



HOW TO DESIGN A **RESEARCH PROPOSAL**



Dr. Annisa Astrid, M.Pd.



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**Sanksi Pelanggaran Pasal 113
Undang-Undang Nomor 28 Tahun 2014
Tentang Hak Cipta**

1. Setiap Orang yang dengan tanpa hak melakukan pelanggaran hak ekonomi sebagaimana dimaksud dalam Pasal 9 ayat (1) huruf i untuk Penggunaan Secara Komersial dipidana dengan pidana penjara paling lama **1 (satu) tahun** dan/atau pidana denda paling banyak **Rp100.000.000 (seratus juta rupiah)**.
2. Setiap Orang yang dengan tanpa hak dan/atau tanpa izin Pencipta atau pemegang Hak Cipta melakukan pelanggaran hak ekonomi Pencipta sebagaimana dimaksud dalam Pasal 9 ayat (1) huruf c, huruf d, huruf f, dan/atau huruf h untuk Penggunaan Secara Komersial dipidana dengan pidana penjara paling lama **3 (tiga) tahun** dan/atau pidana denda paling banyak **Rp500.000.000,00 (lima ratus juta rupiah)**.
3. Setiap Orang yang dengan tanpa hak dan/atau tanpa izin Pencipta atau pemegang Hak Cipta melakukan pelanggaran hak ekonomi Pencipta sebagaimana dimaksud dalam Pasal 9 ayat (1) huruf a, huruf b, huruf e, dan/atau huruf g untuk Penggunaan Secara Komersial dipidana dengan pidana penjara paling lama **4 (empat) tahun** dan/atau pidana denda paling banyak **Rp1.000.000.000,00 (satu miliar rupiah)**.
4. Setiap Orang yang memenuhi unsur sebagaimana dimaksud pada ayat (3) yang dilakukan dalam bentuk pembajakan, dipidana dengan pidana penjara paling lama **10 (sepuluh) tahun** dan/atau pidana denda paling banyak **Rp4.000.000.000,00 (empat miliar rupiah)**.

HOW TO DESIGN A RESEARCH PROPOSAL

Dr. Annisa Astrid, M.Pd.

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Hak Cipta dilindungi oleh undang-undang.
Dilarang mengutip atau memperbanyak sebagian
atau seluruh isi buku tanpa izin tertulis dari penerbit

Forewords

It is important for educators (both lecturers and students) as well as students and researchers to engage in ongoing research. Therefore, this book has been written as a reference for the purpose of creating an effective proposal. In this book, the author gives step-by-step instructions on how to construct the proposal, including the introduction, problem statement, research objectives, research significance, theoretical framework, previous relevant studies, and research methods. The author of this book also includes instructions on how to properly cite sources using the APA style. In conclusion, the author provides a concise overview of the research method, namely how to choose an adequate research design, how to select appropriate research instruments, the processes involved in data collection, and the steps to analyze the collected data.

Author

AA

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1. WRITING A RESEARCH BACKGROUND

The first step in writing the background is to describe the research topic. Of the many topics available, the writer should be able to explain why he chose that topic and describe the crucial reason for the author finally deciding to choose to research the topic. Explaining the topic can be started by writing down why the variable was chosen. We must be able to explain what interests led to choosing these variables.

Writing a background needs to be based on the phenomenon of what is happening in the field. Whatever phenomenon occurs can be raised as the topic or core of the research. A person's success or failure in finding a phenomenon will depend on how much information is obtained.

After describing the research topic, the student needs to identify what problems exist in the chosen research topic. Do not pick an object that does not raise a problem. An object can be said to have a problem when something unusual happens. If we can identify the problem, it will be easier to determine what steps to take in research.

Background writing also starts from the weaknesses of previous studies, especially if we want to make a difference

with previous research. The weaknesses of previous studies should be explained by comparative analysis and assumptions to refute previous research or explain another point of view in research. However, when we want to write from the weaknesses of previous studies, we must first pay attention to the study we want to take. We are trying to complete the research to make the study more beneficial in answering the weaknesses of previous research.

We must first explain the previous studies and the theoretical assumptions used to do this. Then we can use the same research object or other cases with the exact chronology of phenomena as a comparison. At this point of comparison, we can then describe the weaknesses of previous research and what we will look for in the research.

The next step is to make assumptions. *Assumptions* are opinions based on events as a basis for searching or formulating problems in a study. This assumption can be said to be personal opinion, both subjective and objective, but must be based on events or data.

For a quantitative research background, we should first outline the background. Create the main idea for each paragraph. We can create five main ideas for five background paragraphs. The

following is an example of the steps for creating a background for quantitative correlational research

1. Define a topic and title.
2. Create a frame of mind by determining the main idea or main idea for each paragraph.
3. 3. Place the paper's title's primary concept in the final paragraph.

For instance, the title of the article is "**The Relationship Between Reading Interest and Learning Achievement of Indonesian Children.**" Then we can start the background with the following outline.

- Education in Indonesia
- Literacy Level in Indonesia
- Children's Reading Interest
- Measure of learning achievement
- The Relationship Between Reading Interest and Learning Achievement
- Research gap

As for the background of qualitative research, it is necessary to emphasize the phenomena in the field that will be explored in more depth

2. WRITING A RESEARCH PROBLEM, A RESEARCH OBJECTIVE, AND SIGNIFICANCE

Problem Limitations

Making "Problem limitation" is based on considerations, namely: the intent and attention of the researcher, the available materials, and the complexity of the basic assumptions and field studies carried out. And the identification and formulation of the problem then formulated the research questions

Research Problem

The problem formulation contains several sections, ranging from why to how questions, which relate to the research topic. The problem formulation is a short essay containing questions about the topic raised by the author. So with the formulation of the problem, the author tries to find answers to the questions raised.

Several question words used in formulating the problem are "why" and "how" because they open up opportunities for in-depth research. Other question words can still be used in writing a research problem. The formulation of the problems could help researchers to keep doing research under the

corridor or research path. The problem formulation contains the following characteristics: It is in the form of interrogative sentences. It contains short, concise, and straightforward questions. It contains research value. It directs readers to think about the topic discussed. The problems raised are the following research capabilities. Finally, it guides in conducting research activities.

Research Objective

The research aim is the creation of a statement that demonstrates the outcomes of something to be attained or investigated. For the formulation of research, objectives indicate the researcher's intention to find solutions to the stated research challenges. Consequently, the development of objectives must be pertinent to the identified problems, the problem formulation, and the research method. The purpose of the research appears to be a repeat of the problem statement. Typically, research objectives are stated as questions that begin with the verb desire to know. The statement of purpose identifies the study's variables, population, and context.

Characteristics of writing research objectives are as follows;

1. The making is always in accordance with the context of the problem formulation and research objectives
2. Used as a reference by other authors who have the same research problem
3. Research objectives can be said to be the core idea of a research

Various forms of writing for research purposes are distinguished based on the method used, including:

A. Qualitative Objective Statement

Generally, qualitative purpose statements include information about the primary phenomena investigated, research participants, and research settings. The objective of qualitative research might also include a description of the chosen research design. These aims should be expressed in words borrowed from the language of qualitative research.

B. Quantitative Research Objectives

In terms of wording and emphasis on connecting or comparing variables, quantitative purpose statements differ greatly from qualitative models. The objective of quantitative research

involves the variables employed in the study as well as the link between these factors, the participants, and the location of the research. These aims are expressed in terms of quantitative research and involve evaluating specific correlations or hypotheses deductively.

The purpose of quantitative research usually begins with identifying the main variables in the study (free, intervening, or dependent) and their visual model, then finding and determining how these variables will be measured and observed. In the end, quantitatively, Variables are used to link variables, as is common in survey research, or to compare particular samples or groups about research outcomes, as is common in experiments.

C. Objectives of Mixed Methods Research

The purpose of quantitative and qualitative research (mixed methods purpose statement) contains

- the overall research objectives,
- The aspects of qualitative and quantitative research are discussed.
- the reasons/rationalization for mixing the two elements to examine the research problem.

Typically, the objective of mixed methods research is stated first in the introduction to give the reader with a foundational grasp of the quantitative and qualitative components.

Research Significance

Research Significance is a description of the usefulness of research results, both for the benefit of program development and the development of science

Types of Research Benefits

1. Theoretical or Academic

Theoretical benefits are part of the explanation related to the benefits of research from the theoretical aspect, namely the benefits of research for the development of science

2. Practical or Applicative

Practical benefits are the benefits of research results from practical or applicable aspects, namely research benefits for programs aimed at students, the government, and the community.

3. WRITING A LITERATURE REVIEW AND PREVIOUS RELATED STUDY

Theoretical Framework

The theoretical framework briefly describes the theory used in answering research questions. For example, to answer the question: What is the student learning approach? The theory about the types of learning approaches can be used in that there are three learning approaches, namely the deep approach (oriented to meaning), the surface approach (oriented to reproduction), and the strategic approach (Achievement-oriented). Students can use several expert opinions in solving research problems

Previous Related Study

A previous related study is a description of the results of previous studies that are relevant to the planned research. The function of a literature review is to ascertain the position and importance of the planned research in the overall context of the more comprehensive research. Besides, a literature review aims to determine the gap between previous related research

and the planned research. The steps for conducting a literature review are:

- a. Analysing the research problems;
- b. Finding and reading secondary sources;
- c. Selecting relevant primary sources;
- d. Reviewing relevant primary sources;
- e. Organizing notes as a result of a study of library sources;

Writing a previous related study at least consists of the researcher's name, the study's title, the year of publication, the research type, and the research results' substance. It can also use other formats besides those mentioned above but must be consistent

4. APA STYLE CITATION

When citing sources within the domain of the social sciences, the American Psychological Association (APA) style is most often used. This manual employs the seventh version of the updated APA style. APA Style has two main parts to citation writing:

- a. In-text citations
- b. Bibliography/bibliography (List of references)

In-Text Citation directs the reader to find complete information on the source of the Citation in the bibliography used by the author. A list of references directs the reader to find complete bibliography information about all sources of information referenced by the author. The list of references is on the last page of the paper.

Essential Guidelines In Text Citation

1. The source of the quote can be written at the beginning or end of the quote.
2. Placement of the source of the quote (at the beginning or end of the quote) should not obscure the quoted part
3. In-text citations should be formatted following the author-date method, with the author's last name, the publication

year of the cited source, and references must appear in their entirety in the bibliography at the end of the article.

4. Include the source page of the quote after the year is mandatory if the contents of the text quoted are located on the page. But if the quotation of ideas from the reference source is not direct, There is no requirement to include page numbers in text citations.
6. The bibliography must include all sources mentioned in the text.
7. The first word for proper nouns (names of people, places, and names of objects specifically), including the name and initials of the author, is always capitalized, for example, M. Hatta, D. Jones
8. Titles in the bibliography are capitalized only in the first letter of the first word. The students' confidence
9. All titles of books, documentation, albums, and films in italics, for example, *The Closing of the American Mind*
10. All titles of articles are written without italics, and only the first letter of the first word is capitalized. Example: Teaching reading: Problems and solutions
11. Long direct quotations are more than 40 words, then quotation marks are not required. The first line of a quotation should be on a new line, and it should be

indented one inch from the left margin, which is located in the same location in the next paragraph.

12. Paraphrase or summarize an idea or idea from another written work; The only required information is the author's name and the year of publication.
13. If there are more than two writers, just the last name of the first author is provided as the source, followed by et al., then the year of citation.
14. If the source of the citation is translated literature (books and articles), then the source is the original author's name (not the translator's) followed by the publication date of the original work (not the year the translation was published).

The Way to Write References based on “Author”

1. Works with Two Authors

Research from Caroline and Jane (2014) supports that...

Or

This study is similar to other research(Caroline and Jane, 2014)

2. Works of Three to Five

Language acquisition is an ongoing process (Raymond, Corl, Sunny, Beard, & Hellem, 2013)

Or

Raymond, Corl, Sunny, Beard, & Hellem (2013) explain....

In the next quote,

(Raymond et al., 2013)

Or

Raymond et al (2013) argued....

3. Or

Reading comprehension is vital for English students (Harris et al., 2001)

4. Author Unknown. The citation of the source is the title which is written in italics.

A similar study was conducted on students learning to write scientific journal articles (*Teaching Method*, 2011).

5. Organization as Author

Example

According to the English Teacher Association (2020),
blah la la

Alternatively, use an abbreviation if it is known in parentheses when the source is referenced for the first time, simply the abbreviation is cited thereafter..

Example:

First citation: (English Teacher Association [ETA], 2020)

Second citation: (ETA, 2020)

6. Multiple works enclosed in parentheses. Order the author's name alphabetically.

(Jane, 2012; Kelvin, 1999)

7. Author who has the same surname. Initialize the first name and write the surname.

(S. Hall, 2011; T. Hall, 1998)

8. There are at least two books written by the same author that were published in the same year.

Research by Ricard (2000a) illustrates...

Then, Richard (2010b) described...

9. Citing/Citing Indirect Sources

Karlin argues that...(as cited in Hott, 2013, p. 104).

10. Year Unknown

Another study of students found that students were successful with tutoring ("Reading and writing," n.d.).

Writing References

1. All works cited in the writing of the paper must be included in the bibliography.
2. Bibliography on a separate page from the description of the writing.
3. Margin size as on the writing page.
4. In the title, only the initial letter of the first word and proper nouns should be capitalized.
5. The distance between works (library) is two spaces.
6. Indent in the second row with a distance of an inch.
7. The bibliography is written/typed in one space, sequentially alphabetically, without numbers.
8. If there is just one author, the last name is listed first, then the initials of the first and middle names, followed by writing the year, title, and other identities of the referenced literature/library.
9. Writing a bibliography may not use et al. instead of the name of the second author

In Text Citation

Essential Guidelines In Text Citation

1. The source of the quote can be written at the beginning or end of the quote.
2. Placement of the source of the quote (at the beginning or end of the quote) should not obscure the quoted part
3. Format in-text citations using the author-date system, with the author's last name and the year of publication of the referenced source appearing in the text, for example, and references must appear in full in the bibliography at the end of the article.
4. Include the source page of the quote after the year is mandatory if the contents of the text quoted are located on the page. But if the quotation of ideas from the reference source is not direct, There is no requirement to include page numbers in text citations.
5. A brief quotation includes the author's name, the publication year, and the page number preceded by 'p.'
6. All sources referenced in the text must be included in the bibliography.
7. The first word for proper nouns (names of people, places, and names of objects specifically), including the name and initials of the author, is always capitalized, for example, M. Hatta, D. Jones

8. Titles in the bibliography are capitalized only in the first letter of the first word. The students' confidence
9. All titles of books, documentation, albums, and films in italics, for example, *The Closing of the American Mind*
10. All titles of articles are written without italics, and only the first letter of the first word is capitalized. Example:
Teaching reading: Problems and solutions
11. Long direct quotations are more than 40 words, then quotation marks are not required. Writing quotes begins on a new line with a one-inch indent from the left margin, which is located in the same location in the next paragraph.
12. Paraphrase or summarize an idea or idea from another written work; simply the author's name and the publishing year are necessary.
13. If there are more than two writers, just the last name of the first author is provided as the source, followed by et al., then the year of citation.
14. If the source of the citation is translated literature (books and articles), then the source is the name of the original author (not the translator), followed by the year the original literature was published (not the year the translation was published).

Examples of In-Text Citation

Works with Two Authors

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Raymond et al (2013) argued....

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(Harris et al., 2001)

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Organization as Author

Example

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Alternately, use an abbreviation if known in parenthesis the first time the source is referenced, and then only the abbreviation is quoted afterwards.

Example:

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Second citation: (ETA, 2020)

Multiple works enclosed in parentheses. Order the author's name alphabetically.

(Jane, 2012; Kelvin, 1999)

Author sharing the same surname.

Initialize the first name and write the surname.,

(S. Hall, 2011; T. Hall, 1998)

More than two publications by the same author published in the same year

Research by Ricard (2000a) illustrates...

Then, Richard (2010b) described...

Citing/Citing Indirect Sources

Karlin argues that...(as cited in Hott, 2013, p. 104).

Year Unknown

Another study of students found that students were successful with tutoring ("Reading and writing," n.d.).

Different Author

1. Single Author

Last name, initials of author's name.

Example:

Carl, A. J. (2002). Gaining information from text. *Conciencia*, 11, 7-10. <https://doi.org/10.123456>

2. Two to Seven Authors

Sort the last name and initials of the author, a comma (,) to separate the author's name, and add an "&" sign before the last author's name.

Example:

Darul, T., & Petty, R. (2014). Hedonic contingency theory. *Personality Journal*, 6(1), 34-48.

3. More than Seven Authors

Sort the last name and initials of the author, a comma (,) as a separator of the author's name. After the sixth author, add three periods (.) add the last author's name.

Example:

Miki, M. H., Chol, R. M., Ange, L. L., Hairlan,, Termos,
.K, july, S., . . . Ruben, Z. (2009). Young learners.
Learner Journal, 7(1), 23-35.

4. Name of organization as author

Teaching Association. (2013).

5. Unknown Author

Title as author

Example:

Teaching for fun. (1993). Springfield, MA: Publishing
Press.

6. Two or more works by the same author

List the same author's names with their publishing years.

Example:

Burn, A. (1981).

Burn A. (1999).

7. Same-author works in the same year Letters following publication year.

Example:

Burn, A. (2001a). Good friend. *Psychology Journal*, 27(2), 8-16. <http://dx.doi.org/123456>

Burn, A. (2001b). Friends' attitude. *Attitude Journal*, 52(2), 36-43. <http://dx.doi.org/456789>

Reference Writing Format

Books, Theses and Dissertations.

1. Basic Format

Author, A. A. (year). City of Publisher: Publisher's Name.

Example:

Coffee, C., & Valet, R. (2001). *Published*. Washington, DC: Publishing Company

2. Editor, No Author Name

Editor. (Ed.). (year). *Title of the book*. City of Publisher: Publisher's Name

Example:

Sincan, J., & Broke, B. (Ed.). (2007). *Consequences*. New York, NY: Publishing Company.

3. Author and Editor

Author. (year). *Book* . Editor.(Ed.). City of Publisher:
Penerbit

Example:

Path, L. (2000). *Pretty Name*. L. V. Gokil (Ed.). Bandung:
Press Name.

4. Translation

Author. (year). *Book title*. (Translator name). City of
Publisher: Publisher's Name. (Original work published)

Example:

Replace, S. (2001). *Philosophical probabilities*. (A.B. Bill &
L. Memory.). New York, NY: Publishing Press.
(Original work published 1923)

5. Book Edition

Author (year). *Book title* (edition). City of Publisher:
Publisher's name

Example:

Helper. E., Tempe, S., & Ray, D. (2007). *The child* (3rd ed.).
Chicago, IL: Company Press.

6. Article or book chapter

Author's name (year). Chapter Title. In Editor name (Ed).
Book title (edition). City of Publisher: Publisher's name

Example:

Kirt, L. M., & Egg, M. (1992). Gender role journeys. in R. Kurt (Ed.), *Gender issues across the life cycle* (p. 10-23). New York, NY: Publishing Company.

7. Book Which Has Volumes

Author (year). *Book title* (Vol.). City of Publisher: Publisher's name

Example:

Win, K. (1993). *Dictionary of ideas* (Vol. 5). New York, NY: Publishing Company Name

Online Publication

1. Online article journal with no DOI (*Digital Object Identifier*)

Author (year). Article title. *Journal Title, volume*, (edition), page. Retrieved from <http://aaaaaaaaa.com>

Example:

Stein, M. (2012). Ten suggestions for creating a live web. *Journal Name*. 2(3), 10-15 Retrieved from www.websitename.com

2. Online article journal with DOI

Author. (year). Article title. *Journal Title*, volume, (edition), page. <http://doi./123678>

Example:

Wool, M., & Shapk, K. (2012). Playing: Suffering when using electronic toys. *Applied Developmental Psychology Journal*, 3(5), 21-28. <http://dx.doi.org/123456>

Brown, D. (2007). Annotated bibliography for efficient poster presentations. *Market Journal*, 44, 124-136. doi:10.000/123456

Dam, L., & Lilik, J. (2005). The length of time patients with terminal illnesses survives. *Psychology Journal*, 14, 125–129. doi:10.1010/12345

3. Electronic Books

Author (year). *Book title*. Retrieved from <http://www.websitename>

Example:

Christen, W. (n.d.). *Traditional Tales: Classic Indian stories*.
Dikutip dari www.websitename.com

4. Thesis/ Dissertation

Author. (year). *Thesis title*

(Thesis). Retrieved from <http://www.webitename.com>

Contoh:

Biswas, S. (2008). *Parkinson's disease therapeutic targets for the dopamine receptor* (Thesis). Retrieved from www.websitename.com

Adams, B. (2003). *Establishing a framework for assessing educational content* (Doctoral dissertation). Retrieved from www.websitename.com

5. Encyclopaedia and Online Dictionary

Women. (n.d.). In *Encyclopedia for women online*. Retrieved from [http//www. Websitename.com](http://www.Websitename.com)

5. QUALITATIVE RESEARCH DESIGN

Qualitative research involves written or spoken language from visible persons and actors. Qualitative methods describe and analyze individual or group occurrences, events, social dynamics, attitudes, beliefs, and perceptions. As a result, the formation of fundamental assumptions marks the beginning of the research process associated with a qualitative method. Then it is associated with the rules of thought used in research.

Qualitative research seeks to comprehensively comprehend study participants' behavior, perspectives, motives, and behaviors using words and language in a natural setting.

Qualitative researcher seeks to comprehensively comprehend study participants' behavior, perspectives, motives, and behaviors using words and language in a natural setting and natural techniques. Qualitative research is preferable when the data is more in-depth, detailed, and uncovered. Qualitative research has fewer respondents or study objects than quantitative research because it prioritizes data depth above data quantity.

Phenomenology, ethnography, case study research, grounded theory, and historical research are the five key subfields that

fall under the umbrella of qualitative research.. Five qualitative research methods are explained here.:

A. Phenomenology

Phenomenological research is qualitative study that attentively observes and listens to people's explanations and understandings of their experiences. Phenomenological study seeks to understand and explain a person's life experiences, including interactions with others and the environment. In qualitative research, a phenomena may be perceived as something that exists and emerges in the researcher's awareness by employing certain methodologies and explanations of how the process becomes transparent and objective. Phenomenological research emphasizes finding, studying, and communicating the significance of occurrences, events, and their relationships with ordinary people in given contexts. Phenomena approach is included in pure qualitative research because its implementation is based on efforts to understand and describe the intrinsic characteristics of the phenomena that occur in oneself

B. Ethnography

Ethnography is a branch of the social sciences and humanities. Ethnography is from the word 'ethnos,' which means tribe, and

'*graphein*,' which means writing or description. From the etymology, ethnography is the science that describes the tribes. Ethnographic objects in the form of ethnic groups show that ethnography is closely related to human life in society and culture. One society and another have different ways of life and culture.

Ethnographic study examines how people in a society use language to communicate. It also examines how language shape and function society.

Ethnography analyses social groupings, the system, their functions, and social interactions in a society. Ethnographic approaches often examine society's rituals, language, beliefs, and lifestyles.

The characteristics of ethnography research

Ethnographic research is distinct. Ethnographic study has these traits.

1. Cultural themes

Ethnographic research focuses on developing culture and implementing it by a particular ethnic group.

2. A culture-sharing group

This second characteristic implies that ethnographic research can be carried out on two or more people with the same attitude, language, and behavior.

3. Based on fieldwork

Data in ethnographic research is taken utilizing ethnographers going directly to the field (research location)

4. Description in ethnography

The description in ethnography contains a detailed description and explanation of what the object did during the research.

5. Context (a context)

The context in ethnographic research is the overall setting of the place, situation, or environment surrounding the cultural group under study.

6. Researcher reflexivity

This characteristic means that a conscious and open attitude towards the researcher's role will create a feeling of reliance

shared between the person doing the study and the thing being researched.

Types of Ethnographic Research

The following are various ethnographies research based on expert opinion:

a. Realist ethnography

Realist ethnography shows objective conditions in a cultural group reported from a third-person point of view. The researcher will describe the facts in detail and report what is observed and heard from group participants while maintaining objectivity.

b. Critical ethnography

Nowadays, critical ethnography is also popular. This critical ethnographic approach is research that tries to respond to ongoing social issues, such as gender/emancipation, power, status quo, inequality of rights, and equity.

C. Case Study

Case studies investigate a case or social phenomenon's origins, conditions, and relationships. Case studies are conducted on a

unified system, such as a program, and, event of group of people in a given situation.

Case study research is a method used to find or investigate problems in depth about an individual, group, institution, social movement, or event related to the phenomenon, context, and time. It means that the problem or phenomenon that occurs is limited in time and may not be the same in the future. Therefore, this case study research is closely related to the present situation

Characteristics of Case Study Research

- A study has the characteristics to be said to be good research. The characteristics of good case study research have the following characteristics.
- Viewing the object of research as a case or problem
- Viewing cases as contemporary phenomena
- Done based on the facts or existing facts
- Using various data sources for research
- Using the appropriate theory as a guide or research reference

D. Grounded Theory

Grounded Theory research examines core principles and guidelines to find or enhance a theory. Basic conclusions

provide a theory's foundation. This grounded theory technique used observation and field studies to collect data and compare categories, phenomena, and situations using inductive, deductive, and verification investigations until the data was saturated.

E. Historical Method

Historical method study uses historical facts and witnesses to recreate the past. This data can be found in historical documents, artifacts, verbal accounts, and credible live witnesses. Because it examines events that have passed, the hallmark of historical research is the time when phenomena are seen as developments or changes based on time shifts.

Participants in Qualitative Research

Qualitative research starts with specific social settings, not a population. Qualitative study results are applicable to similar social settings, not the population. Qualitative research uses resource, participant, or informant instead of respondent.

Qualitative researchers observe and interview social situation specialists. Purposeful thoughts and aims determine the interviewers.

Qualitative research uses purposive and snowball sampling. Data sources are sampled with purpose. Exploring the object/social situation under investigation will be simpler if the researcher understands what to expect. Snowball sampling is used for tiny data sources that grow. Qualitative researchers can determine their sample before and throughout their investigation (emergent sampling design). Based on the prior sample, researchers select individuals to contribute data. Researchers can find more samples for more data.

Qualitative Data Collection

Data in qualitative research methods includes any spoken and written material, including visuals and photos, that helps answer the issue formulation or study topic. Qualitative data is collected by observation, documentation, and interviews. Use non-human sources like papers and records, as well as Focus Group Discussions (FGD). For instance, interviews, not observation, are utilized to learn instructors' opinions about the new curriculum. Observation is used to study how a teacher produces a vibrant classroom..

A. Interview

Interviews collect research data. A dialogue that takes place

between an investigator and a respondent is known as an interview.. With or without an interview guide, the interviewer and respondent exchange questions and replies to gather research data. These interviews are generally done singly or in groups to get useful information.

Interviews can be technically implemented systematically or not. The researcher created the interview guide tool before conducting the interviews. Unsystematic, the researchers interviewed without a guide. Information technology now allows face-to-face interviews via telecommunications. Interviews provide in-depth information on a study topic. It also involves verifying information collected through other methods. Recorded interviews are valuable because they give real proof if a misconception occurs. Then, the data is summarized and rewritten. The researcher interprets interview data.

Interview questions should be simple, open-ended, and brief. The researcher must know participant-friendly phrases. The interview should last 90 minutes. The researcher can reschedule the next interview. One interviewer and one informant conduct in-depth interviews.

In qualitative research, various interview models are as follows:

1. Deep interview

impromptu. The interviewer and interviewee have a familiar connection, thus the discourse is casual. In-depth interviews are used to contextualize contemporary constructs in terms of people, events, actions, sentiments, motives, responses or perceptions, degrees, and types of engagement.

2. Interview with general instructions

This type of interview requires the interviewer to develop a framework or outline of the subject in the form of interview instructions. General guidelines keep the planned topics covered entirely, and the discussion does not get out of the topic and the planned outline.

3. Open standard interview

An *open interview* is an interview using a set of standard questions, namely questions with the exact wording, sequence, and presentation method for all interviewed informants. This type of interview needs to be used if the variety of questions will make it difficult for researchers because the number of informants is quite large.

4. Structured interview

In a structured interview, the interviewer sets his problems and questions to ask. This type of interview aims to find answers to hypotheses. Structured interviews are generally used if the entire research sample is considered to have the same opportunity to answer the questions posed. The advantage of this structured interview is that there is no deepening of questions that allow the interviewees to lie.

5. Unstructured interview

Unstructured interviews stress exceptions, deviations, unexpected interpretations, reinterpretations, fresh ways, expert viewpoints, or solitary perspectives. The difference between this and a structured interview is the time to ask questions and provide a more unrestricted response. In an unstructured interview, the questions are not prepared in advance because they are adapted to the circumstances and unique characteristics of the resource person or informant.

6. Semi-structured interview

An open-ended interview is underway. The resource person's replies prompt further inquiries, which intensifies information mining during the session.

Interview guideline.

- 1) Interview guideline makes an interview run effectively according to the plan prepared. The researcher needs to develop an interview guide as a guide for the interview. The benefits of interview guidelines are:
- 2) The interview process went according to plan
- 3) The interview can collect answers from informants as desired by the researcher
- 4) It is easier for researchers to classify the data.
- 5) Researchers concentrate more on submitting questions according to the focus of the study in research.
- 6) Anticipating missed questions.

B. Observation

Observation is a systematic and purposeful exploration of occurrences, especially with the eyes, that may be examined afterward. The observation's main goal is the description. The quality of research is determined by how far and deep the researcher understands the situation and context and describes it as naturally as possible. In addition, observations do not have to be carried out by the researchers themselves, so researchers can ask for help from others to carry out observations.

There are several forms of observation, namely:

- 1) Participatory observation (participant observation) involves the researcher in the informant's everyday activity to collect development data.
- 2) Researchers use unstructured observations to adapt to field changes.
- 3) A group of researchers observes a study topic.

C. Documentation

"Documentation" derives from the word "document," or written products; the term "documentation technique" refers to processes for gathering data by documenting data that already exists. A data gathering approach that is utilized to track down past information is called the documentation method. documents pertaining to an individual or group of individuals, events, or events that took place in social contexts that are connected to the study topic

D. Focus Group Discussion

The FGD technique involves investigating a specific phenomena via the conversation of a group of people. The approach places an emphasis on the cooperative endeavors of the people who are involved in the phenomenon in order

to arrive at a consensus. Participants in a discussion group will engage in activities such as talking to one another, interacting with one another by asking questions, and making comments to one another about their personal experiences or ideas about a societal problem or topic that will be identified or resolved in the discussion group.

The basic goal of the focus group discussion (FGD) approach is to acquire data interaction resulting from a conversation of a group of participants or respondents in order to increase the depth of information and expose various facets of a live occurrence in order to describe and explain these phenomena. The data that resulted from the interactions that took place during the group discussion may be used to focus on or stress the similarities and contrasts in experiences, and they can also give factual information and statistics regarding a perspective that was formed as a direct result of the outcomes of the group discussion.

The focus group discussion (FGD) technique is one of the ways that may be used to gather data for research; the end result of using this approach yields data that is derived from the interaction of several participants in a study, as is the case with most other methods of data collection. The FGD technique has various distinguishing features in comparison to other approaches to the collecting of data. It

is a method for collecting data that is used in qualitative sorts of research. The investigation of social interactions carried out by the informants participated in the discussion process is what led to the generation of the data that was used. FGD actions that are carried out objectively and externally are characterized by the characteristics of their execution. Facilitators and moderators who are knowledgeable, dependable, and trained are required for FGDs in order to guide talks in such a way that interactions between participants are centered on finding solutions to problems. When putting the FGD technique into practice, you will conduct semi-structured interviews with a group of people. There will also be a moderator present who will guide the conversation in an informal atmosphere. The purpose of the interviews is to gather data or information on particular topics. The FGD methodology is characterized by the fact that the number of participants participating in a single discussion group can be relatively variable. Between four and eight people can make up the members of a single discussion group.

Characteristics of issues that can be obtained through the FGD method are issues to gain an understanding of the behavior and attitudes of a group of individuals or to find out perceptions, insights, and explanations about social

issues that are not personal, general, and non-threatening. Thus, not all problems/issues can be collected through the FGD method. However, the FGD method is not appropriate for obtaining very personal topics such as sensitive issues of personal life, health status, sexual life, financial problems, and personal religion.

Qualitative Data analysis

One method of conducting data analysis that may be used to seek for recurring themes or patterns within a body of research is called thematic analysis. If a study seeks to investigate in depth the qualitative data they have, uncover correlations between patterns in a phenomena, and describe the extent to which a phenomenon happens from the researcher's point of view, then this approach is particularly successful in accomplishing those goals..

Stages of doing thematic analysis:

a. Understanding data

Here the researcher needs to understand and integrate with the qualitative data obtained. In addition, reading and rereading interview transcripts, as well as listening to interview recordings or seeing films generated during the process of data collection, is the most efficient approach to

become more integrated with the data.

The key goal of this initial stage is for the researcher to have the impression that he is beginning to grasp the contents of the data that he has received and to start finding items in the data that are linked to the research question that he has posed. To achieve this, it is very natural for the researcher to want to read the interview transcript at least once, twice, or even three times until the researcher understands and is 'close' to the data. Plus, being combined with the notes made during the observations will be vital to tracing the depths of the data he reads.

b. Composing Code

Beginning the coding process is the second step in performing a thematic analysis of the data. This coding can be compared to the process that a librarian does to identify the topic of a book's title. Alternately, consider the situation when the reader is searching for the focus of a paragraph. Codes are a type of label or feature that are included in the data that are relevant to the research topic. In this scenario, the researcher is the one who decides which bits of information from the interview transcript require coding. The code needs to be expressed in the clearest way possible

so that when it is analyzed in the future, the researcher can have a better understanding of the significance of the statements made by each participant.

c. Searching for Themes

The research objectives need to be reflected in the theme. This theme identifies anything significant in the data that is connected to the strategy used to formulate the research problem. The pattern of the occurrence that is being studied may be described using this theme.

Data Trustworthiness

The process of determining whether or not qualitative research is accurate and reliable is referred to as verifying the validity of the data. The concept of data trustworthiness covers the requirements for the degree to which the data are credible, transferable, dependent, and confirmable. In addition to the four criteria, the qualitative methodology includes eight data-checking approaches, which are as follows: participation extension, observation persistence, triangulation, peer checking, sufficiency of references, negative case studies, member checking, and extensive descriptions.

6. QUANTITATIVE EXPERIMENTAL RESEARCH DESIGN

Experiment is a method used in the scientific process of inquiry known as experimental research, in which one or more independent variables are applied to one or more dependent variables in order to evaluate the influence of those factors. The effect of the independent variable on the dependent variable is observed and recorded within a particular time so that researchers can conclude the relationship between the two types of variables. The primary objective of experimental research is, in most cases, to identify or establish the impact that a given intervention has had on a certain population. The purpose of this study is to evaluate the efficacy of a certain action or therapy on a variable.

Experimental research has several variables: dependent, independent, and interference. Variables are conditions, circumstances, action factors, or actions expected to affect the experimental results. In this particular instance, the dependent variable is a variable that is subjected to some sort of treatment or intervention in the context of the

research. The dependent variable serves as the independent variable when an action or treatment is being adjusted. Meanwhile, the interference variable is another factor that can affect the experiment and contribute to the existing changes

Types of Experimental Research Design

A. Pre-experimental design

A pre-experimental design is not the best research design. The design of this experimental research method is not maximal because there is still the possibility of outside factors affecting the development of the dependent variable. A pre-experimental design is not an actual experiment. In the pre-experimental research design, one or various groups of dependent variables are observed to find out if the presence of an independent variable that is thought to cause changes has any effect at all. The design is the most straightforward experimental research design, and no control group exists.

Pre-experimental research design is divided into three:

1. Intact-Group Comparison In pre-experimental research design, one group is used for research. The group is divided into two parts: half of the group becomes the group that will be subjected to the treatment (also known as the experimental

group), while the remaining participants will form up the control group. (no treatment is given). The research paradigm can be described as follows:

X O1
 O2

O1=measurement results of half the treated group

O2=measurement results of half of the untreated group.

Effect of treatment = O1 – O2

2. One-group Pretest-posttest Research Design

This research makes use of a group setting that incorporates both the post-test and the pretest. The pretest was conducted at the beginning of the study. After that the treatment is given to the group. Finally, posttest is given to the students after the treatment is complete

O1 X O2

O1= pretest score

O2 = posttest score (after being given treatment)

B. True Experimental Design

A true experimental design is a design for an experimental research technique that provides the researcher with the ability to control all external variables that may have an effect on the study. Within the context of this experimental study, the researchers have complete command over all of the external factors that influence the experimental procedure. As a result, there is potential for an improvement in the quality of the experimental research method or the internal validity. The use of random sampling to choose participants for the experimental and control groups is the defining feature of a well designed experiment. This ensures that the results of the experiment are accurate and reliable.

There are two forms of true experimental design, namely Posttest Only Control Design and Pretest-posttest Control Group Design

1. The Posttest-only Control Group Design

Using this approach, the researcher divided the respondents into two groups after selecting them in a haphazard or random manner (control and experimental). Only the members in the experimental group were given treatment. Following in-depth observation. Both groups were given a post-test when the

experiment was complete. A conclusion was reached based on the differences that were seen between the two groups.

2. The Pretest-posttest Control Group Design

Both groups were given a pretest, but only the experimental group was given treatment under this procedure. Subjects were chosen at random and divided into the two groups in this design. At the conclusion of the research project, a post-test was administered to both groups in order to determine the level of improvement shown in each group.

C. Quasi experimental design

A form of experimental research known as a quasi-experiment is one in which the researcher does not have full control over the variables being investigated. Quasi-experimental is a development of true experimental research where external controlling variables are challenging to do. Just like true experimental research designs, quasi-experimental research also aims to investigate cause-and-effect relationships or discover an event's cause. However, in this experiment, the control and treatment groups were not chosen randomly.

Various kinds of quasi-experimental research

1. Time Series experiment

The design used in this research is Time Series Design. This design does not use a control group. This design uses only one group. Time series design only uses one group, so it does not require a control group. The design for this research is as follows.

O1 X1 O4

O2 X2 O5

O3 X3 O6

Note: O1 O2 O3 = pretest

X1 X2 X3 = treatment

O5 O6 O7 = posttest

The treatment in this study was three times. The students were given a preliminary examination before they were treated in any way. After the students had received treatment, a posttest was administered to them. This procedure may be carried out a maximum of three times.

2. Non-equivalent control group design

The designs of the non-equivalent control group and the pretest-posttest control group are virtually indistinguishable from one another. The two groups in this design are not selected at random, as opposed to other designs. The experimental and control groups are contrasted with one another. A pre-test, followed by treatment, and then a post-test were administered to the two groups that were already present.

D. Factorial Design

A variant of the true-experimental design is known as the factorial design. This design takes into account the potential of interference factors, which are variables that impact the treatment (the independent variable) of the outcome variable (dependent). This design takes into account the possibility of interference factors having an effect on the independent variable, also known as the treatment variable, which then has an effect on the dependent variable, also known as the outcome. In the factorial design, the samples for the control group and the experimental group were chosen at random.

. An example of a diagram of a factorial design is as follows:

Writing Anxiety	Feedback Writing Techniques		
	Peer Feedback (A1)	Teacher Feedback (A2)	Peer & Teacher Feedback (A3)
Low (B1)	A1B1	A2B1	A3B1
High (B2)	A1B2	A2B2	A3B2

Where:

A1: The experimental group I taught by using the peer feedback technique

A2: Experimental group II which was taught by using the teacher feedback technique

A3: The experimental group III, which taught by a combination of peer and teacher feedback

B1: The writing test mean score of low writing anxiety students

B2: The writing test mean score of high writing anxiety students

A1-B1: The writing test mean score of low writing anxiety students taught by using peer feedback technique

A1-B2: The writing test mean score of high writing anxiety students taught by using peer feedback technique

A2-B1: The writing test mean score of low writing anxiety students taught by using teacher feedback technique

A2-B2: The writing test mean score of high writing anxiety students taught by using teacher feedback technique

A3-B1: The writing test mean score of low writing anxiety students taught by using a combination of peer and teacher feedback

A3-B2: The writing test mean score of high writing anxiety students taught by using a combination of peer and teacher feedback

Data Collection Instruments in Experimental Research

Instruments of research are tools that researchers employ in order to acquire quantitative information on the variables that are the subject of their studies. A research instrument is a piece of equipment that is utilized in the process of collecting, analyzing, and looking into a topic. Research instruments may also be seen as tools that are used to gather, process, analyze, and display data in a methodical and objective manner for the

purpose of solving a problem or putting a hypothesis to the test. Therefore, the term "research instrument" refers to any tool that may be used to help research.

The instruments commonly employed in experimental research are questionnaires and tests:

1. A questionnaire consists of a series of written questions that are designed to collect information from respondents regarding topics that are already familiar to them. The respondents record their answers, usually in an openly determined answer alternative. This technique can use questionnaires, checklists, and scales as research instruments
2. Tests can be used as a research instrument in the form of questions and inventory.

Validity

Validity is defined as the amount to which an instrument's accuracy may be relied upon when it is performing its measuring function. If a measuring scale or instrument is able to execute its measuring function or gives measurement findings that are in line with the goal of the measurement, then we may say that the scale or instrument has a high level of

validity. In the meantime, measuring tools with poor validity will result in the production of data that is irrelevant to the overall aim of the measurement.

Types of Validity

A. Content Validity

Content validity is a test carried out on its contents to ensure whether the test items of learning outcomes measure precisely the situation the researcher wants to measure. Content validity is judged in terms of the instrument's content as a measuring tool. If a certain instrument is able to assess specified specific goals, then that instrument is said to have content validity.

B. Construction Validity

Etymologically, the word construction means arrangement, framework, or fiction. Thus, construction validity can be interpreted as validity in terms of structure, framework, or fiction. Terminologically, for example, a test of learning outcomes can be stated as a test that already has construction validity. If the learning outcome test is viewed in terms of its structure, framework, or design, it can accurately reflect a construction in psychological theory. Construction validity

can be measured by analyzing the test items using the product moment correlation formula.

Reliability

A measuring instrument is said to be reliable if the measuring instrument shows the extent to which the measurement results with the tool can be trusted. Reliability is indicated by the level of consistency (consistency) of the scores obtained by the subjects measured with the same instrument or measured with the same instrument under different conditions.

There are two approaches to estimating the reliability of the measuring instrument, namely:

1. Test-Retest Method: A test kit is given to a group of subjects 2x, with a specific time interval, for example, two weeks. Test reliability is sought by calculating the correlation between test score one and scores on testing two. This approach is good in theory, but in practice, it contains weaknesses, namely that the subject's condition in testing 2 is no longer the same as that of the subject in testing one due to the learning process, experiences, and changes in motivation. Therefore, this approach is very suitable if the object of measurement skills, especially physical skills

2. One-time measurement approach / Single Trial Method: A set of tests is given to a group of subjects once, then the estimated reliability of the test is calculated in a certain way. This one-time measurement approach produces information about the internal consistency of the measuring instrument. This one-time measurement approach avoids the difficulties arising from repeated measurement and the parallel test approaches, which is why this approach is familiar. Which uses a one-time measurement approach:

1. Spearman-Brown: The number of items is split into two, and the r value is searched. The number of items can be split left and right, odd and even numbers, or unexpectedly. If the r value is > 0.8 , then it is considered reliable

2. Alpha Cronbach: Alpha divides the number of items with any origin equally, unlike Spearman-Brown and Rulon, which cannot divide two odd numbers equally; for example, the number 15, Alpha can divide into 5, 5, and 5. If its $\text{Alpha} > 0.8$, then it is considered reliable

Data Analysis Technique

A. Descriptive statistics analysis

As the name suggests, descriptive statistical analysis is more aimed at describing data so that researchers will have an overview of the data used in research. Descriptive statistical analysis will generally be the first method to be run. This analysis cannot provide general conclusions for the population based on the sample owned

B. Prerequisite test

1. Homogeneity test

The Homogeneity test aims to determine whether several population variants are identical. This test was a prerequisite for the t-test and ANOVA analysis. The underlying assumption in the analysis of variance (ANOVA) and T-Test is that the population variances are the same. A homogeneity test can be done if the data group is in a normal distribution. The function of doing a homogeneity test is to show the differences in the parametric statistical test. Harley, Cochran, Levene, and Bartlett's analysis are formulas to test for homogeneity of variance.

2. Normality test

The graphing of the frequency distribution of the scores is the simplest and most direct method for testing normality. Normality testing depends on our ability to observe plotting data. If the amount of data is quite large and the distribution is not 100% normal (not perfectly normal), then the conclusions drawn may be wrong. At this time, there have been many ways that experts have developed to carry out normality testing. Some of them are the Kolmogorov-Smirnov test and the Lilliefors test.

C. Inferential Test

Inferential statistical analysis generally becomes a follow-up after descriptive analysis and prerequisite tests. In this type of analysis, the researcher is able to estimate or anticipate the value for an entire population based just on a sample of that group. Because of this, inferential statistics, which are utilized in the testing of hypotheses, are created. In experimental research, the inferential test is usually the T-test, and the ANOVA test

7. NON-EXPERIMENTAL RESEARCH DESIGN

Non-experimental research is research that can only test the relationship between variables and does not manipulate variables. This research has a good chance of having a high level of external validity, which enables its findings to be extrapolated to a more extensive participant pool. Within the scope of the quantitative approach, experts identify and even equate this non-experimental method with survey research methods. This is because of the many similarities between the two.

Characteristics of Non-Experimental Research

The characteristics of non-experimental research are as follows.

1. The research topic is an event that has already happened
Most non-experimental research topics are based on events that have occurred before. After collecting data from the event, the researcher will conduct an analysis.
2. Not using controlled experimental methods
In non-experimental research, controlled experimental methods are not used for reasons such as ethics or morality. This study examines things that have occurred naturally in the sample environment, so this method is inappropriate.

3. Do not intervene directly in the sample environment

As already explained, non-experimental research examines things that have happened. Therefore, the researcher did not have the opportunity to intervene directly in the sample environment.

4. Studying phenomena precisely as they happen

The phenomenon that has occurred is the topic of non-experimental research. Therefore, the research process also tries to study the actual phenomenon to get accurate research findings.

Types of Non-Experimental Research

Types of non-experimental research are generally divided into 3 types.

A. Descriptive Research

A descriptive study is a quantitative approach in which educational occurrences are meticulously described. Descriptive studies focused on establishing "what is." Examples of topics in descriptive research include: How many classroom instructors in this nation hold favorable sentiments toward the use of the whole language approach? What kinds of activities are generally done in art classrooms for seventh graders, and how frequently does each one take place?

Quantification in Descriptive Research

In descriptive research, several instruments are utilized, including standardized achievement tests, classroom observation tools, attitude measures, and questionnaires. Measures of central tendency (the mean, median, and mode) and measures of variability are utilized to conduct a descriptive statistics study on the data (standard deviation, variance, and score interval)

Descriptive Research Types

1. Description of a Sample at a particular time

Typically, descriptive research entails little more than describing the characteristics of a single sample at a single time point. Opinion polls are one illustration of this kind of study. Surveys of human behavior are another illustration.

2. Longitudinal description of a sample

Longitudinal research includes gathering data from a sample at many periods to examine changes or continuity in the features of the sample.

3. Trend Studies

Trend study quantifies change by selecting a different sample from a non-constant population at each data collection point. Define the population to be the members of the National Mathematics Teachers Association that

are listed in the yearly directory so that you can study trends in the use of graphing calculators in high school mathematics education, for example. This will ensure that you get an accurate representation of the population. After that, select a group of people who are representative of the whole. As new teachers join the organization and others leave for various reasons, the membership list in the next year's directory will likely alter substantially. Consequently, the population will have changed significantly.

4. Cohort Research

Cohort studies describe change by choosing a different sample from a steady population at each data collecting point. For instance, imagine we were to examine the annual employment status of all California-certified primary school teachers. At each data collecting point, we would randomly choose a sample from this list containing the names of every member of this population. Thus, the population would stay constant, but various people would be sampled annually.

5. Panel Studies

The panel study is the third form of longitudinal research design. At the beginning of a panel study, selecting a sample is required, and the same sample is surveyed at each successive data collection point. Since panel studies track the same individuals throughout time, the study's results can show the changes in specific individuals and investigate their reasons.

6. Cross-Sectional Design

A cross-sectional study is a sort of research design in which the researcher gathers data from a large number of individuals at one moment, culminating in the study. A cross-sectional study will always involve the scale of data from a population at a certain time. In this kind of research, the participants are chosen based on certain interest characteristics. Therefore, cross-sectional studies are neither causal or relational research; rather, they are observational and are referred to as descriptive research. Because of this, researchers are unable to utilize them to discover the reason of something.. An example of a cross-sectional study is how children's motivation changes in learning English from 6th grade to 12th grade of high school

B. Correlational research

Research on correlation is an investigation into the relationship, as well as the degree to which that relationship, exists between two or more variables. This investigation does not involve any attempts to alter the variables in question, meaning that there is no variable manipulation. Both the presence of a connection and the degree of this variable are required. This is because the researcher has to be able to grow the relationship in accordance with the study objectives, and without knowing the level of the current relationship, this will

not be possible. The term "correlation" refers to the statistical measure or amount of association that is typically used in this kind of research. Instruments are used in correlational research to discover whether or not there is a measurable link between two or more variables and, if so, to what extent that relationship exists.

Objectives of Correlational Research

Research that is based on correlation is conducted with the goal of determining, with the use of a correlation coefficient, the degree to which changes in one element are connected to shifts in the values of one or more additional factors. An additional objective of correlational research is to establish links between the variables being studied or to utilize those established relationships as a basis for making forecasts. In correlational research, numerous factors that are thought to be connected to a single important variable, such learning outcomes, are typically investigated. Variables that do not show a strong correlation are typically excluded from further consideration in these investigations.

Characteristics of Correlational Research

1. Correlational research is suitable when the variables under study are complex, cannot be studied by experimental methods, or cannot be manipulated.

2. This study measures several variables and their interrelationships simultaneously under realistic conditions.
3. The outcome of this study is the degree to which mutual relations are strong or low, not the presence or absence of such a connection.
4. is able to anticipate specific variables based on independent factors

Correlational Research Design

Correlational research has various types of designs, namely:

A. Bivariate Correlation

Bivariate correlation study describes the link between two variables. Measure the association between variables. These connections are hierarchical. The correlation coefficient measures the strength of the link between -1.00 and +1.00. Zero correlation means no association. At -1.00 or +1.00, the correlation coefficient is ideal.

B. Regression and Prediction

If there is a correlation between two variables and we know the score on one of the variables, we may predict the score on the other variable given that there is a correlation

between the two variables. The term "regression" refers to the accuracy with which we are able to make these predictions.

C. Multiple Regression

The concepts of simple regression and prediction are expanded upon in multiple regression by the incorporation of numerous additional variables. The incorporation of all of these different factors into our analysis provides us with a greater capacity to produce precise forecasts. The variable that we use to judge our accuracy is known as the criteria variable. The factors that are already known to us and that we utilize to create predictions are referred to as predictor variables.

D. Factor Analysis

This statistical method determines the relationships between the variables that are already present. Many correlated variables and high intercorrelation indicate an important common factor.

8. MIXED METHOD

A research design known as "mixed methods" is a technique for collecting, analyzing, and combining qualitative and quantitative methods in a single study or group of studies in order to get a better understanding of a research issue. The fundamental idea is that combining quantitative and qualitative methodologies provides a more excellent knowledge of the study problem and topic than each method alone.

Mixed methods research functions to capitalize on quantitative and qualitative data benefits. Quantitative data, such as test scores, offer particular figures that can be statistically evaluated, produce findings to measure the frequency and amplitude of trends and provide helpful information when describing patterns across many individuals.

How did the research approach known as mixed methods come to be?

1. Combining Different Quantitative Data Types
2. Integrating Quantitative and Qualitative Information
3. Calling into question the integration of different worldviews and research methods

4. Establishing Guidelines for the Conduct of Mixed Methods Studies
5. Advocating for a Design That Is Totally Unique
6. A Time for Contemplation

Types Of Mixed Methods Designs

A. The Convergent Parallel Design

The purpose of a convergent mixed methods design, which is also known as a parallel mixed methods design or a concurrent mixed methods design, is to simultaneously collect quantitative and qualitative data, combine the data, and use the combined data and results to gain an understanding of a research problem. Other names for this type of design include: concurrent mixed methods design; parallel mixed methods design; and concurrent mixed methods design.

B. The Explanatory Sequential Design

First, quantitative data are gathered in an explanatory sequential mixed methods design, which is often referred to as a two-phase model. Next, qualitative data are gathered to assist explain or expound on the quantitative findings. To do this, first the collection of quantitative data is carried out, and then the collection of qualitative data follows.

C. The Exploratory Sequential Design

The goal of an exploratory sequential mixed methods design is to carry out the procedure of first collecting qualitative data to investigate a phenomenon, and then collecting quantitative data to explain relationships discovered in the qualitative data. This will be done in the order that the procedures are described. This procedure is repeated several times throughout the research project. The investigation of phenomena, the establishment of themes, the formulation of an instrument, and, finally, its validation are all common applications of this design. Researchers make use of this approach if it is possible that the population they are researching does not have any preexisting instruments, variables, or measurements accessible.

D. The Embedded Design

The objective of the embedded design is to gather quantitative and qualitative data concurrently or sequentially but to have one form of data play a supporting function to the other form of data. This may be accomplished by having both forms of data play a supportive role to each other.

The Adaptive and Transformative Design, The objective of the transformative mixed methods design is to make use of any one of the four different designs (convergent, explanatory,

exploratory, or embedding), but to enclose that design inside a transformational framework or lens (Creswell & Plano Clark, 2011). The mixed methods design may be viewed via an orienting lens provided by this framework. It provides insight into the overarching objective of the study, as well as the research questions, the data gathering process, and the results of the investigation.

6. A multiphase mixed methods design is one that examines a subject or issue via a succession of phases or independent investigations. This design can be carried out by a single researcher or by a team of researchers.

9. RESEARCH AND DEVELOPMENT

Research and Development, also known as R&D, is a method of product and method development that is used in the private sector. This method involves the application of research findings to the design of new products and methods, which are then subjected to rigorous field testing, evaluation, and revision.

The steps involved in the R&D cycle, consists of studying research findings pertinent to the product to be developed, developing the product based on these findings, field testing it in the environment where it will ultimately be used, and revising it to correct any deficiencies discovered during field testing. This cycle is repeated until the results of the product's field testing indicate that it fulfills the behaviorally based goals that were defined in more rigorous research and development initiatives.

The model is developed because 1) there is no previous model; 2) there is already a model, but it is less effective, or 3) as a variation between existing models, with their respective strengths and weaknesses.

Steps in conducting R n D

1. Include an analysis of the pertinent literature, observations made in the classroom, and the writing of a report on the current state of the art in the field.
2. Part of the planning process involves making a list of relevant skills and objectives, determining the order in which lessons will be presented, and doing pilot testing to determine the project's viability.
3. Construct a working model of the product, which should include the production of instructional materials, handbooks, and evaluation instruments.
4. Initial testing in the field; this will take place in one to three schools and will include six to twelve themes. Interviews, observations, and questionnaires will be used to gather data, which will then be analyzed.
5. Principal product revision – Product revision as indicated by preliminary field-test findings.
6. Principal field testing entails the administration of thirty to one hundred different topics in five to fifteen different schools. Collecting quantitative information on the participants' performance both before and after the training session. When applicable, results are reviewed concerning course goals and compared to control group data.

7. Revision of the product for operational use is referred to as "operational product revision," and it is based on the findings of the preliminary field testing.
8. Operational field testing — Conducted in ten to thirty schools with forty to two hundred subjects. Collecting and analyzing data via interviews, observations, and questionnaires.
9. The final revision of the product - Revision of the product based on operational field-test findings.
10. Implementation and dissemination of the product, as well as reporting on it at professional conferences and in magazines. Collaborate with an editor who is in charge of the commercial dissemination of your work. Maintaining high standards by keeping an eye on distribution

The 10 stages of implementing R n D can be classified into 4 groups of stages

1. Exploration stage

In the exploratory stage, the researcher studies the relevant theory. Next, the researcher went into the field to assess the quality of the existing model and conduct a needs analysis. Finally, the researcher makes product specifications

2. Developmental stage

in the developmental stage, the researcher prepares a draft model

Based on Specifications. Next, the researcher conducted a trial of the draft model in the field (until it was said to be feasible). The trial was conducted qualitatively by asking about users' perceptions. Finally, the researcher made improvements to the product based on user comments.

3. Evaluation stage

in the evaluation stage, researchers conduct experiments to test the effectiveness of the product

4. Dissemination

at the dissemination stage, the researcher socializes the developed product to the community

A detailed explanation of each stage of R n D is as follows

A. Theoretical Review

The researcher studies theories to ensure that the researcher understands the main concepts in the research, which could be identified from the title and the formulation of the research problem. Such understanding will help researchers to identify, collect, and analyze data in the field and interpret the results appropriately.

B. Reviewing The Quality of Existing Models

After understanding the main concepts in the research, the researcher examines the quality of the model. The assessment is carried out using document/artifact analysis techniques, observations, interviews, and other relevant techniques.

C. Do a Need Analysis

The next step in the exploration stage is to conduct a needs analysis of the new model developed by the researcher. Researchers need to determine whether stakeholders need a new model that is considered better and its criteria. Techniques used in need analysis include questionnaires, interviews, observations, document analysis, FGDs, and other relevant techniques

D. Create Model Specifications

The researchers made a model specification based on empirical studies in the field and need analysis. Here, the researcher does planning; what kind of model the researcher wants to develop, which includes the model's name, the purpose of developing the model, model specifications, model users, and assumptions for using the model.

E. Draft Model

Based on the planning at the exploration stage, the researchers compiled a draft model. Competent and independent experts should validate the draft model. Validation is intended to ensure that the draft model can be justified theoretically.

F. Model Try Out

The draft model compiled and validated by experts is then tested in the field. The trial was carried out several times as needed, both in a limited setting (1 to 3 schools) and in a broader setting (more than three schools).

G. Model Test

Model testing functions to examine the effectiveness of the post-test model, which is reflected in the positive effects resulting from the model. The method used is experimental. Researchers can choose an experimental design that is considered suitable. At this stage, conducting a qualitative assessment to refine the model is still possible.

H. Model Dissemination

The researcher socializes and disseminates the model he has developed so that the model can be recognized by the wider community and implemented in the field. It is possible to

disseminate information in a variety of methods, including giving lectures at scientific conferences and forums, publishing articles in scientific journals, and disseminating information on the internet.

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HOW TO DESIGN A **RESEARCH PROPOSAL**

It is important for educators (both lecturers and students) as well as students and researchers to engage in ongoing research. Therefore, this book has been written as a reference for the purpose of creating an effective proposal. In this book, the author gives step-by-step instructions on how to construct the proposal, including the introduction, problem statement, research objectives, research significance, theoretical framework, previous relevant studies, and research methods. The author of this book also includes instructions on how to properly cite sources using the APA style. In conclusion, the author provides a concise overview of the research method, namely how to choose an adequate research design, how to select appropriate research instruments, the processes involved in data collection, and the steps to analyze the collected data.

