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| **–THEME 14. QUALITY CRITERIA AND OTHER RESEARCH ISSUES** |

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| Learning outcomes  This lesson offers you opportunities to:   * Gain an overview about quality criteria and other research issues; * Learn about purpose statements, research questions, research hypotheses, and research objectives. * Develop note-taking skills while watching speech; * Develop a knowledge about other essentials for launching a study.   *Key-words: quality criteria for research, purpose statements, research questions, research hypotheses, and research objectives, pilot study, research log.* |



The criteria for quality and various research issues generally pertain to the principles, standards, and challenges associated with executing high-quality research. This theme encompasses a wide range of interdisciplinary elements, focusing on research methodology, ethical considerations, and evaluation processes.

**1. Quality Criteria for Research**

Dörnyei emphasizes the significance of maintaining high-quality standards in research to guarantee reliability, validity, and ethical integrity.

***Reliability*** pertains to the consistency and dependability of the research instruments and procedures. Dependable research yields uniform outcomes when repeated in comparable circumstances. Enhancing reliability can be achieved through the standardization of procedures and the utilization of dependable measurement tools.

Example: A language proficiency assessment should produce comparable outcomes for the same cohort of participants when conducted under uniform conditions.

***Validity*** refers to the accuracy and relevance of the study in assessing what it purports to measure. Various types of validity exist.

* **Construct Validity:** Ensures the study’s instruments measure the intended construct.
* **Internal Validity:** Addresses whether the outcomes are truly due to the variables tested.
* **External Validity:** Concerns the generalizability of findings to other contexts or populations.

**2. Purpose statements, research questions, research hypotheses, and research objectives.** We will begin by elucidating four phrases used in research to articulate the purpose of a study: purpose statements, research questions, research hypotheses, and research objectives.

**The Purpose Statement**

Creswell (2015) asserts that a purpose statement delineates the overarching direction or goal of the investigation. Researchers articulate the objective of a research in one or more concisely constructed statements. It is used in both quantitative and qualitative research and is often located in the "statement of the problem" section. It often manifests as the last line of an introduction. It may be identified since researchers often start it with the statement “The purpose of this study is . . .” A quantitative iteration of this mission statement about teacher-parent communications and student progress is presented as follows:

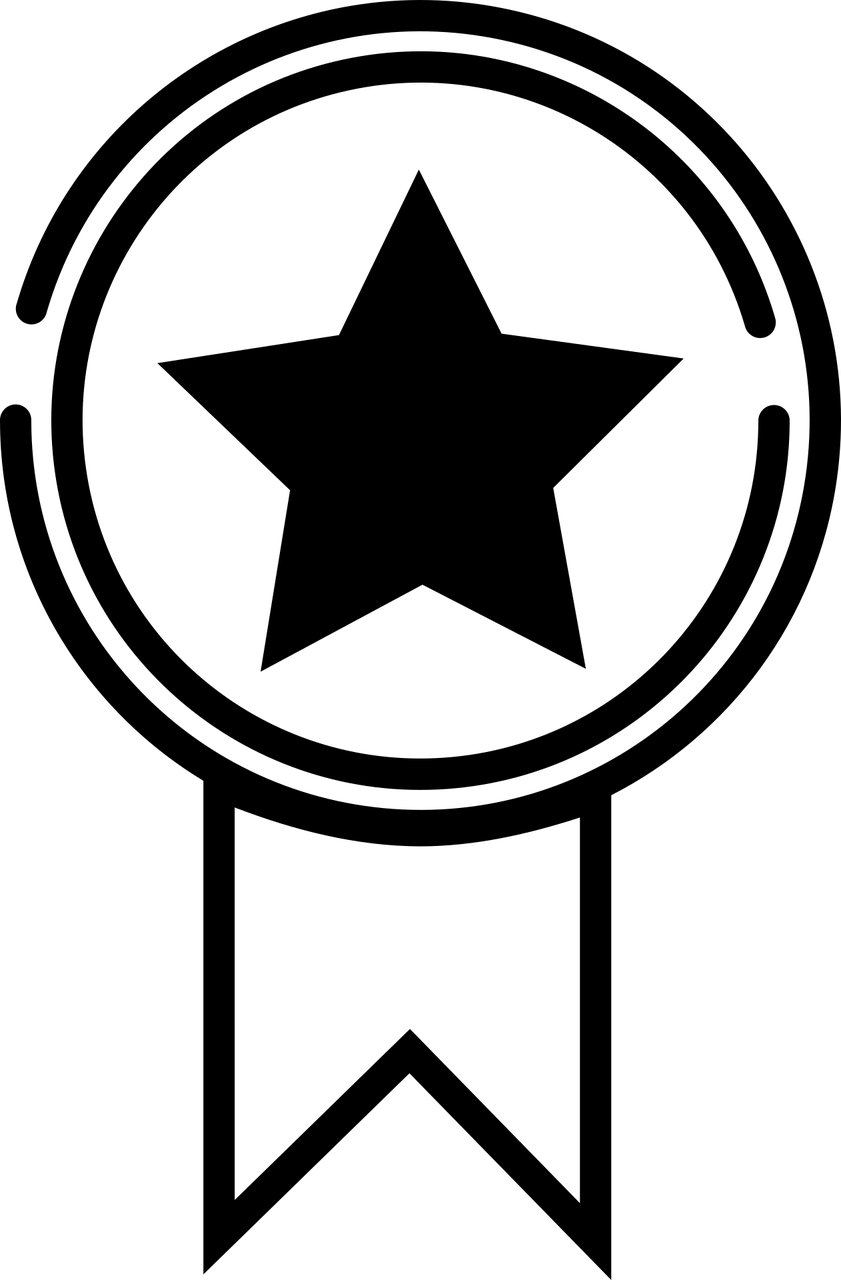
*This research aims to investigate the correlation between Internet contact between instructors and parents in a Midwestern school system and student performance on high school social studies assessments.*

**A qualitative version might be:**

*This research aims to investigate parental narratives about Internet contacts with educators about their children in a Midwestern school system.*

**Research Questions**

Creswell (2015) posits that research questions in quantitative or qualitative studies refine the goal statement into particular inquiries that researchers want to address. Researchers often formulate them prior to determining the study's methodologies (i.e., the categories of data to be gathered, processed, and evaluated in the research). In contrast to the one assertion included in a purpose statement, researchers often articulate many research questions to comprehensively investigate a subject. study questions exist in both quantitative and qualitative studies, however their components vary according to the study type being undertaken.

 **Characteristics of Strong Research Questions**

* **Scope:** Well-defined and not overly broad or narrow.
* **Practicality:** Feasible to address given time, resources, and expertise.
* **Novelty:** Adds value to the existing body of knowledge.

*Example of Refining a Broad Question:*

**Initial:** "What are the challenges of learning English as a second language?"

**Refined:** "What are the key challenges faced by university-level EFL learners in mastering academic writing?"

**Hypotheses**

Creswell (2015) defines hypotheses in quantitative research as statements where the investigator predicts or conjectures the outcome of a relationship among attributes or characteristics. Historically utilized in experimental settings, they function similarly to research questions by refining the purpose statement into precise predictions. These predictions are not merely an informed assumption. Researchers rely on findings from previous studies and literature, where investigators have identified specific outcomes. This allows them to make informed predictions about what other researchers may discover when they replicate the study with different participants or in new locations. These hypotheses are generally presented at the outset of a study, usually located at the conclusion of the introduction. Investigators also position them directly following the literature review or in a distinct section labeled “Hypotheses.” Typically, researchers propose multiple hypotheses, often ranging from three to four. An example of a hypothesis is:

*Students in high schools within the school district where there is communication between parents and teachers via the Internet will achieve higher grades compared to students whose parents and teachers do not utilize the Internet for communication.*

**Research Objectives**

Creswell (2015) defines a research objective as a statement of intent utilized in quantitative research, outlining the goals that the investigator aims to accomplish in a study. Researchers frequently categorize objectives into primary and secondary objectives. They are commonly found in survey or questionnaire studies, as well as in evaluation research where researchers have explicitly defined their objectives. Objectives, similar to hypotheses and research questions, are typically located at the conclusion of the “statement of the problem” section, following the literature review, or presented in a distinct section of the study.

Objectives can be identified by searching for phrases like “The objectives in this study are . . .” The following exemplify objectives for a study:

1. To outline the regularity of communication via the Internet between parents and teachers concerning the academic progress of students in high school social studies classes.   
2. To outline the various types or categories of Internet communication between parents and teachers

3. To connect (a) frequency and (b) types of communication to student achievement in the class as assessed by performance on tests

**3. Other Essentials for Launching a Study**

 Dörnyei highlights the importance of various preparatory activities to facilitate an efficient research process.

***A pilot study*** is a preliminary investigation conducted on a small scale to assess the feasibility of the research design and methodologies employed. This process assists in recognizing potential challenges within research instruments, procedures, or logistics. Conducting a pilot test of the survey questionnaire with a select group to verify its clarity and relevance.

***Research Log:*** A research log serves as a structured documentation of the research process. The document encompasses comprehensive notes regarding decisions, modifications, challenges, and reflections.

The objective is to improve transparency and establish a definitive audit trail for future reference.

***Data Management:*** Efficient data management encompasses the systematic organization, storage, and analysis of data. Important factors to consider are:

* Accurate labeling and classification of data.
* Maintaining data security and confidentiality.
* Employing software tools (e.g., SPSS, NVivo) for effective analysis.

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| **Activity 1. Reading. Read the text and answer the following questions.** |

* + 1. What are the three main quality criteria for research outlined by Dörnyei, and how can each be ensured during a study?
    2. What is the difference between internal and external validity in quantitative research, and how can these be enhanced in applied linguistics studies?
    3. What are the key characteristics of a strong research question, and how do they contribute to the overall quality of a study?
    4. What is the purpose of a pilot study, and how can it help mitigate risks in the main research study?
    5. What is a research log, and what are its key components? How does it contribute to the transparency and reliability of a study?
    6. Why is effective data management crucial in research, and what are some best practices for organizing, securing, and analyzing data?

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| **Activity 2. Watch the video about “Annotating an article”, take notes while watching.** |

You tube link: https://www.youtube.com/watch?v=JtRGUNo2pck&t=52s&ab\_channel=GVSULibrariesInstruction

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| **Activity 3. Speaking. Answer the following questions.** |

1. Why do researchers use annotation?
2. What kind of online programs can be used to annotate?
3. What important information can you use from the article in order to annotate?
4. What citation styles can you use to create annotation?
5. What kind of keys can you use to annotate?
6. What colour codes can you use for annotating a text?
7. How can you remember some key points in the article using annotations?
8. How can you highlight new ideas or author’s theories for further use?
9. How can a hashtag help find more information afterwards?
10. What is “an understanding your reading goals” according to the author?

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| **Activity 4. Listening. Complete the notes below. Write ONE WORD ONLY for each answer.** |

**Annotating an article**

Annotating an article is a kind of detailed note-taking. Researchers use annotation to better understand material and to help organize what they read for use in their own 1 \_\_\_\_\_\_\_\_\_\_\_\_.

***Process of annotating***

Annotation can be done on the paper or with online programs; it includes:

* noting the important stuff about an article;
* the purpose of the writing;
* parts that you find 2 \_\_\_\_\_\_\_\_\_ or you don't agree with; words;
* major findings, theories;
* the overall 3 \_\_\_\_\_\_\_\_\_\_\_\_\_ of the work to your discipline;
* important information about the author or authors;
* search terms for finding more information on the same topic.

***How can you begin?***

* You can make notes directly on the article or start with a clean document;
* Create a citation in the 4 \_\_\_\_\_\_\_ you use in your discipline, APA or MLA;
* If it's an article from a website or other less conventional source, cut and paste the 5 \_\_\_\_\_\_\_\_\_\_ and date retrieve as well.
* The key is the list of symbols or colours you use to code your notes;
* Colour coding system: begin by circling any vocabulary you don't understand.
* Make quotes around actual quotes you want to save for use;
* This symbol could also refer to a question 6 \_\_\_\_\_\_\_\_\_\_ by the article or to something you find confusing.
* Making a question mark will help you hold your questions;
* A star can refer to the main idea or thesis or to the 7 \_\_\_\_\_\_\_\_\_\_ being tested.

***Recognize theories***

* Mark theories with a symbol that helps you call them out;
* You may 8 \_\_\_\_\_\_\_\_\_\_\_ studies or other outside information referred to by the articles author;
* Highlight the author's findings; paraphrase those findings into shorter sections;
* Take note of information that stands out, e.g. an exclamation point.

***Hashtag: Why?***

* The purpose hashtag serve in social media is to group like content together;
* Notice the terms used by certain 9 \_\_\_\_\_\_\_\_\_\_\_ to refer to theories, terms and other ideas or concepts.

***Understand your reading goals.***

* For personal work, focus on finding information connected to your research goals;
* For a class assignment, consider the goals your 10 \_\_\_\_\_\_\_\_\_\_ might have for you.

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| **Activity 5. Vocabulary. Match the words with an appropriate definition.** |

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|  | **Words** | **Definitions** |
| 1 | attach | a) something that you contribute or do to help produce or achieve something together with other people, or to help make something successful |
| 2 | attribute | b) a particular area of study, especially a subject studied at a college or university |
| 3 | code | c) based on clear thought and reason |
| 4 | compile | d) to include something, or to make something a part of something |
| 5 | contribution | e) useful or convenient |
| 6 | discipline | f) a quality or characteristic that someone or something has |
| 7 | handy | g) to show or describe something or someone |
| 8 | rational | h) abbreviation for uniform resource locator (= the address of a page on the Internet) |
| 9 | represent | i) to collect information from different places and arrange it in a book, report, or list: |
| 10 | URL | j) a system of words, letters, or signs used to represent a message in secret form, or a system of numbers, letters, or signals used to represent something in a shorter form |
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