4

Unit 2. Designing a Research Project (Part 1)

2.2 Research Designs in Quantitative and Qualitative Research

In this week's work, we will study different research designs. To start, let me share the definition of design. In their book Creswell and Guetterman (2019) say that research designs are specific strategies to carry out research. They are applied in data collection, analysis of results, and report writing. All these depend on the type of approach we use for our research

Experimental designs: In this design, the researcher splits the participants into two groups. Group one will have an intervention, meaning that the experiment will take place with this group. The second group will continue as normal with any intervention. To understand this better, let me explain it with an example:

Imagine that a teacher wants to know if the use of blogs can improve the writing skills of students. He decides to experiment with one of his classes. He will incorporate activities that use blogs with class 1(experimental group). Class 2 (Control group) will continue studying without any intervention. At the end of the experiment, the teacher will assess the impact blogs had in developing writing skills in group one. Then, he will compare the learning outcomes of both classes and conclude.

Correlational designs: As the name says, this design relates to the relation between variables. In last week's content, we learned about variables, and if you missed this information, I suggest you review that information. In this design, we try to know how the variables interact with each other. When one of the variables changes, we will know how the other variable will react. To understand this better, I invite you to analyze the following example:

A researcher is studying the correlation between lack of motivation and misbehavior in students. I the study, you can identify two variables: lack of motivation and misbehavior. Let us assume that a lack of motivation has a negative impact on students' behavior. This means that teachers who are not able to motivate are likely to have students who misbehave.

Survey designs: In this research design, the investigator is going to apply surveys to collect information from the participants. Usually, in this design, the sample (participants) is large. Most of this research is not experimental since it does not seek to find relations among variables but to get information about single variables. An example of this design would be finding out the percentage of students who want the teachers to incorporate technology in class.

QUALITATIVE RESEARCH DESIGNS

Grounded Theory Design: This research design is considered revolutionary since its focus is different from the other designs. In Grounded Theory, researchers will not study the participants as a whole, but instead, the direction of the analysis is on each individual in a group of participants. In most of the research designs, we start the analysis after we have finished collecting the data. In grounded theory, we analyze the data at the same time we collect it. A key element in this design is the constant comparison between the data collected from individuals and concepts and vice versa. To understand this better, let us revise the example below:

Let us think of a researcher who collects information on the opinions students have on using songs to develop listening skills. He starts collecting this information one by one, and it starts comparing and analyzing what every student said about the topic. From the analysis of that information, the researcher comes up with concepts. Later on, he finds more participants that provide more information; this time, the researcher can compare the new information with the concepts he developed from the first data. In the future, the researcher may do a comparison of concepts.

Ethnographic Designs: In this type of design, the researcher will focus on the specific cultural characteristics of the participants. In other words, they all belong to one specific group that has similar characteristics. Summarizing the information Creswell and Guetterman (2019), state that interest in doing ethnographic research start by learning more about the participants' beliefs, behaviors, and language development. The researcher immerses in the participants' environment and culture to collect data to understand a specific problem. Let us reinforce what you just learned about ethnographic designs by reading the next example:

A researcher seeks to study indigenous students' thoughts from a rural school in Ecuador about American movies to learn about culture and language.

Narrative Research Designs: According to what Creswell and Guetterman (2019) express in their book, researchers use this type of research design when they are not interested in analyzing the participants' behavior or ideas.

The interest is in telling someone's story by researching and collecting information about a specific individual's life and writing narratives about their experiences. The researcher acts as the interpreter of the individual's account. As an example, we have the following:

A researcher is set to collect all the teacher's experiences and feelings about using technological resources to teach during the pandemic. These experiences are later presented to the community.

After learning about Quantitative and Qualitative research designs, let us focus on one final design that is used in both Quantitative and Qualitative approaches.

Action Research Designs: Creswell and Guetterman (2019), state that this design is commonly used in schools to solve practical problems. Teachers collect quantitative and qualitative data to make improvements in the teaching-learning process.

Dear students, please note that we are referring to problems encountered in our educational settings when we talk about practical problems. As teachers, we need to improve or learn more about the problem to make corrections or experiment to solve or alleviate any issues. Let us read the example below to have a better understanding of Action Research Design:

A teacher identifies a problem in the classroom; after analyzing the students' scores on a reading test, he understands that students have issues with this specific skill. He examines the texts they use for reading activities, so he plans to use texts of interest for the students and lets them choose the books they want. After a while, the teacher assesses his students and notices that they have increased their scores, meaning that they have developed reading skills. The teacher can now apply the same tactics in his future courses. The teacher can also share this information with other teachers.

Recommended learning activities

Read the following research scenarios and classify each one as **experimental**, **correlational**, or **survey**. Write your answers and provide a brief justification for each choice.

Scenarios:

1. A teacher wants to determine if interactive games improve students' vocabulary retention. She teaches one group with interactive games and another using traditional methods, then compares their test scores.
2. A researcher is investigating the relationship between students' screen time and their academic performance.
3. A university collects data from 500 students to determine how many prefer online classes over in-person classes.

Now that we have a good idea of different research designs, we may proceed to the next content about the research problem.

Week 5

Unit 2. Designing a Research Project (Part 1)

2.3 The Research Problem and its Importance.

Very often, we ask ourselves how we start research. Well, let me tell you that every research starts by identifying a problem or issue. If we do not have a problem, we will not be able to start research. The research problem is the cornerstone of a study. Think of this problem as the foundation of a house; without the foundation, you are very unlikely to build the house.

In addition, Creswell and Guetterman (2019), explain that the most challenging part of research is correctly identifying a problem, basically because beginner researchers do not know if all the issues are researchable.

To immerse ourselves in this topic, let us start by defining research problems. Creswell and Guetterman (2019), state that "Research problems are the educational issues, controversies, or concerns that guide the need for conducting a study." (p.59)

Moreover, Mertler and Charles (2008), indicate that instructors always have questions for educational matters and need to find answers. These concerns or questions may yield numerous topics for research. To understand this better, what better way to present you with some examples of general areas to start research:

- Classroom environment.
- Educational materials.
- Teaching Methods.
- Classroom management.
- Assessment
- Curriculum.
- Special education.

Of course, the general areas need to be polished and refined to determine the topic from which we will start our research. Let us take one of the examples above and see which topics we could research.

To deepen the information you have just read, I invite you to watch this video about Finding a Research Problem.

2.4 Difference Between the Research Problem and other parts of the Research.

Beginner researchers may get confused with some parts of the research, mostly when we talk about the research problem, the topic and the purpose of the study, and the research questions

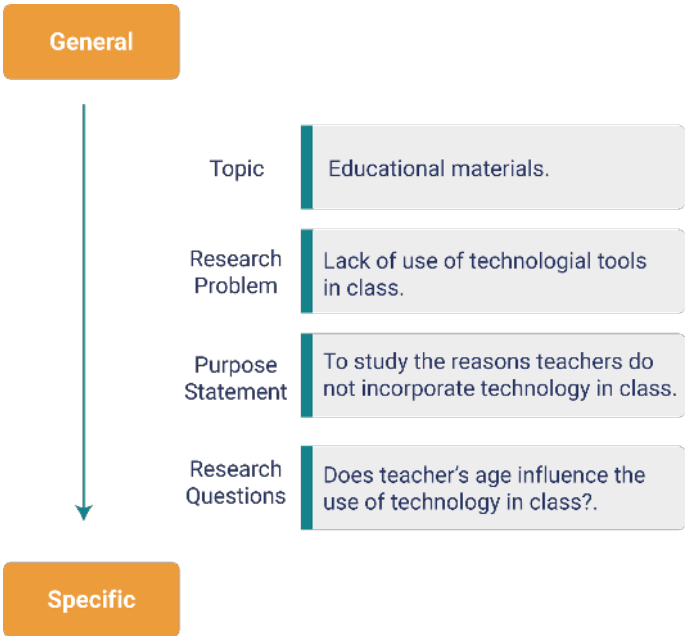
In this respect, Creswell and Guetterman (2019) explain that the research problem must stand out from the other parts of the study to not lose focus on what we are investigating. Let us now identify the different parts of a study:

In their book, Creswell and Guetterman (2019) note that the Research topic is the most general subject matter that will be addressed in the study. Examples could be the ones we listed before Classroom environments, educational materials, etc. The same authors define the **Research problem** as the specific issue we will study, it is narrower than the Research Topic. Additionally, Creswell and Guetterman (2019) mention that the study's intention or goal is called the **Purpose**. Finally, to narrow the study's purpose, the researcher will write the **Research Questions** the study will answer.

To picture this more clearly, let me show you an example using the format presented in Creswell and Guetterman (2019) and one of the topics we previously mentioned in this guide. Let us review the figure 4.

Figure 4

Distinguishing Among the Topic, Research Problem, Purpose and Research Question



Note. Based on information found in Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research, by Cresswell, J., & Guetterman, T., 2019, Pearson Education. CC BY 4.0.

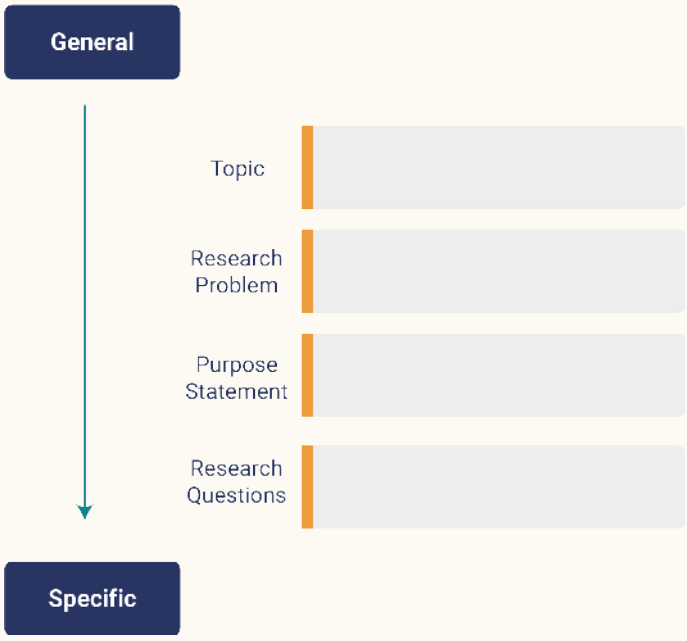
Recommended learning activities.

It is time to apply your knowledge through the activities that have been proposed below:

1. With the information you watched in the video about Finding a Research Problem and the information you read, I prompt you to think about the time when you were in high school and recall problems you faced when studying English, and that could be the start of research to find answers or possible solutions. Then, list them, I will help you with one:

I remember that the books we used had too much grammar and not so many speaking activities. The lack of speaking activities did not help us pick up fluency and correct pronunciation

2. Now that you have learned about the parts of research, I encourage you to choose one of the general topics in section 2.3 and complete the elements of research in the following figure.



Note. Based on information found in Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research by Cresswell, J., & Guetterman, T. (2019). Pearson Education.

Note. Please complete the activities in a class notebook or Word document.

I am sure you filled out the figure and did great in the exercise. Let us move on to the content in Week 6.

Week 6

Unit 2. Designing a Research Project (Part 1)

2.5 Problems that need research

Dear students, so far, we have addressed essential information about the parts of the research, but most importantly, we have learned of the research problem as our starting point for research. In this week's content, we will learn about the feasibility of the study.

To start we are going to ask ourselves: **can** and **should** all problems be studied? The answer to this is NO; there are several aspects that we need to consider before we start to research.

Let us start with **can**

Creswell and Guetterman (2019) explain that the first aspect we need to consider is access to the educational institution (elementary school and high school), where we plan to carry out our research. We ought to understand that we need approval from schools, principals, teachers, parents, and the students themselves for this endeavor. Therefore, a key determinant to carry out our study is to have all the permissions we have just listed.

In addition, the authors also explain that even if you get access to students and sites, you must analyze the time, resources, and skills you possess to carry out research.

- **Time:** Creswell and Guetterman (2019) indicate that researchers must understand the time they need to complete the research. Therefore, they have to foresee the time for collecting and analyzing the data. The authors also note that Qualitative Research takes longer than Quantitative Research because the data collected is lengthy and more difficult to interpret. Remember that in qualitative research, you need to analyze sentences and

words. In their book, Creswell and Guetterman (2019) remark that one way to better understand the time the research will take is to analyze similar research and contact other researchers with more experience.

- **Resources**: Carrying out research work needs of funding; therefore, researchers have to be aware of all the resources needed for the study, taking into account funds for the equipment that will be used, the participants, and the people involved in the gathering and analysis of data. In this respect, Creswell and Guetterman (2019) remark that creating a budget is essential to understanding the research study's realistic expenses. To create a budget, the authors suggest that we get advice from researchers who have experience. After analyzing all the future costs, the researchers may limit their resources or find external funding to carry out the study.

- **Skills**: Skills are one of the most critical elements of research. When we talk about skills, we are referring to the knowledge you have in doing research. Creswell and Guetterman (2019) note that the researcher's skill will influence the study's development. Researchers acquire skills from experience doing research, taking courses, and training. If you want to do Quantitative research, you need to know statistics, the creation of tables to organize information and knowledge of using computers. For Qualitative research, you will need to have some experience in using software to analyze the participants' words, correlate information into broad themes, and write elaborated excerpts.

Let us continue with **should.**

Once again, to start this topic, I will pose the following question:

Should your problem be studied? The answer to this question is built on several aspects; Creswell and Guetterman (2019) state that the main reasons for the problem being researched are "research adds to existing information and to inform our educational practices." (p.62)

To know if we should go ahead with the study of the problem, Creswell and Guetterman (2019) presents five ways to determine it:

1. We can research the problem if it **fills the existing literature gap**. This means that our research will cover or produce information that has been left out in previous research. An example of this would be the following:

   Imagine that there has been a study about high school students' perceptions of using the application of Socrative to assess the grammar structures learned in the unit. However, the researcher has not collected the perceptions teachers have in using this application. As you can see, there is information that your study could cover; information that previous research did not include

2. The next step to consider researching your problem is if **your research replicates previous studies but with different participants (sample) and research sites**. Your study would be of great importance since you are extending the results to more people and places. To comprehend this better, I will use the previous example with minor modifications:

   A study was carried out to learn about the perceptions that high school students had in using Socrative as an assessment tool. For our research to be of value, we could do the same study, but we will select different participants This time, we can study the perceptions of elementary school students.

3. Creswell and Guetterman (2019) also explain that you should study the problem if **your topic deeply examines other research issues**. This means that your research problem will be studied in-depth, and it will yield a new topic or area of study. The understanding of the matter will be at a higher level. Example:

   Imagine that there is previous research on critical issues such as students bringing weapons to schools. The researcher gathers and analyzes information on how to help school authorities in controlling violent students. They have analyzed that counseling students regularly is an

excellent way to deter students from violent acts using weapons. You decide to go deeper into the study of this matter, and you start to research what encourages students to bring weapons to school. You interview them and their parents to understand what causes this behavior and if there is a link between the environment where they live and school

4. Moreover, Creswell and Guetterman (2019) say that the problem should be studied when "**it gives voice to people silenced, not heard, or rejected in society**." (p.63). Dear students, always keep in mind that we are giving back to society when we do research. Doing research is not just a mere act of creating knowledge but using this knowledge to enhance society's well-being. Let us read the following example:

   You want to carry out research in a rural school in one of our indigenous communities. You plan to collect information from the participants regarding English learning without using technology and up-to-date textbooks. After analyzing your results, you find out that learning English without technology and good books slows the learning process. The students' learning outcomes are inferior to the students in the city. By publishing these results, you would be exteriorizing the problems rural schools have regarding access to technology and materials, influencing educational institutions to address the issue.

5. Finally, the authors present the last reason for researching your problem; investigate your problem **if it reports experience**. Creswell and Guetterman (2019) state that studying your problem may produce solid results related to creating new techniques and technology that improve educational practice or contribute to changes in the teaching method. To visualize the information in a better way, let us read the following example:

   Creswell and Guetterman (2019) propose the following "a study of ethical issues in a college setting may lead to a new honor code, new policies about cheating on exams, or new approaches to administering tests." (p.63)

2.6 The research problem in quantitative and qualitative research

After you have finally identified the problem, you need to choose which approach will best address the problem you want to study. Will you use numerical data to analyze results? Or will you analyze opinions and words from participants? With the questions in mind, take into account the characteristics of the research problem for quantitative and qualitative research presented in Table 3.

Table 3

Quantitative and Qualitative Research Problems

Use quantitative research if your research problem requires you to:	Use qualitative research if your research problem requires you to:
▪ Measure variables ▪ Assess the impact of these variables on an outcome ▪ Apply results to a large number of people	▪ Learn about the views of individuals ▪ Assess a process over time ▪ Generate theories bases on participat perspectives ▪ Obtain detailed information about a few people or research sites

Note. Reprinted from *Educational Research: Planning, conducting, and evaluating quantitative and qualitative research* (p. 64), by Creswell, J. and Guetterman, T., 2019, Pearson Education, Inc.

Recommended learning activity.

Dear students, after you have learned about the research problem, I invite you to participate in the following activity:

Identify an issue that you would be interested in exploring. Write down the topic and a tentative title.

Example

Topic: Motivation and participation in class

Title: Study the relation that motivation has on participation in class.

Topic:

Title:

Note. Please complete the activity in a class notebook or Word document.

I am pretty sure you did well on writing the topic and title. Let us move on to the next topic.

Contents, resources and recommended learning activities

Week 7

Unit 2. Designing a Research Project (Part 1)

2.7 Writing the Statement of the Problem Section

In this week's content, we will learn about the problem statement, which explains and introduces the problem or issue you will study. The justification is included in the introduction part of the research study.

In their book, Creswell and Guetterman (2019) explain that there are five aspects to consider when writing the statement of the problem: The Topic, the research problem, the justification, the deficiencies in existing knowledge, and the audiences.

The Topic

The same authors explain that the topic is the section that will catch the readers' attention; it also gives a brief explanation of the direction of the study. Furthermore, Creswell and Guetterman (2019) state that the educational topic needs to have a narrative hook, which means that the reader will want to know more and therefore continue reading. A right narrative hook must awaken interest, stimulate emotional attitudes, and cause the reader to notice. A narrative hook could be:

- What is the English knowledge difference between students from public and private schools?
- Almost half of the students enrolled in this career will fail at least two courses.

The research problem

As we studied before, the research problem is the issue or controversy that we want to know more. The research problem is the result of narrowing it from the broad view we had at the beginning. Creswell and Guetterman (2019) state that the research problem is written in one or two sentences. The authors identify two types of research problems. The first one is the practical research problem that derives from the issues we find in class or educational environments. The second one is called a research-based research problem because it results from the gap other researchers leave in their study or a need for further knowledge about an issue. research problem because it results from the gap other researchers leave in their study or a need for further knowledge about an issue.

Justification

In every research, we need to justify our work, and we need to explain why our study is relevant. Creswell and Guetterman (2019) observe that the justification has to be several paragraphs long, explaining the need to analyze the problem. The justification can be based on Personal experiences, experiences in the workplace, and suggestions from other researchers.

Deficiencies in what we know

According to Creswell and Guetterman (2019) state in their book, the researcher includes in the justification section an explanation of the deficiencies of previous research, meaning that there is not enough information to address the topic of interest. These deficiencies focus on current literature and practice, and they are known as a deficiencies in the evidence, which means that they do not cover the problem satisfactorily in the following instances: deficiencies in studies; therefore, there is a need to study the problem further, repeat the study, examine the topic, add to practice and lift the voice of alienated people.

Another type of deficiency explained by Creswell and Guetterman (2019) is the deficiency in practice, meaning that the researcher does not find factual information to solve problems for school and educational environments.

The authors suggest that the researcher identify two or three reasons why the previous research does not address the problem and develop on that at the end of the introduction.

The Audience

Creswell and Guetterman (2019) explain that the audience needs to be identified in the problem statement. In this case, the audience will be people involved in the educational field who will find the information useful. Among these people are other researchers, policymakers, practitioners, and educators.

To comprehend all the statements of the problem content in a better way, let us use and analyze the following flow of ideas format from Creswell and Guetterman (2019) presented in Table 4.

Table 4
Flow of Ideas

Topic	Research Problem	Justification for the research problem	Justification for the research problem	Relating the Discussion to Audiences
Subject area	A concern or issue, a problem	Evidence from the literature or practical experience.	Evidence that is missing	Audiences that will profit from the study
		Example		
Language learning difficulties	High school students do not achieve the desired English language proficiency	Past literature does not cover reasons why students in Ecuador do not get the desired proficiency	Past literature does not cover reasons why students in Ecuador do not get the desired proficiency	Educators can learn of factors that inhibit the desired language proficiency in high school students

Note. Based on *information found in Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research,* by Cresswell, J., & Guetterman, T., 2019, Pearson Education.

Recommended learning activity.

It is time to apply your knowledge through the activity that have been proposed below:

To evaluate the learning acquired on this topic, I invite you to develop the self-assessment presented below.

Self-assessment 2

Self-assess your knowledge by choosing the correct answer.

1. The most accurate definition of Ethics is: _____.

   a. Ethics is the study of philosophy.

b. Ethics is a philosophical discipline that studies the moral principles that govern a person's behavior.
c. Ethics is to know what to do or do not in a scientific method.

2. Plagiarism is _____.

a. copying other people's work and not giving credit.using other people's ideas and rewriting them in your own words and giving credit to the author.
b. stating your ideas.

3. The correct form to include the citation in the reference list is:

a. Richards, J. (2001). *Curriculum development in language teaching*. Cambridge University Press.
b. Richards, J. (2001). Curriculum Development in Language Teaching. Cambridge University Press.
c. Richards, J. (2001). Curriculum development in language teaching. *Cambridge University Press*.

4. The research designs for quantitative designs are: _____ .

a. experimental designs, correlational designs and survey designs.
b. grounded theories designs, experimental designs, ethnographic designs.
c. Narrative research designs, ethnographic design, grounded theory designs.

5. The first step to start a research is to _____.

a. look for literature review for your topic.
b. identify a problem or issue.
c. write the introduction of your topic.

6. The purpose of the research is also called the _____ .

a. goal of the research.

b. report of the research.
c. introduction of the research.

7. _____ are important aspects to consider before doing a research.

a. Working spaces.
b. Time, skills, resources.
c. Instruments.

8. Once you have _____, it is time to choose the appropriate approach for your research.

a. finished writing the literature review.
b. identified your problem.
c. written the introduction.

9. The Topic, the research problem, the justification, and the deficiencies in existing knowledge should be included in: _____ .

a. statement of the problem.
b. conclusions.
c. chapter number one.

10. In the justification, the researcher must: _____ .

a. analyze the problem.
b. explain the need to analyze the problem.
c. report the analysis.

Ir al solucionario

Contenidos, recursos y actividades de aprendizaje recomendadas

Week 8

Final midterm activities

Dear students, in week eight, you will review the contents learned in this first bimester. Therefore, you must reflect on the different topics we cover in Units 1 and 2. To recall the information studied, you may also review the activities presented in both units and the two self-assessments.

Second bimester

From the following learning outcome, “Identifies the kind of content included in each of the major components of a research proposal,” the student will develop the ability to recognize and articulate the types of content encompassed in the key sections of a research proposal. To achieve this, students will engage in a comprehensive exploration of the major components such as the introduction, literature review, research methodology, data analysis, and conclusion.

Contenidos, recursos y actividades de aprendizaje recomendadas

Recuerde revisar de manera paralela los contenidos con las actividades de aprendizaje recomendadas y actividades de aprendizaje evaluadas.

Week 9

Unit 3. The Literature Review

Dear students, in this unit, we will study all about the Literature Review. For this matter, I have included examples, activities, and links to develop the knowledge you need to conduct a literature review when carrying out a study.

3.1 Importance of the Literature Review

The literature review is a key component in research, and before we discuss the importance of the literature review, we need to understand what it is. The literature review is an examination of scholarly sources that cover a particular topic. When we do a Literature review, we will evaluate the state of the art, which means that we will analyze the scientific information presented so far about the research topic.

To understand this better, let us watch the following video about What is a Literature Review?

To know more about the literature review, let us focus on its purpose. It is known that al "Lit" Review will contribute background for your study, meaning that you will learn about written work about the research you plan to do. This is important because you need to present something new. Keep in mind that if there is plenty of research done on the specific topic you are planning to conduct, it would not be advisable to do it since you need to contribute with new knowledge. When you review the literature, you are acquiring or improving your reading theoretical concepts and summarizing and paraphrasing the information.

In addition, reviewing the literature can tell you how up to date is the topic you want to research. By knowing this, you can determine the relevance of your study. You do not want to research topics that are not relevant anymore.

The literature is important because you learn about how other researchers carry out this type of work and find out the best approach to take to do your study. Furthermore, by analyzing literature, you get familiar with words and definitions that are used in the context of your work.

Recommended learning activities

1. After watching the video What is a Literature Review? I encourage you to test what you understood from it by answering the following questions using your words:

   - What does the term "literature" mean in the academic world?
   - Where will you find the information when doing a review of the literature?
   - List two reasons for carrying out a Literature Review.

   Did you answer the questions? Yes? Excellent!

2. To recall the information, I exhort you to summarize and paraphrase the information you just read about the differences:.

   - Quantitative Literature Review
   - Qualitative Literature Review

Note. Please complete the activities in a class notebook or Word document.

Contenidos, recursos y actividades de aprendizaje recomendadas

Week 10

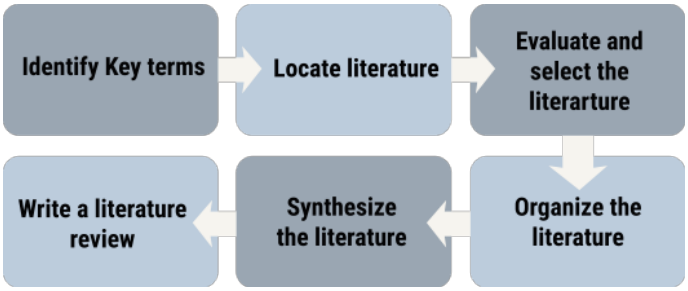
Unit 3. The Literature Review

3.2 Steps in conducting a literature Review

With a clear idea of the literature review definition, we may proceed to study the steps we need to take to conduct a literature review. In their book, Cresswell & Guetterman (2019) states six steps to develop your Literature Review. Even though there might be more suggestions on conducting it, the authors present it as the following figure.

Figure 5

Literature review steps



Note. Based on information found in Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research, by Cresswell, J., & Guetterman, T., 2019, Pearson Education, CC BY 4.0.

To complement what you have learned about the key elements of the Literature Review, Hernández et al. (2019), regarding identifying key terms, explain that we need to choose specific words, descriptors, or research terms that derive from the research problem and the statement of the problem. To help in this matter, we can do preliminary readings to polish the keywords. The authors also explain that we need to avoid words and terms that are vague and general because this will cause us to gather a lot of information that is not pertinent to our study. Therefore, the terms used must be precise. Let us take a look at the following example.

Imagine that we want to find information related to the development of writing skills and the use of blogs. We decide to start looking for information by considering words like “education,” “writing skill,” and “blogging.” By typing “education” on a web browser, we end up with information like this: Education is the process of facilitating learning, or the acquisition of knowledge, skills, values, beliefs, and habits... which is general information that does not relate much to our research.

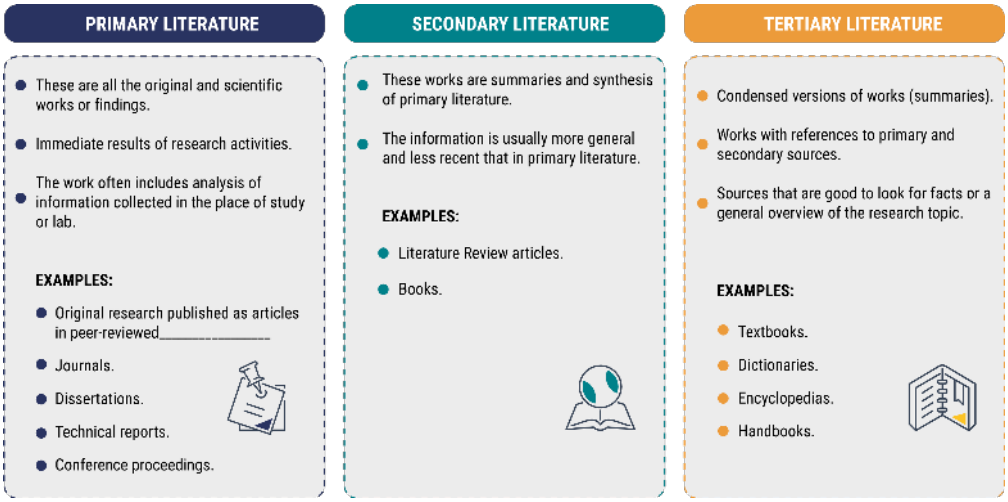
As you can see in the example, we have ended up with information that cannot be used in our research, and what is worse, we have wasted precious time. Therefore, take into account the preciseness of your search by selecting the right keywords.

Regarding locating the literature, Hernández et al. (2019) state that sources of information can be found in Libraries and electronic libraries. It is essential to add that we need to be efficient when reviewing information, and one way to do so us by using the library database. If you check the UTPL web page, you will find a tab that will take you to the library database. If you are curious about it, check the UTPL virtual library.

In addition, your professor or tutor can also recommend where to find information. Finally, I want to inform you that Google Scholar is one of the best ways to find good sources of information. If you do not have experience using this source, I encourage you to watch the following tutorial about How to Use Google Scholar.

Figure 6

Classification of sources



Note. Based on information found in Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research by Cresswell, J., & Guetterman, T., 2019, Pearson Education. CC BY 4.0.

Dear students, I want to highlight two words you read in the figure: Journal and peer-reviewed articles. These two words are often used when doing research at our university. These are going to be one of our main sources of information. Let us take a look at the definition of them both:

- **Peer-reviewed articles** are also known as refereed articles written by researchers that have been revised by other researchers and experts before they are published in a journal. When these articles are reviewed, they guarantee their quality. These are not typical articles that will be presented in blogs, online magazines, and personal webpages. These articles are going to be published in Journals. One easy way to know that an article is peer-reviewed is to look for a DOI number. Note that not all the reviewed articles have a DOI.
- **Journals** are a collection of peer-reviewed articles. Journals can put out an issue monthly or annually; it will depend on the journal's policies.

Now that we know where to find information for our Literature Review, we need to consider different elements to evaluate and critically select the literature. We need to ask ourselves if the information we are reviewing is good and accurate, relevant, and can follow specific recommendations to analyze sources.

In their book, Hernández et al. (2019) explain that to determine the usefulness of books for our research, we need to analyze the table of contents to give us a clear idea of the topics we will find. Note that if you do not check the book's contents, you will waste time reading information that is not valuable to us. The authors also explain that if we find a study that interests us, we have to read the abstract and keywords to learn about the study's purpose and conclusions.

There is an essential term in the previous paragraph that we will come across every time we do research. The term I am referring to is **Abstract**, which summarizes the research study. This meaningful part of the research is written when you finish your entire study. In the Abstract, you will find the methods, results, and conclusions, but you will not find the study's references. When researching for information, reading the abstract will reveal what the study is about without reading the entire paper. If you find that the abstract information is relevant for your research, you will read the whole document to get the parts you can include in your Literature review.

After you find the information for your work, you need to organize it so that you can use it later on when you write the literature review. It is important to mention that there is no specific way to organize the information; many researchers will manage it in a way that they find appropriate. Still, in Creswell and Guetterman (2019) they suggest reproducing, downloading, filing, taking notes, and summarizing studies to handle better the information you gathered.

Regarding the final step in writing a literature review, it's important to follow specific style manuals. You might have noticed that this connects to what we covered in week 2. While you will also find information on various style manuals in other resources, remember that for our research work, we will be using the APA 7th edition guidelines.

Finally, to assist you in writing a Literature Review, please refer to the guidelines provided in the following website Writing a Literature Review.

Recommended learning activities

It is time to apply your knowledge through the activities that have been proposed below:

1. I invite you to read the following research topic and list the keywords that can be used to find information for a literature review. Note that when we research for information, we do it in English or Spanish. In the case the information is in Spanish, you would have to translate it.

   Research Topic: Analysis of EFL teachers' skills, attitudes, and ICT use in Ecuadorian public high schools.

   Keywords:

2. As a practice of researching Google Scholar, use the keywords you selected for the research topic in the previous activity and do quick research to observe the results the browser yields. How did you do? I bet your search yielded relevant information from the keywords you used.

   Note. Please complete the activities in a class notebook or Word document.

3. To evaluate the learning acquired on this topic, I invite you to develop the self-assessment presented below.

self-assessment 3

Self-assess your knowledge by choosing the correct answer.

1. In the academic world, the collected body of scholarly works related to a topic is called _____.

   a. abstract.
   b. literature review.
   c. resume.

2. The correct way of writing a literature review is: _____ .

   a. Writing your own ideas about the topic.
   b. Summarizing and paraphrasing scientific information about the topic.
   c. Copying the scientific information from different sources.

3. Acceptable sources for writing the literature review are:

   a. Blogs and Wikipedia, because the information is easier to understand.
   b. Articles, Journals, and books because they are reliable sources.
   c. Newspapers, magazines, and blogs

4. If you find extensive information and research about your topic,

   a. it is not advisable to continue with the research topic.
   b. you will contribute with new information.
   c. you may imitate one of those researches.

5. The correct order of steps to write the literature review are: _____.

   a. Writing the literature review, locating literature and identifying key terms.
   b. Evaluating and selecting the literature, identifying key terms, and synthetizing the literature review.

c. Identifying key terms, locating the literature, evaluate, select, organize, synthesize the literature, and writing the literature review.

6. The most effective way to find useful information on the web is: _____.

a. Writing the name of your topic on the web.
b. Writing keywords related to your topic on the web.
c. Writing the statement of the problem on the web.

7. _____ can be useful to have a general overview of the research.

a. Primary literature.
b. Secondary literature.
c. Tertiary literature.

8. _____ are not an example of primary literature.

a. Books and handbooks.
b. Peer-reviewed articles, and journals
c. Conferences proceedings.

9. The peer-reviewed articles are scientific papers that _____.

a. are published in blogs.
b. are written on personal web pages.
c. are revised by other researchers before publishing in a journal.

10. The abstract provides a summary of the study's purpose and Conclusions. Therefore, it must be written _____.

a. once you finish the research.
b. when you start the research.
c. before the conclusions.

Ir al solucionario

Week 11

Unit 4. Designing a Research Project (Part 2)

4.1 Writing Quantitative Purpose Statements

Continuing with the construction of a research project, we will learn about the purpose statement, which is a sentence that is written at the end of the introduction. Even though it is not a long sentence, it tells the reader a lot about the work's intention. Also, keep in mind that the purpose is the most important statement in your study, and it has to be presented in a clear and specific way. This statement tells the reason why you want to carry out the research. The purpose statement in Quantitative Research includes certain aspects that we have to consider:

- It centers its attention on the comparison of variables.
- It also includes fundamental aspects like research variables and their relation.
- It also notes the place where the research took place.
- It uses quantitative terms.

From what you have just read, the term variable is mentioned again in this week's content. As you may recall, we learned about variables in week 3. In case you do not remember, let us do a quick review of the variables

We will focus on three variables: independent, dependent, and control variables. Please note that there are other types of variables, but we will study only the three listed before since they are the ones that we will use in research.

The **independent variable** is the variable that will change to study its effects on the dependent variable. We may think of this variable as the ***cause***.

The **dependent variable** is the one that is studied and measured. We may think of this variable as the **effect**.

It is important to remember that we need to select only one independent variable. If we include more than one independent variable, we will not be sure which variable influences the dependent variable. The best way to have a clear understanding of each of the variables is to analyze examples; let us read:

- Reading without proper lighting will affect your sight.

Independent: Lightning

Dependent: Sight

- Studying early in the morning will ensure better memorization.

Independent: time of day

Dependent: memorization

- Listening to songs in English will influence your listening skills.

Independent: Songs

Dependent: listening skills

Now that we understand how the variables work, we will focus again on the statement of the problem in Quantitative Research. Remember that the purpose statement will start with “The purpose of this study...” or “The goal of this study…” . Let us write one purpose statement using one of the examples above and one sample script:

Sample script: the purpose of this study is (the theory) by relating (the independent variable) to (the dependent variable) for (participants) at (the research site).

Listening to songs in English will influence your listening skills.

Independent: Songs

Dependent: listening skills

Result: The purpose of this study is to analyze the influence English songs have on the development of listening skills in EFL at an elementary school in Cuenca.

4.2 Writing Quantitative Research Questions

With the relation of variables in mind, we will now focus on the research questions. I invite you to pay close attention to the information provided in this video Developing a Research Question.

Now that you have an idea about writing research questions, let me explain that you will always start the research question with a question word: how, what, or why. Next, you will identify your independent and dependent variables. Once you have the previous elements, you need to find phrases or words that will link the variables such as: describe, compare, relate, influence, incidence, impact, etc.

The next element that we need to consider is the unit of analysis: the subjects, objects, or phenomena on which we want to do the research. To determine your unit of analysis, you have to ask questions like who will participate in the research. Teachers, students, school personnel, school authorities? The next question you have to ask is where our research will take place. Kindergarten, elementary school, high school, institutes, universities?

Let us exemplify what we read. We will start by gathering all the elements before we write the research question, as we can see in Table 5.

Table 5
Elements for the research question

Elements for our research question	
Question **word**	How
Variables	
Independ **variable**	Padlet
Dependent **variable**	Reading
Linking **word**	influence
Unit of analysis	Students St. Michael High School
Research Questions: How does regular use of Padlet influence the acqusition of reading skills in students at St. Michael High School?	

Note. Paredes, F. 2023.

Dear students, as you have observed, creating a chart like the one above can help you write a research question, including all its elements. Also, Creswell and Guetterman (2019) explain other guidelines for writing research questions, and they identify three types of questions: descriptive questions, relationship questions, and comparison questions.

Please visit Scribbr's webpage for valuable insights on Writing Strong Research Questions.

4.3 Hypothesis

In their book, Creswell and Guetterman (2019) state that "hypothesis are predictions of what the researcher expects to find" (p.125). Also, Hernández et al. (2019) say that hypothesis guide a research study. They demonstrate what we are trying to verify; they can be seen as tentative explanations of the fact that we are investigating.

In addition, Hernández et al. (2019) explain that every Quantitative Research does not require hypothesis; the use of hypothesis depends on the study that will carry out. Do not forget that in Quantitative Research, we can also use research questions.

Example of hypothesis: The use of an online dictionary will improve learners' vocabulary.

As we mentioned earlier, hypothesis are predictions. Therefore, we will carry out a study to find out if online dictionaries can help acquire or improve vocabulary. I want to clarify that you will not always prove your hypothesis; the outcome may be positive or negative, meaning that you may conclude that online dictionaries do not improve vocabulary. Any of the outcomes are correct.

It is pertinent to highlight what Hernández et al. (2019) explain regarding the question of where the hypotheses come from. The authors manifest that they derive from the statement of the problem and the literature review.

Furthermore, Hernández et al. (2019) list several hypotheses' characteristics. Let us read:

- The hypothesis must refer to a real situation.
- The variables in the hypothesis need to be coherent and precise.
- The relation between variables must be logical and straightforward.
- The variables in the hypothesis have to be observable and measurable.

- The hypothesis have to be related to available techniques to experiment with them.

Another type of hypothesis is the **null hypothesis,** which is, according to Hernández et al. (2019) the opposite of the regular hypothesis since they refute or negate them.

To comprehend this better, I am going to change the hypothesis I established in the previous example. Let us read:

- **Hypothesis:** The use of an online dictionary will improve learners' vocabulary.
- **Null hypothesis:** The use of an online dictionary will ***not*** improve learners' vocabulary.

Recommended learning activities

It is time to apply your knowledge through the activities that have been proposed below:

1. Now that you have watched the video titled Developing a Research Question, I encourage you to write the essential aspects or ideas of research question.
2. Now it is time to put into practice what you know about research questions by completing the following chart:

Research Question Exercise

Elements for our research question
Question **word**
Variables
Independ **variable**
Dependent **variable**
Linking **word**
Unit of analysis
Research Question:

Note. Paredes, F. 2023.

3. To put into practice what we have learned in this week of study. I invite you to think of a topic related to education, identify the independent and dependent variables, and write a research question and a hypothesis. Follow the following structure:

   - **Topic:**
   - **Variables**
     - Independent variable:
     - Dependent variable:
   - **Research question:**
   - **Hypothesis:**

Note. Please complete the activities in a class notebook or Word document

Week 12

Unit 4. Designing a Research Project (Part 2)

4.4 The Central Phenomenon

Before concentrating on the central phenomenon, let us recall that the qualitative approach collects data that does not need numerical measurements. Since no numbers are involved, we will not be using variables; therefore, there are no hypothesis in this approach.

According to Creswell and Guetterman (2019), the qualitative approach's main component will be the **central phenomenon**. The authors define this phenomenon as the "concept or process explored in qualitative research" (p. 128). To have a better view of the definition, we can think of the central phenomenon as the issue or topic that we want to know more about, and it is the direction of our research.

These are some examples of the central phenomenon:

- The researcher wants to know parents' opinions about native speakers teaching English to their kids.
- The perceptions students have of younger teachers.
- The students' testimony and experiences in using cellphone applications to practice reading in English.

4.5 Writing Qualitative Purpose Statements

Similar to what we learned when we covered the purpose statements in quantitative research, we will follow guidelines to write the purpose statement for qualitative research.

Before continuing to the guidelines, let us explain what this statement is. This statement is the study's purpose, which indicates the reasons why you want to develop your research. Do not forget that this statement has to transmit your complete intention of the study; we cannot only consider part of the intention of the study.

Before we start writing the purpose statement, we need to ponder on all the elements we have to include:

The information of the central phenomenon.

The participants in the study.

The place where you carried out your research.

When you write your purpose statement, you may start with "the purpose of this qualitative study is..." or "the objective of this qualitative study is..." Also, keep in mind the following suggestions to write good purpose statements:

- Focus only on one phenomenon, sometimes we make the mistake of including more than one phenomenon, and our research will not be precise and confusing.
- Keep in mind that this purpose statement does not seek to relate variables.

To practice, let us use the following script:

Script: The purpose of this qualitative research is to explore/discover/understand/describe (the central phenomenon) for (participants) at the (research site).

Example: The purpose of this qualitative study is to explore the students' opinions of teaching methods used by older teachers in a public school in Loja.

To expand your learning about writing a qualitative purpose statement, let us analyze the following video for more tips to master the purpose statement.

4.6 Writing Qualitative Research Questions

To start, we need to highlight that qualitative research is executed to understand both respondents' and researchers' thought processes. It is usually done in a natural environment, in which respondents show their true "self" and respond transparently. In this week's content, we will learn how to write questions for a qualitative investigation to obtain the expected results.

In their book Creswell and Guetterman (2019) explain that "Qualitative research questions are open-ended, general questions that the researcher would like answered during the study" (p.131), which we will answer by conducting our research.

When we are set to write the research questions, we need to consider certain aspects to avoid ambiguous questions that will not yield the information we seek to collect.

In her study, De la Cuesta-Bemjumea (2008) explains that the research question is central to the entire research process. Writing it is not a mere theoretical exercise that can be forgotten once done. The research question in qualitative studies is present throughout the research, it determines what it wants to know about the chosen topic, and it is the researcher who decides.

In addition, the same author states that qualitative questions are open questions, which allow full exploration of factors and issues during the research process. The intention of the question is therefore expansive; it tries to open a subject and not to control variables. The qualitative question is built during the research study. Consequently, it has to be formulated flexibly and openly and avoid delimiting it too early.

De la Cuesta-Bemjumea (2008) points out that qualitative questions are general; they guide the study but do not determine it and respond to poorly structured designs. The qualitative question does not pretend to be objective but is partial, and it presents only a point of view.

In the words of Creswell and Guetterman (2019), the central question is an "overarching question you explore in a research study." In addition, Agee (2019) explains that the broad question allows the creation of sub-questions. If the overarching question is unambiguous, it can guide the research study and compilation of information from the participants.

Dear students, the central question will start with what or how. Also, it would be best if you avoided questions that express cause and effect.

With a clear understanding of the central question, we will move on to the sub-questions. Creswell and Guetterman (2019) explain that these questions derive from the central question, and they share the same qualities.

Recommended learning activities

It is time to apply your knowledge through the activities that have been proposed below:

1. Considering the information, you have reviewed on the central phenomenon and the provided examples, try to create two examples of your own.

   Example 1:

   Example 2:

   How did you do? I am sure you did great writing the examples.

2. After watching the video about tips to master the purpose statement, it is time to practice. In this activity, you will write a purpose statement using the information in the first part of the chart. Then, write another purpose statement, but this time starting from scratch.

   Activity 1

Verb: explore

Central phenomenon: Use of blogs

Participantes: UTPL students

Research site: Quito

Research statement:

Activity 2

Verb

Central phenomenon

Participantes

Research site

Research statement

Central question:

Dear students, to learn about sub-questions in invite you to watch the following video How to write qualitative sub-questions in a Research Proposal. Then, summarize the information in your own words.

Summary:

How did you do? I am sure you did great writing the summary. Let us continue.

Note. Please complete the activities in a class notebook or Word document.

Week 13

Unit 4. Designing a Research Project (Part 2)

4.7 Unit of Analysis, Population, and Sample

This week we will study the unit of analysis, population, and sample. As mentioned before, these elements are essential when selecting the individuals who will participate in the research study. We already have some basic knowledge of this topic since we mentioned the unit of analysis in section 4.2.

Recapitulating, the **unit of analysis**, according to Hernández et al. (2019) is the interest focused on participants, objects, events, or study groups selected based on the approach and scope of the research.

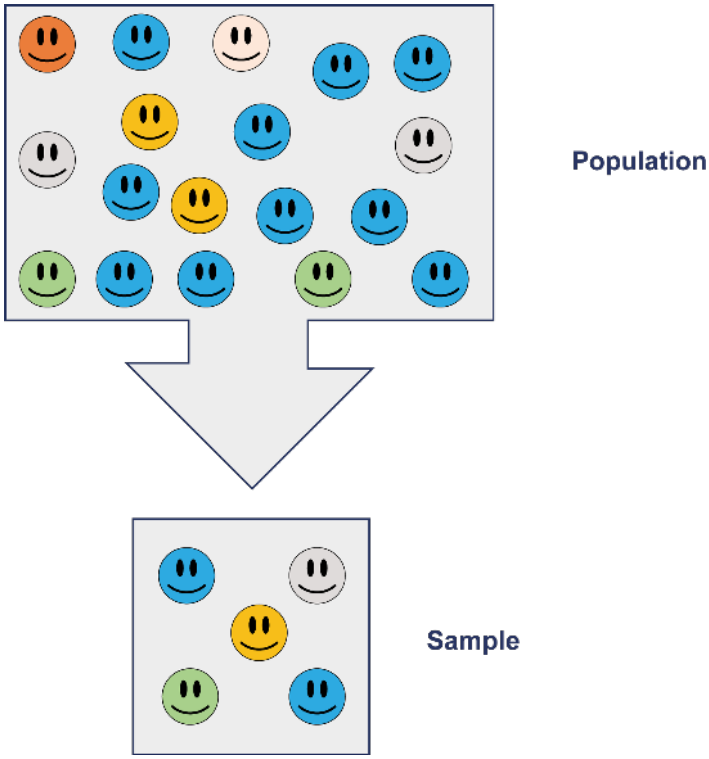
The **population** refers to the set of all study units: subjects or objects whose observable characteristics we are interested in the study. It is essential to pay extra attention to the features of the population to delimit our sample. According to Hernández et al. (2019), populations should be located by their content, characteristics, place, and time.

The **sample** is a subset of the population. We use a sample of the population because it would be challenging to study all the individuals in the population. When we select a sample or a smaller number of individuals, we will learn from them more effectively. Once we get the results of our study, we will generalize those results to the entire population.

To understand the population and sample let us observe the following figure 7.

Figure 7

Unit of analysis, population, and sample



Note. Paredes, F., 2024.

Now that you have learned about the unit of analysis, population, and sample, we will continue with the different sampling approaches. Creswell and Guetterman (2019) divide these approaches into two big groups, one for quantitative research and another one for qualitative research.

Let us focus now on the sampling approaches for **quantitative research**.

Probability sample: In this type of sampling all the individuals in the population have the same possibility of being selected for the sample. The probability sample is divided into three subgroups:

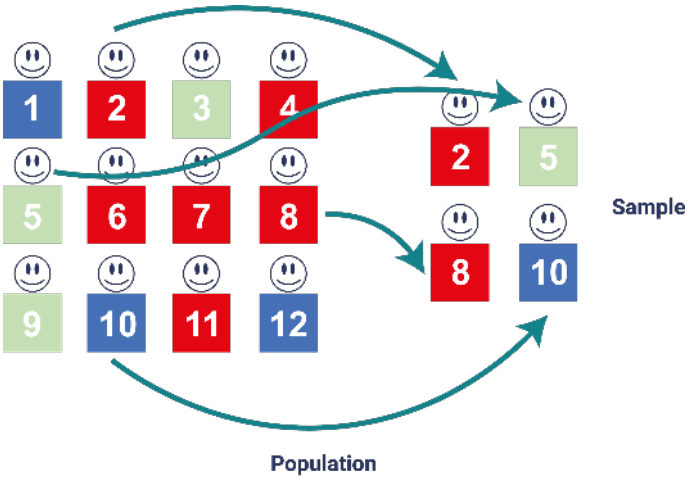
- Simple random sampling
- Stratified sampling

- Multistage cluster sampling

In *Simple random sampling,* any individual in the population can be selected. As the name says, the researcher may choose the participants randomly without the use of any patterns.

Figure 8

Simple random sampling

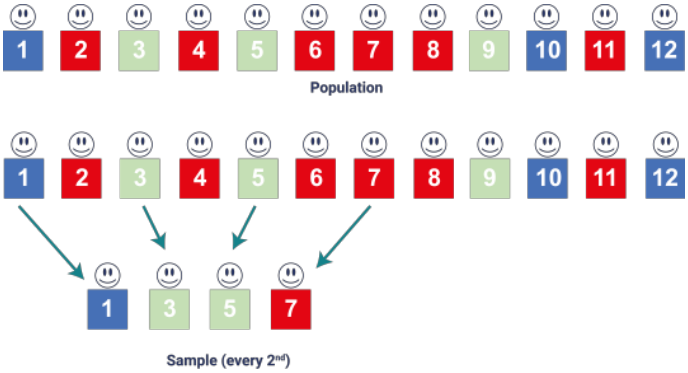


Note. Paredes, F., 2024.

In *Systematic sampling*, participants are selected using a selection pattern, meaning that researchers will select every kth individual. For example: let us imagine that k = 2, which means that we will select every second individual in the population. Please note that you can start counting from any individual.

Figure 9

Systematic sampling

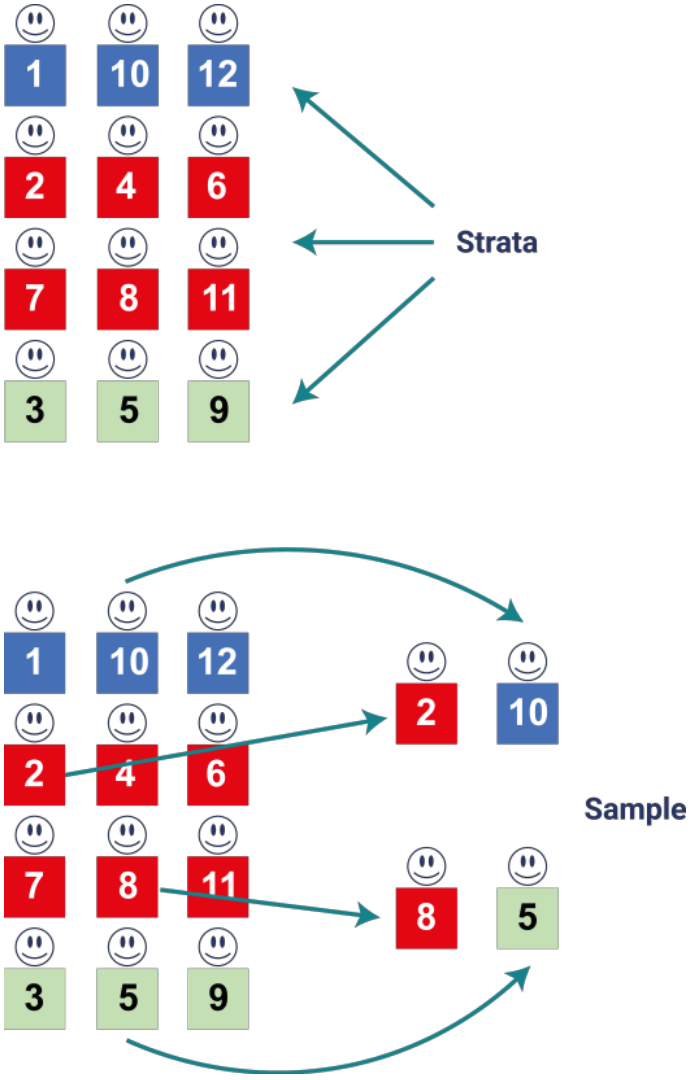


Note. Paredes, F., 2024.

In *Stratified sampling*, we will group individuals according to similar characteristics. Then, we will select individuals from each group. For example, let us say that we want to collect data about the influence online grammar webpages have on writing. The population is Grammar class, from where I will group students who have used online grammar webpages, students who know about these web pages but have never used them, and students who have never heard or used these webpages. Once I group them, I will select individuals from each of the groups.

Figure 10

Stratified sampling



Note. Paredes, F., 2024.

In *multi-stage cluster* sampling, the researcher will create different groups (clusters). Then, by using simple random sampling, we will select one of the clusters (this will depend on the number of individuals we need in our study;

we may need to select more than one cluster if the sample is significant). All the individuals in the chosen cluster(s) (groups) will be our sample. To understand this better, I invite you to watch the video about Cluster Sampling.

Nonprobability sample: According to Hernández et al. (2019), in this type of sampling, the participants' selection will not depend on the probability, but the causes related to the characteristics of the research or the researcher's purposes. The nonprobability sample is divided into two subgroups:

- Convenience sampling
- Snowball sampling

In **Convenience sampling** the individuals who will participate in the research are selected because they are readily available because we know that they belong to the population of interest, not because statistical criteria have selected them. To comprehend this better, let us analyze the following example: Let us imagine that a researcher wants to study government English books' content to help develop speaking skills in English. A convenience sample would be to gain access to 3 schools close to where the researcher lives.

Snowball sampling is used when the individuals with the characteristics we want to study are challenging to find. Therefore, when we find a participant, we ask him to help us find other participants with the same characteristics, and so on until we find an appropriate sample. Let us read the next example: A researcher wants to investigate the study effort students who have come to the city from small towns make when they have been granted a university scholarship. As you can see, some characteristics will not be common. Therefore, once the researcher finds one individual, he may ask the participant to help find another participant. Usually, they know people who are in a similar situation. This process will continue as a chain until the sample size is met.

Now let us focus on sampling approaches for **qualitative research:**

Creswell and Guetterman (2019) state that in a purposeful sample, "researchers intentionally select individuals and sites to learn or understand the central phenomena" (p.206). The authors also list different types of qualitative research sampling which are depicted in the following infographic titled qualitative research.

Qualitative research

Now that we have a good idea of different types of sampling, we may proceed to the next content about permissions required to do research

4.8 Types of Permission

Dear students, the type of permissions you will need for a Quantitative and Qualitative study will be the same. These permissions will depend on the institution you are planning to collect the information.

You need to obtain your permission before starting the fieldwork, which means you cannot collect information before that.

Creswell and Guetterman (2019) list different permissions that may be needed before you collect the information:

- Institutions or organizations (e.g., school district, university)
- Specific sites (e.g., high schools)
- A participant or group of participants
- Parents of participants
- The campus on which you conduct the research (i.e. permission from your university or college review board)

Please keep in mind that you will need a formal letter to obtain permission from the individuals or organizations listed above, where you will explain exactly the purpose of your study and the time it will take.

Recommended learning activities

It is time to apply your knowledge through the activities that have been proposed below:

1. To understand better the multi-stage cluster sampling, watch again the video about Cluster Sampling, and, to demonstrate what you learned from the video, I encourage you to write your own example.

   Your example:

   How did you do? I bet you did great!

2. I invite you to research the web for the definition of Gatekeeper in research and then write your definition of a Gatekeeper, starting your paragraph with: "A Gatekeeper is …"

   Note. Please complete the activities in a class notebook or Word document

Contenidos, recursos y actividades de aprendizaje recomendadas

Week 14

Unit 4. Designing a Research Project (Part 2)

4.9 What are Instruments?

Instruments are the tools that you will use to collect information from the participants. The instruments are carefully designed to collect only the information you need depending on the type of study you will carry out; this way, we will avoid bias. The data we collect with the instruments will attempt to measure variables and understand the central phenomenon. The instruments will vary for Quantitative research, Qualitative research, and Mixed methods.

Dear students, in the definition of instruments, I wrote the word bias in bold letters to highlight this word's importance in research. Therefore, I invite you to check an online dictionary to read the definition of bias.

Now that you know the meaning of bias, watch this video about bias in research.

4.10 Types of Instruments

Before learning about different instruments, we must know what an instrument is and how we have to choose them. Hernández et al. (2019) define research instruments as the tools to record data that truly represent the concept of variables and central phenomena.

It is important to note that instruments have a central role in research because there is no data to study without them. In quantitative research, the data collected will allow us to quantify the information, meaning that the data collected will be expressed in numbers, and we will manage to relate variables. In qualitative research, the data collected will be organized and studied thoroughly.

To select instruments, we can follow some strategies to decide on the one you need to use.

- **Using an existing instrument:** We can use an instrument that has been used in another research. This strategy is advantageous because you will not need to start from scratch. Besides, the instrument used before has been validated. Remember that before using the instrument, make sure you have permission from the authors.
- **Adaptations:** The existing instrument may fit your needs in your study and be ready for use because it is congruent with the information you wish to collect. If it is partially congruent, you will have to modify it to fit the data collection related to your variables or central phenomenon.

- **Free use instrument:** You may use an instrument that is free to use. You may still need to ask permission from the author. Even if it is free, it is advisable to contact the author in case you need an explanation about the topic or instrument.
- **Creating an instrument:** This will require considerable time and study. You can even write a thesis about the creation of an instrument.
- **Experts:** If you create your instrument, you cannot use it right away. You will have to wait until an expert validates your instrument.

Now let us focus on the different types of instruments:

Instruments for Collecting Quantitative Data.

1. **Questionnaire (Survey):** According to Hernández et al. (2019) surveys are a set of questions about the variables you wish to measure. They must relate to your statement of the problem and hypothesis. In surveys, you will use close questions, and they contain categories or multiple-choice answers. The number of answer options will be decided by the researcher. The same author suggests the following characteristics that the questions have to meet. Let us read:

    - The questions must be clear, precise, and understandable to the participant. You must avoid ambiguous and double meaning terms.
    - It is advisable to keep the questions as short as possible Because long questions tend to be tedious, take more time, and distract the participant.
    - The questions should be written using simple vocabulary that is direct and familiar to the participants.
    - The questions should not make the respondent uncomfortable or be perceived as threatening, and they should never feel that they are prejudiced
    - Questions should preferably refer to a single aspect or a logical relationship.
    - The questions should not induce one specific answer.
    - Do not include negative questions.

To see an example, I invite you to review Annex 1. Examples of Instruments for Collecting Quantitative Data specifically Section A Surveys.

2. **Attitude scales (Survey):** According to Creswell and Guetterman (2019), this type of instrument is used when the researcher wants to measure educational topics' feelings. To understand this better, I encourage you to analyze the examples presented in **Annex 1. Examples of Instruments for collecting Quantitative data** specifically Section B. Attitude scales, use the Likert scale.

After you finish analyzing the examples, you may be wondering what the Likert scale is. I invite you to watch the following video that explains this type of scale.

3. **Observation:** According to Hernández et al. (2019) this data collection method consists of registering observable behaviors and situations through a set of categories and subcategories. The registration has to be systematic, valid, and reliable. Let us read the example from **Annex 1. Examples of Instruments for collecting Quantitative data specifically Section** Observation.

Instruments for collecting Qualitative data

1. **Checklist (Observation):** In qualitative research we will also use observations to collect our data. The difference between both methods is that in Quantitative research data collection, the things we are set to observe must be measurable. In Qualitative research, as Hernández et al. (2019) state, the researcher must learn to observe. Observation is not limited to the sense of sight but all the senses. Observing is not mere contemplation; it implies going deeply into social situations and maintaining an active role and permanent reflection. The observer must be attentive to the details of events and interactions

   When we observe, the researcher may adopt roles such as participant observer and participate in classroom activities. As a nonparticipant observer, there is no participation or interaction in the classroom. Finally, the observer can also change observational roles during the observation.

Now that you know the characteristics of observation in qualitative data collection, let us analyze the next example from Annex 2. Examples of Instruments for Collection Qualitative Data specifically Section A. Observation.

2. **Questions / Audio recording (Interviews):** Hernández et al. (2019) define interviews as a meeting to talk and exchange information from person to person. We use interviews when the researcher cannot observe the study problem, or it isn't easy to do so due to ethics or complexity. The authors explain the following characteristics of the interviews. Let us read:

   - The beginning and end of the interview are not predetermined or clearly defined. Interviewers may carry out the interviews in several stages; they are flexible.
   - The order of the questions will vary depending on the participants' answers.
   - The qualitative interview is mainly anecdotal and has a more amiable characteristic.
   - The interviewer shares with the interviewee the pace and direction of the interview.
   - The Social context is considered and is fundamental for the interpretation of meanings.

Dear students, keep in mind that interviews can be one-on-one, in small groups, by telephone, email, and web-based.

With all this information in mind, let us analyze the example **from Annex 2. Examples of Instruments for Collection Qualitative Data** Specifically Section B. Interviews.

Recommended learning activities

It is time to apply your knowledge through the activity that has been proposed below:

After watching the video about Bias in Research, I encourage you to write in your own words a brief explanation of how bias affects research.

Note. Please complete the activity in a class notebook or Word document.

So far, so good!

Contenidos, recursos y actividades de aprendizaje recomendadas

Week 15

Unit 4. Designing a Research Project (Part 2)

4.11 Validity and reliability in data collection

After learning about different instruments to collect data for our research study, we must ensure that the instruments we use will collect exact and consistent data. Without one or two of those elements, we will not be able to make our generalization of the findings yielded from the analysis.

In this week's content, we will learn about Validity and Reliability. Hernández et al. (2019) indicate that an instrument is valid when it measures the variable it intends to measure. Also, Creswell and Guetterman (2019) states that validity is "the degree to which all the evidence points to the intended interpretation of test scores for the proposed purpose. A measuring instrument's reliability refers to the degree to which its repeated application to the same individual or object produces the same results.

To understand this better, I encourage you to watch the following video about What Are Validity & Reliability In Research.?

4.12 Analyzing and interpreting data

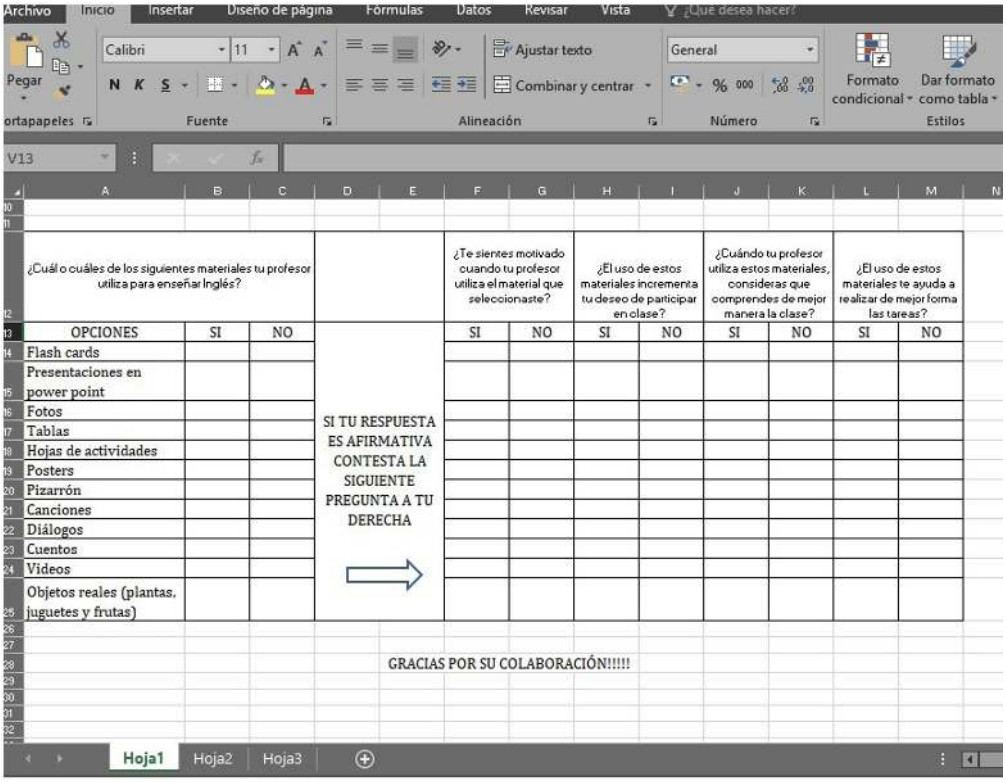
Creswell and Guetterman (2019) present four steps to analyze and interpret quantitative data:

Preparing the information for analysis

In this step, you have to organize the data you collected with the instruments, and then transform it into numbers.

Figure 11

Interview format



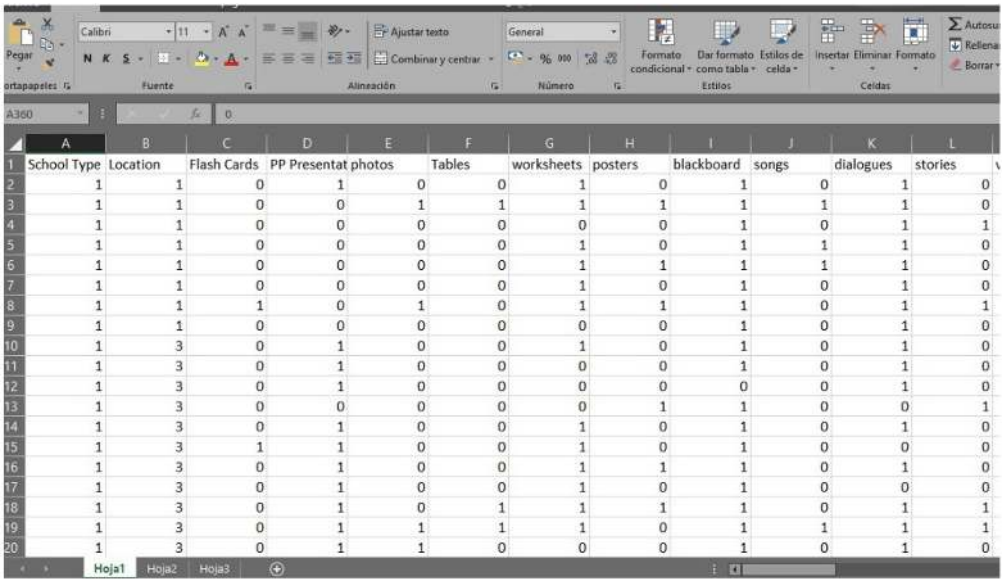
¿Cuál o cuáles de los siguientes materiales tu profesor utiliza para enseñar Inglés?				¿Te sientes motivado cuando tu profesor utiliza el material que seleccionaste?		¿El uso de estos materiales incrementa tu deseo de participar en clase?		¿Cuándo tu profesor utiliza estos materiales, consideras que comprendes de mejor manera la clase?		¿El uso de estos materiales te ayuda a realizar de mejor forma las tareas?	
OPCIONES	SI	NO		SI	NO	SI	NO	SI	NO	SI	NO
Flash cards			SI TU RESPUESTA ES AFIRMATIVA CONTESTA LA SIGUIENTE PREGUNTA A TU DERECHA								
Presentaciones en power point											
Fotos											
Tablas											
Hojas de actividades											
Posters											
Pizarrón											
Canciones											
Diálogos											
Cuentos											
Videos											
Objetos reales (plantas, juguetes y frutas)											

GRACIAS POR SU COLABORACIÓN!!!!!

Note. Paredes, F., 2024.

Figure 12

Numerical code



	A	B	C	D	E	F	G	H	I	J	K	L
1	School Type	Location	Flash Cards	PP Presentat	photos	Tables	worksheets	posters	blackboard	songs	dialogues	stories
2	1	1	0	1	0	0	1	0	1	0	1	0
3	1	1	0	0	1	1	1	1	1	1	1	0
4	1	1	0	0	0	0	0	0	1	0	1	1
5	1	1	0	0	0	0	1	0	1	1	1	0
6	1	1	0	0	0	0	1	1	1	1	1	0
7	1	1	0	0	0	0	1	0	1	0	1	0
8	1	1	1	0	1	0	1	1	1	0	1	1
9	1	1	0	0	0	0	0	0	1	0	1	0
10	1	3	0	1	0	0	1	0	1	0	1	0
11	1	3	0	1	0	0	0	0	1	0	1	0
12	1	3	0	1	0	0	0	0	0	0	1	0
13	1	3	0	0	0	0	0	1	1	0	0	1
14	1	3	0	1	0	0	1	0	1	0	1	0
15	1	3	1	1	0	0	1	0	1	0	0	0
16	1	3	0	1	0	0	1	1	1	0	1	0
17	1	3	0	1	0	0	1	0	1	0	0	0
18	1	3	0	1	0	1	1	1	1	0	1	1
19	1	3	0	1	1	1	1	0	1	1	1	1
20	1	3	0	1	1	0	0	0	1	0	1	0

Note. Paredes, F., 2024.

In this step, you analyze the results you obtained after tabulating the data. Example:

Table 6
Tabulation

Tabulación cuantitativa Chart nine: Frecuency of use of suplementary material in 1st year			
Variable	Indicators	Public	Private
		f	f
	flashcards	11	3
Visual	PowerPoint presentations	22	6
	maps	1	1
	pictures	4	5
	charts	2	5
	handouts	6	13
	posters	4	4
	word cards	5	0
	white/black board	55	38
	Others	2	5
Audio	songs	5	4
	dialogues	4	7
	stories	4	3
	tales	0	0
	Others	0	2
Audiovisual	videos	0	4
	movies	0	0
	documentaries	0	0
	Othes	0	0

Note. Paredes, F., 2024.

Reporting the results

You present the results organized using charts, tables, and figures. Example:

Table 7
Results of Chi-Square for motivation, participation, understanding, and performance

Criteria	X^2	N	df	P
Motivation	122.50	3599	11	<.001
Participation	96.14	3493	11	<.001
Understanding	40.72	3447	11	<.001
Performance	54.91	3480	11	<.001

Note. Paredes, F., 2024.

Analysis of Standardized Residuals

Because the four overall chi-square tests were statistically significant (Table 7), further analyses were required to determine which of the twelve institutional methods were believed to improve motivation, increase participation or understanding, and improve performance. Therefore, Pearson's standardized residuals were calculated to determine which specific methods were statistically significant. Because standardized residuals are normally distributed in the population, residuals higher than |2.5| would be unlikely if the null hypothesis was true (Note 1). If the residuals for a given method were positive and higher than |2.5|, students believed those methods did not improve motivation, participation, understanding, or performance. The residuals for each method are shown in Table 7. Those that are statistically significant were viewed as likely or not likely to affect the dependent variable. For example, the motivation residual value of 3.39 for flashcards is above |2.5| and positive; therefore, we conclude that students in the target population believed that the use of flashcards improves motivation. The motivation

residual value of -2.47 for tables is above |2.5| and is negative; therefore, we conclude that students in the target population believed that do not improve motivation. See Table 7 for a listing of the 12 residuals for each of the four dependent variables/ categories.

Interpreting the results

Finally, the researchers present their conclusions and explain their findings. They may also include limitations, weaknesses, or suggestions for future research. Example:

Discussion

The quantitative and qualitative results of our study are positive in how they explained the motives of teachers to use supplementary materials in their class along with the effects said materials have on the students. According to the interviews, the main motive of the teachers in using the materials was to motivate the interest of the students.

Teachers appeared to feel as though learning and understanding can only really be achieved once students are motivated. This highlights the importance of the correct use of supplementary materials in the classroom. According to the results of our survey, students claim to be most motivated when the teacher uses flashcards, photos, songs, realia, and video.

Teachers and education professionals should therefore perhaps take these results into account when deciding how to plan lessons and organize courses. On the hand, it appears as though we should limit the use of the blackboard, tables, and worksheets, which have a negative effect on the students in the classroom.

The teachers claimed that a good learning environment is necessary for students to learn and understand effectively the material they are teaching and that a good learning environment is only achieved once the students are

motivated. Likewise, they mentioned that in order to have motivated students it was necessary that the students were kept attentive via the correct use of supplementary materials.

Overall, we have seen positive results from both the quantitative and qualitative studies as regards the use of supplementary materials. Teachers should therefore plan the classes appropriately to keep students motivated and improve the learning outcomes

Acknowledgments

We would like to give our special gratitude to all the people who, with their support, contributed to the development of this research work. Especially to all teachers and students who provided insight and expertise that greatly assisted the research, although they may not agree with all of the interpretations/ conclusions of this paper. In addition, we would like to thank all the principals who allowed us to conduct our research in the institutions they manage. We are very grateful to Ms. Sylvia Rogers from the University of Southern Alabama, USA for her comments on an earlier version of our manuscript.

Moreover, Creswell and Guetterman (2019) explain the steps to analyze and interpret data in Qualitative Research:

- The first step is to organize your data. The way you manage your information will depend on you. There is not a specific pattern that you must follow. What is advisable is that you create different folders on your computer to save interviews and observations. If the information is sensitive, you will need to create passwords to protect the participants confidentially.
- The next step will be to transcribe your data. Remember that interviews are recorded audios that we need to transform to text to analyze them. We do not use the audio files because it would be impossible to code all the interviews.
- Once you have transcribed the interviews, you will code the data. Note that nowadays, researchers use software to code text. To understand coding in

qualitative data analysis, I invite you to watch the following video about Beginners guide to coding qualitative data.

Now that you know how data is coded, we will move on to the other steps in interpreting qualitative data. To understand this process, I encourage you to watch the video below about Qualitative Content analysis.

4.13 Reporting and Evaluating Research

To start, we will read the definition of a research report given by Creswell and Guetterman (2019) who state that a research report is "a completed study that reports an investigation or exploration of the problem." (p.267). In research, you have different formats or types of research reports. To learn about 2 of them, let´s analyze one report (format) used at UTPL and another one that relates to a journal article.

The first one will be a Quantitative and Qualitative thesis dissertation. This type of report is used here at UTPL to graduate. This report follows a specific format:

Figure 13

Thesis structure

Note. Paredes, F., 2024.

To learn about the parts of a thesis and the information we need to include, I invite you to review the institutional repository, which will take you to our University repository where you will find the thesis done by other students. Select any thesis to review.

The second research report we will study is Journal Articles, a shorter version of the thesis submitted to scientific magazines where experts will revise them and decide if it will be published. These are the parts of Journal Article:

- Abstract
- Introduction
- Materials and methods
- Results
- Discussion
- Conclusion
- References

To have a better idea of the information above, I invite you to read the following article titled The Cultural Identities of Foreign Language Teachers that is an example of a journal that has all its components.

Recommended learning activities

It is time to apply your knowledge through the activities that have been proposed below:

1. After watching the video about What Are Validity & Reliability In Research?, you noticed that besides covering the basic definition of validity and reliability, the author explains the different validity and reliability types. So, can you list the types of reliability and validity?

   Reliability:

   Validity:

2. Dear student, participate in the activity below. Write a brief summary of the explanation given in the video about Qualitative Content analysis.

Note. Please complete the activities in a class notebook or Word document.

3. To evaluate the learning acquired on this topic, I invite you to develop the self-assessment presented below.

Self-assessment 4

Self-assess your knowledge by choosing the correct answer.

1. There are several types of variables, but the most used are independent variables and dependent variables. The independent variable is the_____, and the dependent variable is the _____.

   a. Effect – cause.
   b. Cause-effect.
   c. Consequence – cause.

2. The use of multiple independent variables ___ to determine which independent variable influences the dependent variable.

   a. will allow.
   b. will not allow.
   c. Has allowed.

3. Recognize the type of variable in the following example: “Amount of water” and “size of plant.”

   a. “Amount of water is a dependent variable, and “size of plant” is an independent variable.
   b. “Amount of water” is an independent variable, and “size of plant” is a dependent variable.
   c. Both “Amount of water” and “size of plant” are dependent variables.

4. Analyze the following questions and choose the research question that has been written following the correct steps.

   a. What are the student's needs that influence English language learning in a public high school?
   b. Do students like learning English?
   c. Do environmental factors influence English language learning?

5. Regarding the definition of hypothesis, which of the following statements is correct?

   a. Hypotheses are predictions about the future.
   b. Hypotheses are predictions or anticipated answers that need to be verified.
   c. Hypothesis is always proved.

6. The central phenomenon does not deal with numbers, so it is explored in:

   a. Quantitative research.
   b. Qualitative research.
   c. Both quantitative and qualitative research.

7. Open research questions, that allow full exploration of factors and issues during the research process are called:

   a. Quantitative questions.
   b. Qualitative questions.
   c. Test questions.

8. Some of the elements while designing a research project are unit analysis, sample and population. Based on their meaning, which statement is correct?

   a. Population is a subset of the sample.
   b. Sample is a subset of the unit analysis.
   c. Sample is a subset of the population.

9. The tools that you will use to collect information from the participants are called:

a. Formal documents.
b. Instruments.
c. Permission.

10. According to the information studied, surveys are

a. instruments designed to measure educational topics' feelings.
b. set of questions about variables you wish to measure.
c. methods consisting of registering observable behaviors.

Ir al solucionario

Contenidos, recursos y actividades de aprendizaje recomendadas

Week 16

Final end-of-term activities

Dear students, in week sixteen, you will review the contents learned in this second bimester. Therefore, you must reflect on the different topics we cover in Unit 3 and 4. To recall the information studied, you may also review the activities presented in both units and the two self-assessments.

4. Self-assessments

Self-assessment 1

Pregunta	Respuesta	Retroalimentación
1	b	Epistemology is indeed a branch of philosophy. It is concerned with the study of knowledge, how it is acquired, the nature of knowledge, the methods used to obtain knowledge, and the criteria for determining the validity of knowledge.
2	b	Option b is correct. Etymology relates to the history of words, and educational research deals with the collection and analysis of data.
3	b	Option b is correct. Logia means reason or study and Episteme means knowledge or understanding
4	a	By exploring the foundations and methods of knowledge, epistemology contributes to establishing the conditions under which thoughts and beliefs can be considered valid and reliable.
5	c	Option c is correct. This aligns with the focus of epistemology, which is concerned with understanding the nature of knowledge, how it is acquired, and the fundamental principles that govern it.
6	c	Option c is correct. The scientific method is a systematic approach to inquiry that involves observation, hypothesis formation, experimentation, and analysis; so, this will look for valid facts and relationships.
7	c	Option c is correct. This sequence represents a systematic and logical approach to scientific inquiry. It begins with posing a question, followed by formulating a hypothesis, designing and conducting experiments to gather data, analyzing the data, and finally, reporting the findings.
8	b	Option b is correct. Common knowledge is not based on testing and technical language. Qualitative research is a method to carry out research studies.
9	c	Option c is correct. Guessing results is not part of research and reporting research is the final step in the study.

Pregunta	Respuesta	Retroalimentación
10	c	Option c is correct. The scientific method involves formulating questions, developing hypotheses, conducting experiments, and analyzing data to arrive at evidence-based answers and resolutions.

Ir a la autoevaluación

Self-assessment 2

Pregunta	Respuesta	Retroalimentación
1	b	Option b is correct. Ethic does not study philosophy; it is a discipline in philosophy. The scientific method is a strategy to answer a question.
2	a	Option a is correct. You commit plagiarism when you do not give any credit to your sources, this includes using someone else's words, ideas, or creations without proper attribution.
3	a	The correct option is a. The italics are used in the books title.
4	a	The correct option is a. These three types of designs are commonly used in quantitative research to investigate relationships, test hypotheses, and collect numerical data.
5	b	Option b is correct. If there is no problem, there is no research. This involves recognizing a gap in knowledge, a question that needs answering, or an issue that requires investigation.
6	a	Option a is correct. The purpose or goal articulates the overall objective or aim of the research study. It provides a clear direction and focus for the investigation.
7	b	Option b is correct. These factors are crucial for planning and executing a research project effectively. Working spaces and instruments could be considered secondary.
8	b	Option b is correct. After clarifying the problem, you can make informed decisions about the research design, methodology, and approach.
9	a	Option a is correct. Conclusions are drawn after you finish the study. In Chapter 1 you will include other elements of the study
10	b	Option b is correct. You have to explain why your research is relevant and must be done
		Ir a la autoevaluación

Self-assessment 3

Pregunta	Respuesta	Retroalimentación
1	b	Option b is correct. The abstract is a summary of the entire research. The Resume has nothing to do with research.
2	b	Option b is correct. In the literature review, you do not share your ideas. Also, you cannot copy other sources.
3	b	Option b is correct because articles, journals and books, have been revised by experts.
4	a	Option a is correct. If there is nothing to contribute to the current knowledge, there is no need to carry out your research.
5	c	By first identifying key terms, researchers can effectively search for relevant literature. Locating the literature involves finding and gathering the identified sources. The subsequent steps of evaluation, selection, organization, and synthesis guide the process of analyzing and integrating the literature into a cohesive narrative. Finally, the step of writing the literature review consolidates the synthesized information into a well-structured and informative review.
6	b	Option b is correct. You need to key words to narrow your research of literature on the web. These key words derive from the topic.
7	c	Option c is correct. Primary and secondary literature will be used for the literature review. Tertiary literature will help you with an overview of what you need to look for.
8	a	Option a is correct. Books and handbooks are an example of secondary literature, but articles and peer-reviewed articles are considered primary literature.
9	c	Option c is correct. Peer review is a quality control mechanism used in academia to ensure the rigor and credibility of scholarly articles before they are published, so, if these are not revised by experts, they are not peer-reviewed.
10	a	Option a is correct. You write the abstract after finishing your study since it hast to include a general conclusion.

Ir a la autoevaluación

Self-assessment 4

Pregunta	Respuesta	Retroalimentación
1	b	The independent variable is considered the cause, as changes or variations in it are hypothesized to lead to changes in the dependent variable, which is the effect.
2	b	Option b is correct. To have a clear view of what you will study, you need only one independent variable.
3	b	The amount of water is manipulated (independent variable), and the resulting size of the plant is observed and measured (dependent variable).
4	a	Option a is correct. The question clearly identifies the target population (students in a public high school), the key variables (student's needs), and the context (English language learning).
5	b	Option b is correct. See your hypotheses as a speculation that you will confirm.
6	b	When the central phenomenon does not involve numerical data and is more focused on exploring subjective experiences, meanings, or phenomena in-depth, qualitative research is the appropriate approach.
7	b	Option b is correct. In qualitative research, we use open questions, while in quantitative research we use closed questions to get specific answers that relate to our variables.
8	c	Option c is correct. We will always get the sample from the population. The population is the larger number of potential participants.
9	b	Option b is correct. Permission and formal documents are used to gain access to formal papers related to the study. Instruments will be used to collect data from the sample.
10	b	Option b is correct. In surveys, we will include questions that will collect specific information related to the variables.

Ir a la autoevaluación

5. Bibliographic references

Agee, J. (2009). Developing qualitative research questions: a reflective process. International Journal of Qualitative Studies in Education, 22(4), 431-447. DOI: 10.1080/09518390902736512

Cresswell, J. & Guetterman, T. (2019). Educational research: Planning conducting and evaluating quantitative and qualitative research. Pearson Education.

Creswell, J. W. (2018). Research design: Qualitative, quantitative, and mixed methods approach (5th ed.). SAGE Publications.

De la Cuesta-Benjumea, C (2008). ¿Por dónde empezar?: la pregunta en investigación cualitativa. Enfermería Clinica, 18(4), 205-210. https://doi.org/10.1016/S1130-8621(08)72197-1

Denzin, N. K., & Lincoln, Y. S. (Eds.). (2018). The SAGE handbook of qualitative research (5th ed.). SAGE Publications.

Duddley-Evans, T. & St John, M. (1998). Developments in English for Specific Purposes: A multi-disciplinary approach. Cambridge University Press.

Gadea, W., Cuenca, R. & Chávez, A. (2019). Epistemología y fundamentos de investigación científica. UTPL.

Geertz, C. (1973). *The interpretation of cultures: Selected essays*. Basic Books.

Habermas, J. (1984). *The theory of communicative action: Reason and the rationalization of society* (Vol. 1). Polity Press.

Hernández, R., Fernández, C. & Baptista, P. (2019). Metodología de la Investigación. McGraw-Hill

Kincheloe, J. L., & McLaren, P. (2005). Rethinking critical theory and qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *The SAGE handbook of qualitative research* (3rd ed., pp. 303-342). SAGE Publications.

Manual of the American Psychological Association (6th ed.). (2009). Washington, DC: American Psychological Association.

Meredith, E. (2019, July 12). Intro to the Scientific Method. OER Commons. Retrieved September 30, 2020, from https://www.oercommons.org/ authoring/55859-intro-to-the-scientific-method.

Mettler, C., & Charles, C. (2008). Introduction to Educational Research. Pearson Education, Inc.

Parra, G. (2000). Bases epistemológicas de la Educomunicacion: Definiciones y perspectivas de su desarrollo. ABYA-YALA.

Quintero-Castro, N. (2007). Approaches to an Epistemology of Librarianship as a Regional Study of Knowledge. Revista Interamericana de Bibliotecología, Jul. Dec. 2007, vol.30, no. 2, p. 71-87

Sandoval, C. (1996). La formulación y el diseño de los procesos de investigación social cualitativos. In Sandoval, C. (1996). Investigación Cualitativa (pp. 111-128). Instituto Colombiano para el Fomento de al Educación Superior. http://www.ugr.es/~erivera/PaginaDocencia/ Posgrado/Documentos/DisenoInvestigacion.pdf

6. Annexes

Annex 1. Examples of Instruments for Collecting Quantitative Data

Section A. Questionnaire (Survey)

Teacher's Factors

1. **Which of the following items do you consider necessary for an effective teacher?**

   - Teacher's language proficiency ( )
   - Teacher's Pedagogical knowledge ( )

2. **Select the activities that your teacher develops during his/her English classes:**

   - Roleplays ( )
   - Interviews ( )
   - Learning games ( )
   - Debates ( )
   - Expositions ( )
   - Picture-cued tasks ( )
   - Construction of paragraphs, essays ( )
   - Dictation ( )
   - Listening gap filling tasks ( )

3. **How do you prefer your English lessons?**

   - Student-centered classes ( )
   - Teacher-centered lessons (lectures) ( )

4. **Select the factors that affect your motivation to learn English:**

- Little variation in content ( )
- Excessive use of text ( )
- Lack of application of innovative resources ( )

Section B. Attitude scales

Student's survey

Dear student,

The purpose of this survey is to obtain information on your opinion on the factors interfering with the achievement of intermediate English level according to the Common European Framework of Reference. It, should be noted that this information will be used for academic purposes only; therefore, we kindly ask you to answer the following questionnaire:

Instructions: Please check the frequency option that best reflects your opinion (ONLY ONE ANSWER PER NUMBER). Mark with an X in the corresponding box.

Student's factors

Item n.	Statements	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1	I mainly focus on using English for class assignments and exams.					
2	I am interested in reading and listening only English textbooks and audios for my school study, but not other English texts or recordings e.g. newspaper, magazines, music, podcasts, interviews, etc.					
3	I think that learning English is important for travelling Abroad					
4	I believe that being proficient in English can lead to more					

	success and achievements in life.					
5	Studying English enables me to understand English books, movies, pop music, etc.					
6	Studying English enables me to keep in touch with foreign acquaintances					

Please rate your boss on the following traits:

- **I feel my boss is decisive**

  Strongly disagree ( ) Disagree ( ) Neutral ( ) Agree( ) Strongly agree ( )

- **I feel my boss is strong**

  Strongly disagree ( ) Disagree ( ) Neutral ( ) Agree( ) Strongly agree ( )

- **I feel my boss is fair**

  Strongly disagree ( ) Disagree ( ) Neutral ( ) Agree( ) Strongly agree ( )

- **I feel my boss is active**

  Strongly disagree ( ) Disagree ( ) Neutral ( ) Agree( ) Strongly agree ( )

- **I feel my boss is cheerful**

  Strongly disagree ( ) Disagree ( ) Neutral ( ) Agree( ) Strongly agree ( )

Section C. Checklist (Observation)

Universidad Técnica Particular de Loja

La Universidad Católica de Loja

Modalidad Abierta y a Distancia Titulación de Inglés

Hoja de observación

Institución educativa:

Fecha:

Curso/nivel:

1. Se realizan actividades que permiten poner en práctica lo aprendido.

   Si ( ) No ( )

   Notas:

2. Todos los estudiantes están atentos y participan en las actividades desarrolladas en clase.

   Si ( ) No ( )

   Notas:

3. El espacio de la clase permite desarrollar adecuadamente las actividades asignadas por el profesor.

   Si ( ) No ( )

   Notas:

4. El profesor brinda una retroalimentación adecuada debido al poco número de estudiantes en la clase.

   Si ( ) No ( )

Notas:

5. Existe interacción entre los estudiantes

   Si ( ) No ( )

   Notas:

6. Existe interacción entre el profesor y los estudiantes

   Si ( ) No ( )

   Notas:

   El profesor recuerda el nombre de los

   estudiantes Si ( ) No ( )

   Notas:

Annex 2. Examples of Instruments for Collecting Qualitative Data

Section A. Checklist (Observación)

Universidad Técnica Particular de Loja

La Universidad Católica de Loja

OPEN AND DISTANCE MODALITY ENGLISH DEGREE

Observation Sheet

Institution: _____

Date. _____

Year: _____

1. **Students feel motivated to learn English in class?**

   Yes ( ) No ( )

   Why?

2. **Mark which of the following aspects motivate the subject of students observed to learn English in class.**

Aspects	**Yes**	**No**
Type of activity		
Rewards		
The topic		
Teacher´s attitude		
The book		
The material		

Section B. Questions (Interviews)

TEACHER'S INTERVIEW

Dear teacher,

The purpose of this interview is to obtain information on your opinion on the factors interfering with the achievement of the intermediate English level according to the Common European Framework of Reference. It should be noted that this information will be used for academic purposes only; therefore, we kindly ask you to answer the following questionnaire:

Teacher's factors

1. Do you consider English language proficiency important for developing successful English classes?

   Yes ( ) No ( )

   Why?

2. Do you consider important that updating and permanent training of teachers as a factor in improving teaching practices?

   Yes ( ) No ( )

   Why?

3. Do you think that the use of several teaching methodologies helps to create meaningful learning environments?

   Yes ( ) No ( )

   Why?