



Republic of the Philippines
Department of Education
REGION IV- A CALABARZON
CITY SCHOOLS DIVISION OF THE CITY OF TAYABAS

27 May 2025

DIVISION MEMORANDUM
No. **323** s. 2025

DISSEMINATION OF THE REGIONAL RESEARCH WRITING GUIDELINES


To: Assistant Schools Division Superintendent
Chief Education Supervisors
Heads, Public Elementary and Secondary Schools
Heads, Unit/Section
All Others Concerned

1. Relative to **DepEd Order No. 16, s. 2017** titled **Research Management Guidelines** and **Regional Memorandum No. 375, s. 2025** titled **Dissemination of the Regional Research Writing Guidelines**, this Office through the Planning and Research Section and Schools Division Research Committee (SDRC) disseminates the approved Research Writing Guidelines to establish uniformity, clarity, and conciseness of research outputs in the region.
2. All BERF and non-BERF research papers to be submitted for utilization and dissemination must adhere to the guidelines accessible through this link <https://depedcalabarzon.ph/wp-content/uploads/2025/05/PPRD-RM-2025-375.pdf>.
3. The SDRC evaluators are also advised to refer to the said guidelines in reviewing the research papers, providing technical assistance and monitoring the progress of the research.
4. Immediate dissemination of and strict compliance with this Memorandum is hereby desired.

For:

CELEDONIO B. BALDERAS JR.
Schools Division Superintendent

By:


EDWIN R. RODRIGUEZ, Ed D.
Chief Education Supervisor-CID
Officer-in-Charge

Encl.: As stated
Reference: DepEd Order No. 16, s. 2017
To be indicated in the Perpetual Index
under the following subjects:

WRITING GUIDELINES

SGOD- dissemination of the regional research writing guidelines
RECNE805-004776/May 27, 2025



Republic of the Philippines
Department of Education
REGION IV-A CALABARZON



PPRD-RM-2025-375

16 May 2025

Regional Memorandum
No. 375 s. 2025

**DISSEMINATION OF THE REGIONAL
RESEARCH WRITING GUIDELINES**

To: Schools Division Superintendents
All Others Concerned

1. Relative to DepEd Order No. 16, s. 2017, this Office, through the Policy, Planning and Research Division (PPRD) and Regional Research Committee (RRC), hereby disseminates the approved Regional Research Writing Guidelines to establish uniformity, clarity, and conciseness of research outputs in the region.
2. All BERF and non-BERF research papers to be submitted for utilization and dissemination must adhere to the guidelines (see the Attachment). The regional (RRC) and division (SDRC) evaluators are also advised to basically refer here in reviewing the research papers, providing technical assistance and monitoring the progress of the research.
3. This Office also recognizes the valuable contributions of research experts from various schools division offices during the development, vetting, and finalization of the research writing guidelines.
4. For more information and details, you may contact Policy, Planning and Research Division (PPRD) through pprd.calabarzon@deped.ph.
5. For immediate dissemination and compliance.

ATTY. ALBERTO T. ESCOBARTE, CESO II
Regional Director *pk*

07/ROP2/ROP1



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Certificate No. PHP QMS
22 93 0085

Regional Research Writing Guidelines (for BERF and Non-BERF Research Papers)

GENERAL GUIDELINES

Use the following format when writing the research paper body:

1. Paper: Use A4 size (8.3 x 11.7 inches).
2. Font:
 - Style: Bookman Old Style
 - Size:
 - Title: 14 points
 - Subtitle: 13 points
 - Body: 12 points
3. Margins: Set all page margins to 1 inch.
4. Spacing: Double-space all text, including headings.
5. Paragraph Indentation: Indent the first line of every paragraph by 0.5 inches.
6. Paragraph Alignment: Justify all paragraphs.
7. Page Numbers: Include a page number in the upper right-hand corner of every page (font size: 10 points).
8. Running Head: Place a shortened version of the title in the upper left-hand corner (font size: 10 points, sentence case) on all pages except the title page.
9. Headings and Subheadings:
 - Use APA-style headings (Levels 1-5) to organize sections and improve readability:
 - Level 1: Centered and boldfaced.
 - Level 2: Left-aligned and boldfaced.
 - Level 3: Left-aligned, boldfaced, and italicized.
 - Level 4: Indented, boldfaced, and ending with a period.
 - Level 5: Indented, boldfaced, italicized, and ending with a period (American Psychological Association [APA], 2020).

Level 1	APA Heading Format (7 th ed.)
1	Centered, Bold, Title Case Text begins on a new line (indent first line).
2	Left-aligned, Bold, Title Case Text begins on a new line (indent first line).
3	Left-aligned, Bold, Italic, Title Case Text begins on a new line (indent first line).
4	Indented, Bold, Title Case, Period. Text begins on the same line.
5	Indented, Bold, Italic, Title Case, Period. Text begins on the same line.

10. The manuscript title page must not contain the researcher/s name and school affiliation during the blind evaluation process.



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I. Basic Research Proposal

Part	Guidelines
Research Title	<p>A good research title should be:</p> <ol style="list-style-type: none"> 1. Concise and Specific. Avoid unnecessary jargon or overly broad terms. Aim for clarity and precision. Ideally, it should not be more than 12 words. There should be no acronym. 2. Accurate Representation. The title should accurately reflect the content and scope of the research. 3. Engaging. While accuracy is vital, a title that attracts interest can draw readers in. However, avoid being sensational or misleading. 4. Keyword-Rich. Incorporate relevant keywords, including dependent and independent variables, to help others find your research during database searches. 5. Appropriate for the Audience. Consider the intended audience and choose the language they will understand. <p>Note: The research title should be written in Bold Letters and arranged in an inverted pyramid format on the title page.</p>
Title Page	<p>The research title should be written in Bold Letters (Font: 14), arranged in an inverted pyramid format, and centered on the title page. Begin 3-4 lines down from the top margin of the paper. Put a double-spaced blank line between the title and the byline. It should contain the following:</p> <ul style="list-style-type: none"> • Researcher/s name (First Name, Middle Initial, Last Name) • Position • Schools Division Office, District, School Name • Month and Year the research was conducted • Page number in the upper right corner <p>Note: The manuscript title page must not contain the researcher/s name and school affiliation during the blind evaluation process.</p>
I. Introduction and Rationale	<p>The introduction sets the stage for your research. The following are the guidelines for writing the introduction and the rationale:</p> <ol style="list-style-type: none"> 1. Start Broad. Begin with a general statement about the broader topic area (e.g., the importance of early childhood education). 2. Narrow the Focus. Narrow the focus to a specific issue within that area (e.g., the impact of play-based learning on social-emotional development in preschoolers). 3. Problem Statement. State clearly the problem or gap in knowledge (e.g., limited research on the long-term effects of specific play-based interventions on social skills).

	<p>4. Brief Literature Review. Review briefly key studies that highlight the importance of social-emotional development and the potential benefits of play-based learning, while also pointing out the gap in long-term research.</p> <p>5. Rationale/Justification. State explicitly why your research is needed (e.g., to provide evidence-based insights into the long-term impact of play-based interventions, which can inform educational practices and policy).</p> <p>6. Purpose/Objectives/Research Questions. State the purpose and output of your study (e.g., to investigate the long-term effects of a specific play-based intervention on learners' social skills from preschool to early elementary school).</p> <p>7. (Optional) Overview. Mention briefly the research design (e.g., a longitudinal study with follow-up assessments)</p>
<p>II. Literature Review</p>	<p>The literature review serves as a critical foundation for research by analyzing and synthesizing existing scholarly work (preferably within a 10-year timeframe) focused on a well-defined topic. It is more than a simple compilation of sources; rather, it is a structured and analytical argument that contextualizes the researcher's intended contribution. Specifically, a literature review provides crucial context, meticulously identifies gaps in the literature that the research will address, synthesizes current knowledge to create a cohesive understanding of the field, defines key terminology with precision, establishes the researcher's authority and familiarity with the subject matter, and provides a strong rationale for the chosen research methodology. The subsequent guidelines outline the key principles of effective literature review construction.</p> <p>1. Search for Relevant Literature. Identify Keywords: Determine the key terms related to your research topic.</p> <ul style="list-style-type: none"> • <i>Use Databases.</i> Search academic databases like JSTOR, PubMed, PsycINFO, ERIC, Web of Science, and Google Scholar. • <i>Consult Experts.</i> Talk to professors or researchers in your field for recommendations. <p>2. Evaluate and Select Sources</p> <ul style="list-style-type: none"> • <i>Relevance.</i> How closely does the source relate to your research question? • <i>Quality.</i> Is the source peer-reviewed, reputable, and methodologically sound? • <i>Currency.</i> How recent is the source? (Consider the field; some fields require more recent sources than others.) • <i>Authority.</i> Who is the author or publisher? Are they experts in the field? <p>3. Organize and Synthesize Information</p>

- *Identify Themes.* Look for recurring themes, patterns, and debates in literature.
- *Group Studies.* Organize studies by topic, methodology, or theoretical approach.
- *Create a Synthesis Matrix.* Use a table or chart to compare and contrast key aspects of different studies.

4. Write the Literature Review

- *Introduction.* Briefly introduce the topic and provide an overview of the literature to be reviewed.
- *Body.* Organize the literature into sections based on **themes aligned with research questions**. Discuss each source in relation to the overall themes and to your research.
- *Analysis.* Do not just summarize; analyze the information. Identify key findings, contradictions, and gaps in the research.

When crafting the literature review, maintain a formal and objective tone, ensuring your writing remains free from personal opinions or biases. Clarity and conciseness are key; therefore, use straightforward language and avoid jargon or overly complex sentence structures. Crucially, all sources must be cited accurately using the APA 7th Edition format.

Moreover, as a synthesis of existing research on a given topic, a literature review relies heavily on the proper attribution of sources. Accurate and consistent in-text citations are not only essential for avoiding plagiarism but also for giving due credit to the original authors. The subsequent section will focus on the specific application of APA 7th Edition guidelines within the context of constructing a literature review.

1. Basic Principles

- **Author-Date Method:** APA uses the author-date method for in-text citations. This means you include the author's last name and the year of publication in the text.
- **Purpose:** In-text citations serve to:
 - Attribute ideas, research findings, and information to their original sources.
 - Direct readers to the full reference in the reference list.
 - Avoid plagiarism.
- **Frequency:** Cite every time you refer to, paraphrase, or quote from another source.

2. Types of In-Text Citations

- **Parenthetical Citation:** The author's last name and year of publication appear in parentheses.
 - Example: (Smith, 2020).
- **Narrative Citation:** The author's name is part of the sentence, and the year of publication appears in parentheses.
 - Example: Smith (2020) found that...

3. Specific Citation Scenarios

- One Author:
 - Parenthetical: (Jones, 2022).
 - Narrative: Jones (2022) stated...
- Two Authors:
 - Parenthetical: (Garcia & Lee, 2021).
 - Narrative: Garcia and Lee (2021) concluded...
- Three or More Authors:
 - Parenthetical: (Brown et al., 2023).
 - Narrative: Brown et al. (2023) argued...
 - "et al." means "and others." Use it from the first citation.
- Group Author (Organization, Association):
 - Parenthetical: (American Psychological Association [APA], 2020).
 - Narrative: American Psychological Association (APA, 2020) reported...
 - If the group author has a well-known abbreviation, you can introduce it in the first citation and use it in subsequent citations.
- Unknown Author:
 - Use the title of the work.
 - If the title is from a periodical, book, brochure, or report, italicize it.
 - Parenthetical: (Title of the Work, 2019).
 - If the title is from a work that is part of a larger work (article, chapter, webpage), use quotation marks.
 - Parenthetical: ("Title of the Article," 2020).
- No Date:
 - Use "n.d." (no date).
 - Parenthetical: (Johnson, n.d.).
- Direct Quotations:
 - Include the author, year, and page number(s).
 - Parenthetical: (Smith, 2020, p. 145).
 - Narrative: Smith (2020, p. 145) stated, "..."
 - For sources without page numbers (e.g., websites), use paragraph numbers, section headings, or other locators if available.
 - (Smith, 2020, para. 3).
 - (Organization, 2021, Results section).
- Paraphrasing:
 - Include the author and year. Page numbers are not required, but they can be helpful to the reader, especially in longer works.
 - Parenthetical: (Jones, 2018).
 - Narrative: Jones (2018) suggested...
- Multiple Works in One Citation:
 - List works alphabetically, separated by semicolons.
 - Parenthetical: (Brown, 2019; Garcia & Lee, 2021; Smith, 2020).
- Multiple Works by the Same Author in the Same Year:
 - Use lowercase letters (a, b, c, etc.) after the year to distinguish them.

	<ul style="list-style-type: none"> ▪ Parenthetical: (Smith, 2015a; Smith, 2015b). • Authors With the Same Last Name: <ul style="list-style-type: none"> ◦ Include the authors' initials. <ul style="list-style-type: none"> ▪ Parenthetical: (J. Smith, 2022; A. Smith, 2020). • Secondary Sources: <ul style="list-style-type: none"> ◦ Cite the source you consulted (the secondary source). In the text, name the original source and say that it was cited in the secondary source. <ul style="list-style-type: none"> ▪ Example: Joseph (2019, as cited in Sorensen & van Dyk, 2022) advises... ◦ In the reference list, provide only the details of the secondary source. be significant. <p>Synthesis</p> <p>Synthesizing conceptual and research literature is a crucial step in building a strong foundation for your research study. It involves integrating different sources to create a coherent and comprehensive understanding of the topic.</p> <ul style="list-style-type: none"> • In synthesizing the conceptual literature, analyze and summarize the main findings of the literature review and highlight the implications for your research. State how your research will address the identified gaps or build upon existing knowledge. • In the research literature, explain the similarities and differences of the cited research study to the current study. Highlight gaps in the existing research and suggest directions for future studies. • Use transition words and phrases (e.g., "however," "in contrast," "similarly," "furthermore") to create a smooth flow between ideas.
<p>III. Research Questions</p>	<p>Crafting effective research questions is crucial for guiding your research and ensuring a focused investigation. This will serve as the terminal objective of the study. Here are guidelines for writing strong research questions:</p> <ul style="list-style-type: none"> • Start Broad. Begin with a general area of interest. • Preliminary Research. Review existing literature to identify gaps and potential questions. • Refinement. Narrow your broad topic into a specific, researchable question. • Audience Consideration. Tailor your question to your target audience. <p>Experts generally agree there is no fixed number of research questions but offer these guidelines: research often uses 3-5 questions (Portland State University, n.d.); it is helpful to have one main question/objective with supporting sub-questions/objectives.</p>

	<p>Hypothesis/Hypotheses (if applicable)</p> <p>A hypothesis in educational research is a testable guess about a relationship between educational variables (Fraenkel et al., 2019). It guides the research process and helps answer questions about teaching, learning, and educational outcomes.</p> <p>However, the null hypothesis (H_0) in educational research is a statement that there is no significant relationship or difference between the variables being studied (Ary et al., 2010). It is the hypothesis that researchers aim to disprove.</p> <p>Here are simple guidelines for formulating a null hypothesis in educational research:</p> <ol style="list-style-type: none"> 1. <i>Identify Variables.</i> Clearly define the independent and dependent variables you are investigating (Fraenkel et al., 2019). 2. <i>State "No Effect".</i> Explicitly state that there is no significant relationship or no significant difference between the identified variables (Ary et al., 2010). Use phrases like "no significant difference," "no relationship," or "no effect." 3. <i>Make it Testable.</i> Ensure that this statement of "no effect" can be tested through statistical analysis of collected data (Creswell & Creswell, 2018). 4. <i>Keep it Concise.</i> Formulate the null hypothesis as a clear and brief statement.
IV. Scope and Limitation	<p>The scope and limitations section of a research paper defines the boundaries of your study and acknowledges any factors that might have influenced or restricted your findings. It is crucial for transparency and helps readers understand the context of your research. The following are the guidelines for formulating the scope and limitations.</p> <ol style="list-style-type: none"> 1. Be Specific. Define clearly and concisely the scope and limitations. Avoid vague language. 2. Be Honest and Transparent. Acknowledge the limitations of your study openly and honestly. 3. Focus on Relevant Limitations. Only discuss limitations that are relevant to the interpretation of your findings. 4. Avoid Overstating Limitations. Do not exaggerate the impact of limitations or use them as an excuse for poor research design. <p>The scope defines what your research will cover. It clarifies the boundaries and parameters of your study. Key aspects to define in the scope include topic/subject matter, population/sample, geographic location, time frame, variables, and methodology.</p> <p>Limitations identify the potential weaknesses or constraints in the research that could affect the interpretation or generalizability of your findings. Acknowledging limitations demonstrates intellectual honesty and provides context for the results. Common limitations include sample size and selection, data collection methods, time and resources, and external factors.</p>
	Research Design

V. Research Methodology

Research design serves as the framework for conducting studies, and it varies depending on the research question and objectives. The following are the common types:

1. Quantitative Research - Emphasizes numerical data, statistical analysis, and objective measurements to test hypotheses and establish cause-and-effect relationships (Creswell & Guetterman, 2019).

Types:

1. Experimental. Manipulates independent variables to observe effects on dependent variables.

Example: A researcher randomly assigns students to either a traditional teaching method or a gamified learning method and compares their post-test scores.

2. Causal-comparative/quasi-experimental. Identify cause-effect relationships between independent and dependent variables. However, unlike true experiments, it lacks the crucial element of random assignment of participants to different groups (Lodico et al., 2010).

Example: A researcher might want to investigate the effectiveness of a new reading intervention program on students' reading comprehension.

3. Correlational. Examines the relationships between variables without manipulation.

Example: A researcher analyzes existing school records to determine if there is a relationship between hours of homework completed and grade point average.

4. Descriptive. Describes the characteristics of a population or phenomenon.

Example: A survey was administered to high school seniors to determine their post-graduation plans.

2. Qualitative Research. Focuses on understanding the meaning, experiences, and perspectives of individuals or groups through non-numerical data like interviews, observations, and documents (Merriam & Tisdell, 2016).

Types:

1. Narrative. Explores the life stories of individuals

Example: A researcher interviews a student about their educational journey and writes a detailed account of their experiences.

2. Phenomenological. Seeks to understand the essence of a lived experience.

Example: A researcher interviews multiple teachers to understand their shared experiences of implementing new classroom technology.

3. Case Study. In-depth examination of a specific individual, group, or situation.

Example: A researcher conducts extensive observations and interviews at a specific school to understand its unique approach to education.

4. Ethnographic. Studies the culture and practices of a group in their natural setting.

Example: A researcher immerses in a school community to observe and document the daily interactions and cultural norms.

5. Grounded Theory. Develops theories from data collected through systematic analysis.

Example: A researcher conducts interviews and analyzes data to develop a theory about the stages of student motivation.

3. Mixed Methods Research. Combines both quantitative and qualitative approaches to provide a more comprehensive understanding of a research problem (Creswell & Plano Clark, 2018).

Types:

1. Convergent Parallel. Collects and analyzes both quantitative and qualitative data simultaneously and then compares the results.
2. Explanatory Sequential. Collects and analyzes quantitative data first, followed by qualitative data to explain the quantitative findings.
3. Exploratory Sequential. Collects and analyzes qualitative data first, followed by quantitative data to test or generalize the qualitative findings.

In articulating the research design, the researcher must provide a clear and detailed explanation of the chosen methodology, clearly justifying its suitability for addressing the specific research questions and objectives. This involves demonstrating how the selected design aligns with the study's purpose and offers the most effective approach to generating valid and reliable findings.

A. Sampling

In writing this portion, identify the participants in the research study, the total population, the characteristics of the sample or participants, and the procedure for determining the sample size. The following is a guide to sample size determination and the different sampling techniques.

Determining an appropriate sample size is a critical step in research design. It impacts the statistical power of the research study, the generalizability of your findings, and the resources required for data collection.

Sample Size Determination

Different methods are used to calculate sample size, depending on the research design and the information available:

- **Power Analysis.** This is the most common method for quantitative studies. It involves using statistical software or formulas to calculate the sample size needed to achieve a desired level of power, given the effect size, alpha level, and population variability (Cohen, 1992).
- **Sample Size Calculators.** These tools are also geared towards quantitative research. Many online calculators and statistical software packages (e.g., G*Power, R, Slovin, and the Raosoft sample size calculator) are available to perform power analyses.
- **Rules of Thumb.** In some cases, rules of thumb or guidelines may be used, especially for certain types of research, but these should be used with caution and justified appropriately. For example, in survey research, a sample size of 300 is often considered a minimum for national surveys.
- **Saturation (Qualitative Research).** In qualitative research, sample size is often determined by data saturation, which is the point at which new data no longer provide new insights or themes (Guest, Bunce, & Johnson, 2006). Research using empirical data can reach information saturation quickly (9-17 interviews, 4-8 focus groups), especially with similar/ homogenous participants and focus groups (Hennink & Kaiser, 2022).

This portion must explain the research design to be used in the study. It also contains brief discussions of how the sample size will be determined and the sampling technique.

Sampling Techniques

Sampling techniques are crucial in research as they determine how participants or data points are selected from a larger population. The choice of sampling technique significantly impacts the generalizability and validity of research findings. The following are the different sampling techniques for conducting research:

Probability Sampling (Random Sampling). Every member of the population has a known, non-zero chance of being selected. This allows for statistical inferences about the population.

- Simple Random Sampling. Simple random sampling is a way to select a smaller group (a sample) from a larger group (a population) where every member of the larger group has an equal chance of being chosen. It is like picking names out of a bowl, ensuring fairness and reducing bias in research.
- Systematic Sampling. Selecting every kth member of the population after a random start.

- **Stratified Sampling.** Dividing the population into subgroups (strata) based on shared characteristics (e.g., age, gender, education) and then randomly sampling from each stratum. This ensures the representation of all subgroups.
- **Cluster Sampling.** Dividing the population into clusters (e.g., schools, neighborhoods) and then randomly selecting entire clusters to participate. This is often used when it's difficult or costly to sample individuals directly.
- **Multi-Stage Sampling.** Combining different probability sampling methods. For example, a researcher might use stratified sampling to divide a country into regions, then use cluster sampling to select cities within those regions, and finally use simple random sampling to select individuals within those cities.

In **non-probability sampling**, the probability of selecting any particular member of the population is unknown. These methods are often used in qualitative research or when probability sampling is not feasible.

- **Convenience Sampling:** Selecting participants who are readily available and accessible. This is the easiest and often the least expensive method, but it can lead to biased samples
- **Quota Sampling.** Selecting participants based on pre-determined quotas for different subgroups (similar to stratified sampling), but the selection within each quota is not random.
- **Purposive/Judgmental Sampling:** Selecting participants based on the researcher's judgment of their knowledge or experience related to the research topic. This is often used in qualitative research when specific expertise is needed.
- **Snowball Sampling.** Starting with a small group of participants and then asking them to refer other potential participants who meet the study criteria. This is useful for reaching hard-to-reach populations.

Note: If the entire population will be studied and no sampling techniques utilized, a thorough explanation of this choice, including its feasibility and appropriateness for the research objectives, should be included.

B. Data Collection

The following are the procedures for writing the data collection portion.

1. **Recruitment of Participants.** Explain how participants were recruited (e.g., advertisements, email invitations, snowball sampling), the inclusion and exclusion criteria, and the sample size (Creswell & Creswell, 2018).
2. **Data Collection Instruments.** Describe the instruments used to collect data (e.g., survey questionnaires, interview guides, observation protocols). If using established instruments, provide citations. If developing new

instruments, explain the development process and any **validity or reliability** testing conducted.

Validity and Reliability. Content validity and reliability are two essential aspects of evaluating the quality of a research instrument, such as a questionnaire, test, or scale. They address different but complementary concerns: whether the instrument measures what it intends to measure (validity) and whether it does so consistently (reliability).

Content Validity assesses whether the instrument adequately covers the full scope of the construct it is designed to measure. It focuses on the representativeness and relevance of the items or questions in the instrument.

Process of Content Validity Testing

1. Define the Construct. Clearly define the construct or concept you want to measure. This involves specifying the key dimensions or aspects of the construct.
2. Item Development. Develop a pool of items or questions that are intended to measure the different aspects of the construct.
3. Expert Review. The most common method for assessing content validity is to have experts in the field review the instrument. Experts evaluate each item for:
 - Relevance: Does the item measure a relevant aspect of the construct?
 - Representativeness: Does the set of items adequately cover all important aspects of the construct?
 - Clarity: Is the item clearly worded and easy to understand?
4. Content Validity Ratio (CVR). Lawshe (1975) proposed a quantitative method for assessing content validity using a panel of experts. Experts rate each item as "essential," "useful but not essential," or "not necessary." The CVR is calculated as:

$$\text{CVR} = (\text{ne} - N/2) / (N/2)$$

Where:

ne = number of experts indicating the item is "essential"

N = total number of experts

A CVR value above a critical value (which depends on the number of experts) indicates acceptable content validity.

5. Pilot Testing. Administer the instrument to a small group of individuals from the target population can help identify any problems with wording, clarity, or response format.

Reliability refers to the consistency and stability of the measurement. A reliable instrument produces similar results when administered multiple times or under different conditions.

Methods of Reliability Testing

1. *Test-Retest Reliability* - Administer the same instrument to the same group of individuals at two different time points and calculating the correlation between the two sets of scores. A high correlation indicates good test-retest reliability.
2. *Internal Consistency Reliability* - Assess the consistency of responses across items within the same instrument. Common methods include:
 - *Cronbach's Alpha*: A widely used measure of internal consistency for scales with multiple items. A Cronbach's alpha of .70 or higher is generally considered acceptable (DeVellis, 2012).
 - *Split-Half Reliability*: Dividing the instrument into two halves and calculating the correlation between the scores on the two halves.
3. *Inter-Rater Reliability*: Assess the agreement between two or more raters or observers who are coding or scoring the same data. This is particularly relevant for observational studies or qualitative research. Common measures include:
 - *Cohen's Kappa*: Used for categorical data.
 - *Intraclass Correlation Coefficient (ICC)*: Used for continuous data.

Note: If the instrument is adopted from another research paper, acknowledge the owner in this portion.

3. Data Collection Setting. Describe the setting where data was collected (e.g., laboratory, classroom, online).
4. Data Collection Timeline. Specify the dates or times during which data were collected.
5. Data Recording and Storage. Explain how data were recorded (e.g., audio recordings, written notes, digital files) and how they were stored and protected to ensure confidentiality and security.

C. Ethical Issues

Describe any ethical considerations addressed during data collection, such as informed consent, anonymity, and data privacy (APA, 2020).

This section should clearly describe how you addressed the following ethical considerations:

1. Informed Consent

- Explain how informed consent was obtained (e.g., written consent forms, online consent procedures).
- Describe the information provided to participants in the consent process (e.g., the purpose of the study, procedures, risks, benefits, confidentiality, right to withdraw).

- If you used a waiver of consent (in specific circumstances where it's justified and approved by the School/District/Division Research Committee), explain the rationale for the waiver.
- If participants are minors or vulnerable populations, describe the procedures for obtaining assent from the participant and consent from a parent or guardian.

2. Confidentiality and Anonymity

- Explain how participant data was kept confidential (e.g., using coded data, secure storage, password protection).
- If anonymity was maintained (participants' identities are completely unknown to the researcher), describe how this was achieved.
- If anonymity was not possible, explain the measures taken to protect confidentiality.

3. Data Security and Storage

- Describe how data was stored (e.g., secure servers, password-protected computers, locked cabinets).
- Explain who had access to the data and how long the data would be stored.

4. Potential Risks and Benefits

- Identify any potential risks to participants (e.g., psychological distress, social stigma, breach of confidentiality).
- Describe the steps taken to minimize these risks.
- Explain the potential benefits of the research to participants or society.

5. Debriefing (If Applicable)

- If deception was used (only in very specific circumstances and with School/District/Division Research Committee approval), describe the debriefing process, where participants were informed about the true nature of the study after their participation.
- If the study involved any potentially distressing procedures, describe the debriefing or support provided to participants.

6. School/District/Division Research Committee Approval

- State that the research was approved by the relevant School/District/Division Research Committee.
- Provide the School/District/Division Research Committee approval number or reference if applicable.

Example:

"This study was approved by the School Research Committee. All participants provided written informed consent before participating. The consent form explained the purpose of the study, procedures, potential risks and benefits, and their right to withdraw at any time without penalty. To protect participant confidentiality, all data were coded and stored on a password-protected server accessible only to the research team. Participants were informed that their responses would remain anonymous. The potential risks of participation were minimal, primarily involving the time commitment required to complete the survey. The

potential benefits include contributing to a better understanding of the research study. Participants were provided with information about local mental health resources should they experience any distress as a result of participation."

D. Plan for Data Analysis

Statistical tools are essential for analyzing data and drawing meaningful conclusions in research. They range from simple descriptive statistics to complex inferential methods. The following is an overview of different statistical tools and their uses:

Quantitative Analysis Techniques

Descriptive statistics summarize and describe the main features of a dataset. They provide a basic understanding of the data's central tendency, variability, and distribution.

Measures of Central Tendency

- Mean - The average value of a dataset.
- Median - The middle value in a sorted dataset.
- Mode - The most frequent value in a dataset.

Measures of Dispersion/Variability

- Range. The difference between the maximum and minimum values.
- Variance. The average of the squared differences from the mean.
- Standard Deviation. The square root of the variance provides a measure of how spread out the data is.
- Interquartile Range (IQR). The range between the 25th and 75th percentiles is useful for non-normally distributed data.
- Frequency Distributions. Show how often each value or category occurs in a dataset.

Inferential statistics are used to make inferences or generalizations about a population based on a sample of data. They help researchers draw conclusions and make predictions beyond the immediate data.

- Hypothesis Testing. A formal procedure for testing a claim or hypothesis about a population. It involves setting up a null hypothesis (no effect) and an alternative hypothesis (an effect exists) and then using statistical tests to determine whether there is enough evidence to reject the null hypothesis.

Parametric Tests. It is used when reasonably assumed data comes from a known distribution (especially normal), has a larger sample size (often considered $n > 30$), and is working with interval or ratio data. Example: t-test for dependent means, t-test for independent means, Analysis of Variance (ANOVA), Pearson r

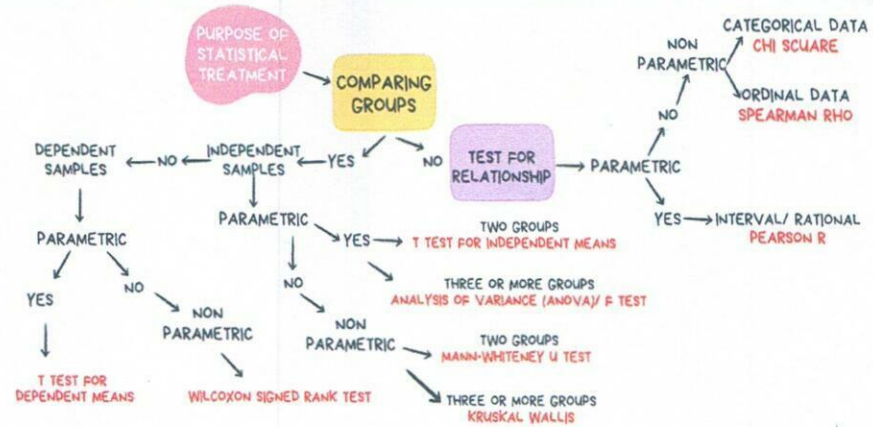
- T-tests. Use to compare the means of two groups.
 - Independent Samples t-test: Compare the means of two independent groups.

- Paired Samples t-test: Compare the means of two related groups (e.g., pre-test and post-test scores).
- ANOVA (Analysis of Variance). Use to compare the means of three or more groups.
- Correlation Analysis. Examine the relationship between two continuous variables. It measures the strength and direction of the association using correlation coefficients (e.g., Pearson's r).
- Regression Analysis. Use to model the relationship between one or more independent variables and a dependent variable.
- Linear Regression. Model a linear relationship between variables.
- Multiple Regression. Model the relationship between multiple independent variables and a dependent variable.

Non-parametric Tests. It is used when the data violates the assumptions of parametric tests, has a small sample size, or the data is nominal or ordinal. Example: Wilcoxon Signed Rank Tests, Mann-Whitney U Test, Kruskal-Wallis, Chi Square, and Spearman Rho

- Wilcoxon Signed Rank Tests. It is used when there is paired data, the assumption of normality is not met, the data might be ordinal, and there is a need for testing the significance of the median difference between the related groups. It is a powerful non-parametric alternative to the paired t-test in many situations.
- Mann-Whitney U Test. It is used to compare two separate groups when you cannot assume your data follows a bell curve. It essentially checks if the distributions of the two groups are different.
- Kruskal-Wallis. It is a non-parametric statistical test used to determine if there are statistically significant differences between the medians of three or more independent groups.
- Chi-Square Test. Use to examine the relationship between two categorical variables.
- Spearman Rho. It is used when two variables move together in the same or opposite direction, without assuming a linear pattern or a normal distribution. It is particularly useful for ranked data or when outliers might skew a traditional Pearson correlation.

The following is the diagram that can assist in deciding the appropriate statistical tools to be used in a research study.



Qualitative Analysis Techniques

- Thematic Analysis** - Identifying and analyzing patterns of meaning within the data (Braun & Clarke, 2006). The following is Braun and Clarke's six-phase framework, which is a widely used and clear approach to thematic analysis:
 1. Familiarization: Read data thoroughly (Braun & Clarke, 2006).
 2. Coding: Label data segments systematically.
 3. Generating Themes: Find patterns and group codes.
 4. Reviewing Themes: Check coherence and relevance of themes.
 5. Defining & Naming: Clearly define and name each theme.
 6. Reporting: Write up findings with supporting quotes.
- Content Analysis** - Systematically coding and categorizing textual data (Krippendorff, 2018). The following is a brief procedure for conducting content analysis.
 1. Define Focus & Sample. Determine the research question and data.
 2. Develop Codes. Create categories for analysis.
 3. Code Data. Systematically apply codes to the text.
 4. Analyze. Quantify coded elements and identify patterns.
 5. Interpret. Draw conclusions based on the analysis.
- Narrative Analysis** - Analyzing stories and personal accounts. Narrative analysis focuses on understanding how people make sense of events through stories (Riessman, 2008). Here is a brief step-by-step process:
 1. Collect Narratives. Gather stories through interviews, journals, or other qualitative methods.
 2. Transcribe and Organize. Prepare the narratives for analysis by transcribing them and organizing them systematically.
 3. Identify Narrative Elements. Analyze the structure and content of the stories, looking for elements like plot, characters, setting, and themes.

	<ol style="list-style-type: none"> 4. Analyze Narrative Structure. Examine how the story is told, including sequencing, temporal order, and the use of language. 5. Interpret Meaning. Explore the meanings and interpretations embedded within the narratives, considering the storyteller's perspective and the broader context. 6. Synthesize Findings. Identify overarching patterns and insights across the collected narratives to answer the research question. <ul style="list-style-type: none"> • <i>Grounded Theory</i> - Developing theories from the data (Strauss & Corbin, 1990). Here is a brief step-by-step process: <ol style="list-style-type: none"> 1. Begin with Data Collection. Start gathering data (interviews, observations, documents) relevant to your research interest. 2. Open Coding. Perform initial coding by breaking down the data into discrete parts and labeling them conceptually. 3. Axial Coding. Relate categories and subcategories developed in open coding. Identify core categories and link other categories around them. 4. Selective Coding. Select the core category, systematically relate other categories to it, validate these relationships, and fill in categories needing further refinement. 5. Develop Theoretical Framework. Articulate the relationships among categories in the form of a theoretical framework or model. 6. Write Up the Theory. Present the developed theory, supporting it with evidence from the data. <p>This portion of basic research must identify and explain the different statistical tools to be used in the research study.</p>
VI. Timetable/ Gantt Chart	<p>A timetable, also known as a timeline or schedule, is a crucial component of a research proposal or report. It visually represents the planned sequence and duration of research activities, ensuring that the project stays on track. The following are the tips for drafting the timetable.</p> <ul style="list-style-type: none"> • <u>Be Realistic</u>. Estimate realistic durations for each task. Do not underestimate the time required for certain activities. • <u>Be Specific</u>. Break down large tasks into smaller, more manageable subtasks. • <u>Include Buffer Time</u>. Allow for some buffer time in case of unexpected delays. • <u>Regularly Review and Update</u>. Regularly review and update your timetable as the project progresses. This will help you stay on track and make necessary adjustments. • <u>Consider Dependencies</u>. Clearly indicate any dependencies between tasks.

- Use Visual Aids. Use clear and easy-to-understand visuals (e.g., color-coding, different bar styles) in your Gantt chart or flowchart.

Sample Table

ACTIVITIES	*Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
1. Preparation of research questionnaire						
2. Testing of validity and reliability of the questionnaire						
3.						
4.						
5. Add rows if necessary						

Note: Shade the corresponding month per activity

VII. Cost Estimates

Cost estimation in Basic Education Research Fund (BERF) research follows specific guidelines to ensure appropriate use of funds. Here is a breakdown of the process:

Eligible and Non-Eligible Expenses. BERF funding has specific categories for what can and cannot be covered. This is crucial for accurate cost estimation.

Eligible Expenses

- Supplies/Materials. Consumable items needed for the research (e.g., paper, pens, printing ink).
- Reproduction. Costs for printing, photocopying, and binding questionnaires, reports, etc.
- Communication. Expenses related to communication (e.g., phone calls, internet access) are directly related to the research.
- Transportation. Costs for travel directly related to data collection or dissemination activities within the Philippines.
- Food. Limited funding for food during research activities like focus group discussions.

Non-Eligible Expenses

- Equipment. Purchase of equipment like computers, cameras, or recorders.
- Software. Purchase of software licenses.
- Salaries/Consultancy Fees. Payment is for the researcher's time or that of external consultants.
- Utilities. Costs for electricity, water, or internet are not directly tied to specific research activities.
- Overseas Travel. International travel is not covered by BERF.

Steps in Cost Estimation:

1. Identify Research Activities. Break down your research project into specific activities (e.g., literature review, questionnaire development, data collection, data analysis, report writing).
2. Determine Required Resources. Identify the materials, supplies, and other resources needed for each activity.
3. Estimate Costs. Estimate the cost of each resource based on current market prices. Be realistic and consider potential price fluctuations.
4. Prepare a Detailed Budget. Create a detailed budget table or spreadsheet that lists each expense item, its quantity, unit cost, and total cost.
5. Justify Expenses. Provide a brief justification for each expense, explaining how it is directly related to the research activities.
6. Summarize Total Costs. Calculate the total estimated cost of the research project.

Sample Table

Activity	Item	Quantity	Unit Cost (PHP)	Total Cost (PHP)	Justification
Data Collection	Photocopy of Questionnaires	200	2	400	For distribution to participants during data collection.
Data Collection	Transportation Expenses	2 trips	500	1000	Travel to research site for data collection.
Focus Group Discussion	Food for Participants	20 pax	80	1600	Lunch for participants during the focus group discussion.
Report Writing	Printing and Binding	5 copies	200	1000	Printing and binding of the final research report for submission and dissemination.
Total				4000	

VIII. Plans for Dissemination and Advocacy

A robust dissemination and advocacy plan is crucial for translating research findings into real-world impact. It's a strategic process of sharing research outcomes with relevant audiences and promoting their uptake in practice, policy, or further research. The following are the process in crafting the plan.

1. *Defining Clear Objectives*. Begin by establishing specific, measurable, achievable, relevant, and time-bound (SMART) objectives for your dissemination and advocacy efforts.
2. *Identifying and Segmenting Target Audiences*. Pinpoint the key stakeholders who can benefit from or influence the application of your research. Segment these audiences based on their needs, interests, and preferred communication channels.
3. *Selecting Appropriate Dissemination Channels*. Choose channels that effectively reach your target audiences. Consider the strengths and limitations of each channel.
4. *Crafting Compelling Messages*. Develop clear, concise, and audience-tailored messages that highlight key findings and

their implications. Use plain language and avoid jargon when communicating with non-academic audiences.

5. *Developing a Dissemination and Advocacy Strategy.* A comprehensive strategy should include:

- *Key Messages* - Tailored to each target audience.
- *Channels* - Specific platforms and methods for reaching each audience.
- *Timeline* - A schedule for dissemination activities.
- *Responsibilities* - Clear roles and responsibilities for team members.
- *Budget* - Allocated resources for dissemination activities.
- *Evaluation Metrics* - How will you measure the impact of your efforts?

6. *Implementing the Plan.* Carry out the planned activities, ensuring consistent messaging and coordinated efforts.

7. *Evaluating Impact.* Assess the effectiveness of your dissemination and advocacy efforts using pre-defined metrics. This could include:

- Website traffic and social media engagement.
- Media mentions and coverage.
- Policy changes or adoption of new practices.
- Feedback from target audiences.
- Number of publications and citations.

Example Dissemination and Advocacy Plan (Simplified):

- **Research Topic** - Impact of early childhood interventions on school readiness.
- **Objectives** - Increase awareness among educators and policymakers and promote the adoption of effective interventions.
- **Target Audiences** - Teachers, school administrators, policymakers, and parents.
- **Channels** - Journal article, conference presentation, policy brief, website, parent workshops.
- **Key Messages** - Early interventions improve school readiness and long-term academic success.
- **Timeline** - Publication (Month 6), conference (Month 9), policy brief (Month 12), workshops (ongoing).
- **Evaluation** - Track website visits, workshop attendance, and policy citations.

It can be presented in tabular form.

Sample Table

Research Topic	Objectives	Target Audiences	Channels	Key Messages	Timeline	Evaluation Process

IX. References

Creating a reference list in APA 7th edition involves adhering to specific formatting rules for different source types. The following are the guidelines:

1. General Formatting for the Reference List

- Placement - The reference list begins on a new page after the main body of your paper.
- Title - Center the word "References" at the top of the page (no bolding, italics, or quotation marks).
- Spacing - Double-space the entire reference list.
- Hanging Indent - Each entry should have a hanging indent (the first line is flush left, and subsequent lines are indented 0.5 inches).
- Alphabetical Order - Entries are alphabetized by the first author's last name. If there is no author, alphabetize by the first significant word of the title (ignoring "A," "An," or "The").

2. Common Source Types and Examples**A. Journal Article****Format:**

Author, A. A., Author, B. B., & Author, C. C. (Year). Title of article. Title of Periodical, volume number (issue number), page range. DOI or URL

Example:

Herculano-Houzel, S. (2009). The human brain in numbers: A linearly scaled-up primate brain. *Frontiers in Human Neuroscience*, 3, Article 31.
<https://doi.org/10.3389/neuro.09.031.2009>

B. Book**Format:**

Author, A. A. (Year). Title of work. Publisher.

Example:

Wegener, D. T., & Petty, R. E. (1998). *The elaboration likelihood model: Current status and controversies*. Psychology Press.

C. Chapter in an Edited Book**Format:**

Author, A. A. (Year). Title of chapter. In E. E. Editor & F. F. Editor (Eds.), Title of work (pp. page range). Publisher.

Example:

Haybron, D. M. (2008). Philosophy and the science of subjective well-being. In M. Eid & R. J. Larsen (Eds.), *The science of subjective well-being* (pp. 17-43). Guilford Press.

D. Website:**Format:**

Author, A. A. (Year, Month Day). Title of page. Site Name. URL

Example:

National Institute of Mental Health. (2023, January). Anxiety disorders. U.S. Department of Health and Human Services, National Institutes of Health.
<https://www.nimh.nih.gov/health/topics/anxiety-disorders/>
 No Date: If no date is available, use (n.d.).

	<p>E. Report:</p> <p>Format: Author or Organization. (Year). Title of report (Report Number). Publisher.</p> <p>Example: American Psychological Association. (2010). Publication manual of the American Psychological Association (6th ed.). American Psychological Association.</p> <p>Citation management tools like Zotero, Mendeley, and EndNote can greatly simplify the process of creating and managing references. These tools can automatically format citations and bibliographies in APA style.</p> <p>The link below is an online citation generator that can assist in formatting references. https://www.bibliography.com/</p>
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II. Completed Basic Research

Part	Guidelines
Research Title	<p>A good research title should be:</p> <ol style="list-style-type: none"> 1. Concise and Specific. Avoid unnecessary jargon or overly broad terms. Aim for clarity and precision. Ideally, it should be no more than 12 words. There should be no acronym. 2. Accurate Representation. The title should accurately reflect the content and scope of your research. 3. Engaging. While accuracy is vital, a title that attracts interest can draw readers in. However, avoid being sensational or misleading. 4. Keyword-Rich. Incorporate relevant keywords that will help others find your research during database searches. 5. Appropriate for the Audience. Consider the intended audience and choose the language they will understand. <p>Note: The research title should be written in Bold Letters and arranged in an inverted pyramid format on the title page.</p>
I. Title Page	<p>The research title should be written in Bold Letters (Font: 14), arranged in an inverted pyramid format, and centered on the title page. Begin 3-4 lines down from the top margin of the paper. Put a double-spaced blank line between the title and the byline. It should contain the following:</p>

	<ul style="list-style-type: none"> • Researcher/s name (First Name, Middle Initial, Last Name) • Position • Schools Division Office, District, School Name • Month and Year the research was conducted • Page number in the upper right corner <p>Note: The manuscript title page must not contain the researcher/s name and school affiliation during the blind evaluation process.</p>
II. Abstract	<p>The abstract should not exceed 200 -250 words in one paragraph containing the following:</p> <ol style="list-style-type: none"> Purpose – Objectives of the research Methodology – This includes the research design, sampling and the sample size, data collection methods, and statistical tools used in the study. Findings – This contains data analysis and discussion. Conclusion and Recommendations – This includes the significant results of the research and recommendations. Keywords – This consists of a listing of at least 5 keywords that will facilitate the search for the research study and should be italicized.
III. Acknowledgment	<p>The acknowledgments section of a research paper is where you express gratitude to individuals and organizations who contributed to the research but do not meet the criteria for authorship. It's a brief but important part of your paper, demonstrating professionalism and acknowledging support.</p> <p><i>What to Include in the Acknowledgements?</i></p> <ol style="list-style-type: none"> Specific Contributions - Clearly state the nature of the contribution made by each individual or organization. Avoid vague statements like "for their help." Be specific about what they did. Formal Tone - Maintain a formal and professional tone, even when acknowledging personal support. Avoid overly casual language or slang. Conciseness - Keep the acknowledgments brief and to the point. Focus on the most significant contributions. Proper Titles and Affiliations - Use correct titles (e.g., Professor, Dr.) and affiliations (e.g., university department, organization name) when acknowledging individuals.
IV. Introduction and Rationale	<p>The introduction sets the stage for your research. The following are the guidelines for writing the introduction and the rationale:</p> <ol style="list-style-type: none"> Start Broad. Begin with a general statement about the broader topic area (e.g., the importance of early childhood education).

	<ol style="list-style-type: none"> 2. Narrow the Focus. Narrow the focus to a specific issue within that area (e.g., the impact of play-based learning on social-emotional development in preschoolers). 3. Problem Statement. State clearly the problem or gap in knowledge (e.g., limited research on the long-term effects of specific play-based interventions on social skills). 4. Brief Literature Review. Review briefly key studies that highlight the importance of social-emotional development and the potential benefits of play-based learning, while also pointing out the gap in long-term research. 5. Rationale/Justification. State explicitly why your research is needed (e.g., to provide evidence-based insights into the long-term impact of play-based interventions, which can inform educational practices and policy). 6. Purpose/Objectives/Research Questions. State the purpose and output of your study (e.g., to investigate the long-term effects of a specific play-based intervention on learners' social skills from preschool to early elementary school). 7. (Optional) Overview. Mention briefly the research design (e.g., a longitudinal study with follow-up assessments)
V. Literature Review	<p>The literature review serves as a critical foundation for research by analyzing and synthesizing existing scholarly work (preferably within a 10-year timeframe) focused on a well-defined topic. It is more than a simple compilation of sources; rather, it is a structured and analytical argument that contextualizes the researcher's intended contribution. Specifically, a literature review provides crucial context, meticulously identifies gaps in the literature that the research will address, synthesizes current knowledge to create a cohesive understanding of the field, defines key terminology with precision, establishes the researcher's authority and familiarity with the subject matter, and provides a strong rationale for the chosen research methodology. The subsequent guidelines outline the key principles of effective literature review construction.</p> <ol style="list-style-type: none"> 1. Search for Relevant Literature. Identify keywords. Determine the key terms related to your research topic. <ul style="list-style-type: none"> • <i>Use Databases.</i> Search academic databases like JSTOR, PubMed, PsycINFO, ERIC, Web of Science, and Google Scholar. • <i>Consult Experts.</i> Talk to professors or researchers in your field for recommendations. 2. Evaluate and Select Sources

- *Relevance.* How closely does the source relate to your research question?
- *Quality.* Is the source peer-reviewed, reputable, and methodologically sound?
- *Currency.* How recent is the source? (Consider the field; some fields require more recent sources than others.)
- *Authority.* Who is the author or publisher? Are they experts in the field?

3. Organize and Synthesize Information

- *Identify Themes.* Look for recurring themes, patterns, and debates in the literature.
- *Group Studies.* Organize studies by topic, methodology, or theoretical approach.
- *Create a Synthesis Matrix.* Use a table or chart to compare and contrast key aspects of different studies.

4. Write the Literature Review

- *Introduction.* Briefly introduce the topic and provide an overview of the literature to be reviewed.
- *Body.* Organize the literature into sections based on **themes aligned with research questions**. Discuss each source in relation to the overall themes and to your research.
- *Analysis.* Do not just summarize; analyze the information. Identify key findings, contradictions, and gaps in the research.

When crafting the literature review, maintain a formal and objective tone, ensuring your writing remains free from personal opinions or biases. Clarity and conciseness are key; therefore, use straightforward language and avoid jargon or overly complex sentence structures. Crucially, all sources must be cited accurately using the APA 7th Edition format.

Moreover, as a synthesis of existing research on a given topic, a literature review relies heavily on the proper attribution of sources. Accurate and consistent in-text citations are not only essential for avoiding plagiarism but also for giving due credit to the original authors. The subsequent section will focus on the specific application of APA 7th Edition guidelines within the context of constructing a literature review.

1. Basic Principles

- **Author-Date Method:** APA uses the author-date method for in-text citations. This means you include the author's last name and the year of publication in the text.
- **Purpose:** In-text citations serve to:
 - Attribute ideas, research findings, and information to their original sources.
 - Direct readers to the full reference in the reference list.
 - Avoid plagiarism.
- **Frequency:** Cite every time you refer to, paraphrase, or quote from another source.

	<p>2. Types of In-Text Citations</p> <ul style="list-style-type: none"> • Parenthetical Citation: The author's last name and year of publication appear in parentheses. <ul style="list-style-type: none"> ◦ Example: (Smith, 2020). • Narrative Citation: The author's name is part of the sentence, and the year of publication appears in parentheses. <ul style="list-style-type: none"> ◦ Example: Smith (2020) found that... <p>3. Specific Citation Scenarios</p> <ul style="list-style-type: none"> • One Author: <ul style="list-style-type: none"> ◦ Parenthetical: (Jones, 2022). ◦ Narrative: Jones (2022) stated... • Two Authors: <ul style="list-style-type: none"> ◦ Parenthetical: (Garcia & Lee, 2021). ◦ Narrative: Garcia and Lee (2021) concluded... • Three or More Authors: <ul style="list-style-type: none"> ◦ Parenthetical: (Brown et al., 2023). ◦ Narrative: Brown et al. (2023) argued... ◦ "et al." means "and others." Use it from the first citation. • Group Author (Organization, Association): <ul style="list-style-type: none"> ◦ Parenthetical: (American Psychological Association [APA], 2020). ◦ Narrative: American Psychological Association (APA, 2020) reported... ◦ If the group author has a well-known abbreviation, you can introduce it in the first citation and use it in subsequent citations. • Unknown Author: <ul style="list-style-type: none"> ◦ Use the title of the work. ◦ If the title is from a periodical, book, brochure, or report, italicize it. <ul style="list-style-type: none"> ▪ Parenthetical: (Title of the Work, 2019). ◦ If the title is from a work that is part of a larger work (article, chapter, webpage), use quotation marks. <ul style="list-style-type: none"> ▪ Parenthetical: ("Title of the Article," 2020). • No Date: <ul style="list-style-type: none"> ◦ Use "n.d." (no date). <ul style="list-style-type: none"> ▪ Parenthetical: (Johnson, n.d.). • Direct Quotations: <ul style="list-style-type: none"> ◦ Include the author, year, and page number(s). <ul style="list-style-type: none"> ▪ Parenthetical: (Smith, 2020, p. 145). ▪ Narrative: Smith (2020, p. 145) stated, "..." ◦ For sources without page numbers (e.g., websites), use paragraph numbers, section headings, or other locators if available. <ul style="list-style-type: none"> ▪ (Smith, 2020, para. 3). ▪ (Organization, 2021, Results section). • Paraphrasing:
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	<ul style="list-style-type: none"> ○ Include the author and year. Page numbers are not required, but they can be helpful to the reader, especially in longer works. <ul style="list-style-type: none"> ▪ Parenthetical: (Jones, 2018). ▪ Narrative: Jones (2018) suggested... • Multiple Works in One Citation: <ul style="list-style-type: none"> ○ List works alphabetically, separated by semicolons. <ul style="list-style-type: none"> ▪ Parenthetical: (Brown, 2019; Garcia & Lee, 2021; Smith, 2020). • Multiple Works by the Same Author in the Same Year: <ul style="list-style-type: none"> ○ Use lowercase letters (a, b, c, etc.) after the year to distinguish them. <ul style="list-style-type: none"> ▪ Parenthetical: (Smith, 2015a; Smith, 2015b). • Authors With the Same Last Name: <ul style="list-style-type: none"> ○ Include the authors' initials. <ul style="list-style-type: none"> ▪ Parenthetical: (J. Smith, 2022; A. Smith, 2020). • Secondary Sources: <ul style="list-style-type: none"> ○ Cite the source you consulted (the secondary source). In the text, name the original source and say that it was cited in the secondary source. <ul style="list-style-type: none"> ▪ Example: Joseph (2019, as cited in Sorensen & van Dyk, 2022) advises... ○ In the reference list, provide only the details of the secondary source. be significant. <p>Synthesis</p> <p>Synthesizing conceptual and research literature is a crucial step in building a strong foundation for your research study. It involves integrating different sources to create a coherent and comprehensive understanding of the topic.</p> <ul style="list-style-type: none"> • In synthesizing the conceptual literature, analyze and summarize the main findings of the literature review and highlight the implications for your research. State how your research will address the identified gaps or build upon existing knowledge. • In the research literature, explain the similarities and differences of the cited research study to the current study. Highlight gaps in the existing research and suggest directions for future studies. • Use transition words and phrases (e.g., "however," "in contrast," "similarly," "furthermore") to create a smooth flow between ideas. <p>VI. Research Questions</p> <p>Crafting effective research questions is crucial for guiding your research and ensuring a focused investigation. Here are guidelines for writing strong research questions:</p>
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	<ul style="list-style-type: none"> • Start Broad. Begin with a general area of interest. • Preliminary Research. Review existing literature to identify gaps and potential questions. • Refinement. Narrow your broad topic into a specific, researchable question. • Audience Consideration. Tailor your question to your target audience. <p>Experts generally agree there is no fixed number of research questions but offer these guidelines: research often uses 3-5 questions (Portland State University, n.d.); it is helpful to have one main question/objective with supporting sub-questions/objectives.</p> <p>Hypothesis/Hypotheses (if applicable)</p> <p>A hypothesis in educational research is a testable guess about a relationship between educational variables (Fraenkel et al., 2019). It guides the research process and helps answer questions about teaching, learning, and educational outcomes.</p> <p>However, the null hypothesis (H_0) in educational research is a statement that there is no significant relationship or difference between the variables being studied (Ary et al., 2010). It is the hypothesis that researchers aim to disprove.</p> <p>Here are simple guidelines for formulating a null hypothesis in educational research:</p> <ol style="list-style-type: none"> 1. <i>Identify Variables.</i> Clearly define the independent and dependent variables you are investigating (Fraenkel et al., 2019). 2. <i>State "No Effect".</i> Explicitly state that there is no significant relationship or no significant difference between the identified variables (Ary et al., 2010). Use phrases like "no significant difference," "no relationship," or "no effect." 3. <i>Make it Testable.</i> Ensure that this statement of "no effect" can be tested through statistical analysis of collected data (Creswell & Creswell, 2018). 4. <i>Keep it Concise.</i> Formulate the null hypothesis as a clear and brief statement.
VII. Scope and Limitations	<p>The scope and limitations section of a research paper defines the boundaries of your study and acknowledges any factors that might have influenced or restricted your findings. It's crucial for transparency and helps readers understand the context of your research. The following are the guidelines for formulating the scope and limitations.</p> <ol style="list-style-type: none"> 1. Be Specific. Clearly and concisely define the scope and limitations. Avoid vague language. 2. Be Honest and Transparent. Acknowledge the limitations of your study openly and honestly.

	<p>3. Focus on Relevant Limitations. Only discuss limitations that are relevant to the interpretation of your findings.</p> <p>4. Avoid Overstating Limitations. Don't exaggerate the impact of limitations or use them as an excuse for poor research design.</p> <p>The scope defines what your research covered. It clarifies the boundaries and parameters of your study. Key aspects to define in the scope include topic/subject matter, population/sample, geographic location, time frame, variables, and methodology.</p> <p>Limitations identify the potential weaknesses or constraints in the research that could affect the interpretation or generalizability of your findings. Acknowledging limitations demonstrates intellectual honesty and provides context for the results. Common limitations include sample size and selection, data collection methods, time and resources, and external factors.</p>
<p>VII. Research Methodology</p>	<p>Research Design</p> <p>Research design serves as the framework for conducting studies, and it varies depending on the research question and objectives. The following are the common types:</p> <p>1. Quantitative Research - Emphasizes numerical data, statistical analysis, and objective measurements to test hypotheses and establish cause-and-effect relationships (Creswell & Guetterman, 2019).</p> <p>Types:</p> <ol style="list-style-type: none"> 1. Experimental. Manipulates independent variables to observe effects on dependent variables. <i>Example: A researcher randomly assigns students to either a traditional teaching method or a gamified learning method and compares their post-test scores.</i> 2. Causal-comparative/quasi-experimental. Identify cause-and-effect relationships between independent and dependent variables. However, unlike true experiments, it lacks the crucial element of random assignment of participants to different groups (Lodico et al., 2010). <i>Example: A researcher might want to investigate the effectiveness of a new reading intervention program on students' reading comprehension.</i> 3. Correlational. Examines the relationships between variables without manipulation. <i>Example: A researcher analyzes existing school records to determine if there is a relationship between hours of homework completed and grade point average.</i> 4. Descriptive. Describes the characteristics of a population or phenomenon. <i>Example: A survey was administered to high school seniors to determine their post-graduation plans.</i>

2. Qualitative Research. Focuses on understanding the meaning, experiences, and perspectives of individuals or groups through non-numerical data like interviews, observations, and documents (Merriam & Tisdell, 2016).

Types:

1. Narrative. Explores the life stories of individuals
Example: A researcher interviews a student about their educational journey and writes a detailed account of their experiences.
2. Phenomenological. Seeks to understand the essence of a lived experience.
Example: A researcher interviews multiple teachers to understand their shared experiences of implementing new classroom technology.
3. Case Study. In-depth examination of a specific individual, group, or situation.
Example: A researcher conducts extensive observations and interviews at a specific school to understand its unique approach to education.
4. Ethnographic. Studies the culture and practices of a group in their natural setting.
Example: A researcher immerses themselves in a school community to observe and document the daily interactions and cultural norms.
5. Grounded Theory. Develops theories from data collected through systematic analysis.
Example: A researcher conducts interviews and analyzes data to develop a theory about the stages of student motivation.

3. Mixed Methods Research: Combines both quantitative and qualitative approaches to provide a more comprehensive understanding of a research problem (Creswell & Plano Clark, 2018).

Types:

1. Convergent Parallel. Collects and analyzes both quantitative and qualitative data simultaneously and then compares the results.
2. Explanatory Sequential. Collects and analyzes quantitative data first, followed by qualitative data to explain the quantitative findings.
3. Exploratory Sequential. Collects and analyzes qualitative data first, followed by quantitative data to test or generalize the qualitative findings.

In articulating the research design, the researcher must provide a clear and detailed explanation of the chosen methodology, clearly justifying its suitability for addressing the specific research questions and objectives. This involves demonstrating how the selected design aligns with the study's

purpose and offers the most effective approach to generating valid and reliable findings.

A. Sampling

In writing this portion, identify the participants in the research study, the total population, the characteristics of the sample or participants, and the procedure for determining the sample size. The following is a guide to sample size determination and the different sampling techniques.

Determining an appropriate sample size is a critical step in research design. It impacts the statistical power of the research study, the generalizability of your findings, and the resources required for data collection.

Sample Size Determination

Different methods are used to calculate sample size, depending on the research design and the information available:

- **Power Analysis.** This is the most common method for quantitative studies. It involves using statistical software or formulas to calculate the sample size needed to achieve a desired level of power, given the effect size, alpha level, and population variability (Cohen, 1992).
- **Sample Size Calculators.** Many online calculators and statistical software packages (e.g., G*Power, R, Slovin, and Raosoft sample size calculator) are available to perform power analyses.
- **Rules of Thumb.** In some cases, rules of thumb or guidelines may be used, especially for certain types of research, but these should be used with caution and justified appropriately. For example, in survey research, a sample size of 300 is often considered a minimum for national surveys.
- **Saturation (Qualitative Research).** In qualitative research, sample size is often determined by data saturation, which is the point at which new data no longer provide new insights or themes (Guest, Bunce, & Johnson, 2006). Research using empirical data can reach information saturation quickly (9-17 interviews, 4-8 focus groups), especially with similar/ homogenous participants and focus groups (Hennink & Kaiser, 2022).

This portion must explain the research design used in the study. It also contains brief discussions of how the sample size was determined and the sampling technique.

Sampling Techniques

Sampling techniques are crucial in research as they determine how participants or data points are selected from a larger population. The choice of sampling technique significantly impacts the generalizability and validity of research findings. The following are the different sampling techniques for conducting research:

Probability Sampling (Random Sampling). Every member of the population has a known, non-zero chance of being selected. This allows for statistical inferences about the population.

- Simple Random Sampling. Simple random sampling is a way to select a smaller group (a sample) from a larger group (a population) where every member of the larger group has an equal chance of being chosen. It is like picking names out of a bowl, ensuring fairness and reducing bias in research.
- Systematic Sampling. Selecting every kth member of the population after a random start.
- Stratified Sampling. Dividing the population into subgroups (strata) based on shared characteristics (e.g., age, gender, education) and then randomly sampling from each stratum. This ensures the representation of all subgroups.
- Cluster Sampling. Dividing the population into clusters (e.g., schools, neighborhoods) and then randomly selecting entire clusters to participate. This is often used when it's difficult or costly to sample individuals directly.
- Multi-Stage Sampling. Combining different probability sampling methods. For example, a researcher might use stratified sampling to divide a country into regions, then use cluster sampling to select cities within those regions, and finally use simple random sampling to select individuals within those cities.

In **non-probability sampling**, the probability of selecting any particular member of the population is unknown. These methods are often used in qualitative research or when probability sampling is not feasible.

- Convenience Sampling. Selecting participants who are readily available and accessible. This is the easiest and often the least expensive method, but it can lead to biased samples.
- Quota Sampling. Selecting participants based on pre-determined quotas for different subgroups (similar to stratified sampling), but the selection within each quota is not random.
- Purposive/Judgmental Sampling. Selecting participants based on the researcher's judgment of their knowledge or experience related to the research topic. This is often used in qualitative research when specific expertise is needed.
- Snowball Sampling. Starting with a small group of participants and then asking them to refer other potential

participants who meet the study criteria. This is useful for reaching hard-to-reach populations.

Note: If the entire population will be studied and no sampling techniques utilized, a thorough explanation of this choice, including its feasibility and appropriateness for the research objectives, should be included.

A. Data Collection

The following are the procedures for writing the data collection portion.

1. Recruitment of Participants. Explain how participants were recruited (e.g., advertisements, email invitations, snowball sampling), the inclusion and exclusion criteria, and the sample size (Creswell & Creswell, 2018).
2. Data Collection Instruments. Describe the instruments used to collect data (e.g., survey questionnaires, interview guides, observation protocols). If using established instruments, provide citations. If developing new instruments, explain the development process and any **validity or reliability** testing conducted.

Validity and Reliability. Content validity and reliability are two essential aspects of evaluating the quality of a research instrument, such as a questionnaire, test, or scale. They address different but complementary concerns: whether the instrument measures what it intends to measure (validity) and whether it does so consistently (reliability).

Content validity assesses whether the instrument adequately covers the full scope of the construct it is designed to measure. It focuses on the representativeness and relevance of the items or questions in the instrument.

Process of Content Validity Testing

1. Define the Construct: Clearly define the construct or concept you want to measure. This involves specifying the key dimensions or aspects of the construct.
2. Item Development: Develop a pool of items or questions that are intended to measure the different aspects of the construct.
3. Expert Review: The most common method for assessing content validity is to have experts in the field review the instrument. Experts evaluate each item for:
 - o Relevance: Does the item measure a relevant aspect of the construct?
 - o Representativeness: Does the set of items adequately cover all important aspects of the construct?
 - o Clarity: Is the item clearly worded and easy to understand?

4. Content Validity Ratio (CVR): Lawshe (1975) proposed a quantitative method for assessing content validity using a panel of experts. Experts rate each item as "essential," "useful but not essential," or "not necessary." The CVR is calculated as:

$$\text{CVR} = (\text{ne} - N/2) / (N/2)$$

Where:

ne = number of experts indicating the item is "essential"

N = total number of experts

A CVR value above a critical value (which depends on the number of experts) indicates acceptable content validity.

5. Pilot Testing: Administering the instrument to a small group of individuals from the target population can help identify any problems with wording, clarity, or response format.

Reliability refers to the consistency and stability of the measurement. A reliable instrument produces similar results when administered multiple times or under different conditions.

Methods of Reliability Testing

1. *Test-Retest Reliability* - Administering the same instrument to the same group of individuals at two different time points and calculating the correlation between the two sets of scores. A high correlation indicates good test-retest reliability.
2. *Internal Consistency Reliability* - Assessing the consistency of responses across items within the same instrument. Common methods include:
 - *Cronbach's Alpha*: A widely used measure of internal consistency for scales with multiple items. A Cronbach's alpha of .70 or higher is generally considered acceptable (DeVellis, 2012).
 - *Split-Half Reliability*: Dividing the instrument into two halves and calculating the correlation between the scores on the two halves.
3. *Inter-Rater Reliability* - Assessing the agreement between two or more raters or observers who are coding or scoring the same data. This is particularly relevant for observational studies or qualitative research. Common measures include:
 - *Cohen's Kappa*: Used for categorical data.
 - *Intraclass Correlation Coefficient (ICC)*: Used for continuous data.

Note: If the instrument is adopted from another research paper, acknowledge the owner in this portion.

	<ol style="list-style-type: none"> 3. <u>Data Collection Setting</u>. Describe the setting where data were collected (e.g., laboratory, classroom, online). 4. <u>Data Collection Timeline</u>. Specify the dates or times during which data were collected. 5. <u>Data Recording and Storage</u>. Explain how data were recorded (e.g., audio recordings, written notes, digital files) and how they were stored and protected to ensure confidentiality and security.
IX. Discussion of Results and Recommendations	<p>Interpreting research data and findings is the crucial process of making sense of the collected data and drawing meaningful conclusions in relation to the research questions or hypotheses. It involves going beyond simply reporting the results to explaining their implications and significance.</p> <p>Substantial writing of the results may or may not mention numerical data. It focuses on the significant results, which are outstanding in the data harvested, like the top and bottom indicators. State the in-depth analysis supporting relevant literature and studies from the review.</p> <p>Organization and Structure</p> <ol style="list-style-type: none"> 1. <i>Order of Presentation</i> - Present findings in a logical sequence, typically mirroring the order of your research questions or hypotheses. This creates a clear narrative for the reader. 2. <i>Integration of Tables and Figures</i> - Integrate tables and figures within the text, referring to them by number (e.g., "As shown in Table 1...") and providing concise explanations of their content. Place the table as close as possible to their first mention. <p>Presenting Quantitative Results</p> <ol style="list-style-type: none"> 1. <i>Descriptive Statistics First</i> - Begin with descriptive statistics (means, standard deviations, frequencies, percentages) to summarize the data and provide context. 2. <i>Inferential Statistics Next</i> - Report the results of inferential statistical tests (t-tests, ANOVAs, correlations, regressions). Include: <ul style="list-style-type: none"> • Test statistic (e.g., t, F, r, χ^2). • Degrees of freedom (df). • p-value (report exact p-values unless $p < .001$, in which case report $p < .001$). • Effect sizes (e.g., Cohen's d, eta-squared, r^2). These quantify the practical significance of the findings. 3. <i>Use Precise Statistical Language</i> - Avoid vague terms. Use correct statistical terminology. 4. <i>Tables for Detailed Data</i> - Use tables to present large amounts of numerical data efficiently. Follow APA table formatting guidelines.

table number → Table 1

table title → Numbers of Children With and Without Proof of Parental Citizenship

stub heading: heading that describes the leftmost column

table spanner: heading that covers the entire width of the table body, allowing for further divisions

stub column or stub: leftmost column of the table; usually lists the major independent or predictor variables

column spanner: heading that describes the entries in two or more columns in the table body

decked heads: headings that are stacked, often to avoid repetition in column heads

column heading: heading that identifies the entries in just one column in the table body

cell: point of intersection between a row and a column

table body: rows and columns of cells containing the primary data of the table

table notes: explanations to supplement or clarify information in the table body

Note. This table demonstrates the elements of a prototypical table. A general note to a table appears first and contains information needed to understand the table, including definitions of abbreviations (see Sections 7.14–7.15) and the copyright attribution for a reprinted or adapted table (see Section 7.7).

* A specific note appears in a separate paragraph below the general note.

† Subsequent specific notes follow in the same paragraph (see Section 7.14).

* A probability note (for *p* values) appears as a separate paragraph below any specific notes; subsequent probability notes follow in the same paragraph (see Section 7.14).

Grade	Girls		Boys	
	With	Without	With	Without
Wave 1				
3	280*	240 [†]	281	232
4	297	251	290	264
5	301	260	306	221
Total	878	751	877	717
Wave 2				
3	201	189	210	199
4	214	194	236	210
5	221	216	239	213
Total	636	599	685*	622

Image Source: <https://apastyle.apa.org/style-grammar-guidelines/tables-figures/tables>

5. Figures for Visual Representation - Use figures (graphs, charts) to illustrate relationships, trends, or patterns in the data. Follow APA figure formatting guidelines.

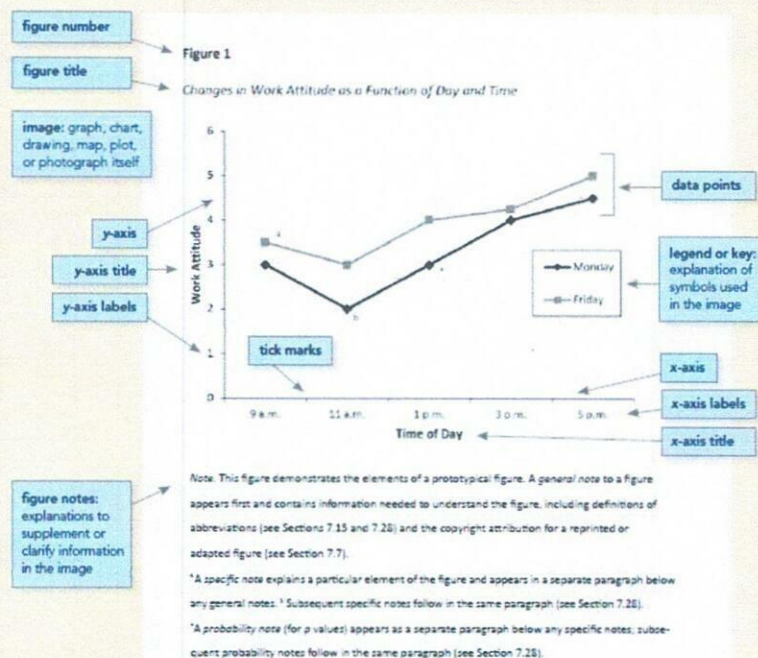


Image Source: <https://apastyle.apa.org/style-grammar-guidelines/tables-figures/figures>

Example (Quantitative)

"Participants in the experimental group ($M = 85.3$, $SD = 7.2$) demonstrated significantly higher scores on the anxiety scale compared to the control group ($M = 78.1$, $SD = 6.9$), $t(198) = 4.21$, $p < .001$, $d = 0.60$. This indicates a moderate to large effect of the intervention on anxiety levels (see Table 1)."

Presenting Qualitative Results

1. *Identify Themes or Patterns* - Present the key themes, patterns, or categories identified during analysis.
2. *Provide Rich Supporting Evidence* - Use direct quotations from participants or excerpts from other data (field notes, documents) to illustrate and substantiate the themes.
3. *Maintain Participant Anonymity* - Protect participant confidentiality using pseudonyms or other identifiers.
4. *Integrate Quotations Smoothly* - Embed quotations within the text, providing context and interpretation. Use block quotations for quotes longer than 40 words.

Example (Qualitative)

"Participants frequently described a sense of isolation during online learning. As one participant noted, 'It was really hard to feel connected to anyone. I felt like I was just learning by myself, all the time' (Sarah, personal communication, October 26, 2023). This sentiment was echoed by several others, highlighting the theme of social disconnection."

General Guidelines for Discussion

1. *Interpret, Don't Just Report* - Go beyond simply reporting the results. Explain what they mean and their implications.
2. *Relate to Research Questions/Hypotheses* - Explicitly state whether the findings support or refute your research questions or hypotheses.
3. *Compare to Existing Literature* - Discuss how your findings compare to previous research. Do they confirm, contradict, or extend existing knowledge?
4. *Acknowledge Limitations* - Acknowledge any limitations of your study that might affect the interpretation or generalizability of the findings.
5. *Discuss Implications for Practice or Future Research* - Explain the practical implications of your findings and suggest directions for future research.

Recommendations

The recommendations section of a research paper is where you suggest specific actions or future research directions based on your findings. It's a crucial part of demonstrating the practical implications and value of your study.

Basis for Recommendations

- *Grounded in Findings* - Recommendations must be directly supported by the findings of your research. Avoid making recommendations that are not justified by the data.
- *Logical and Specific* - Recommendations should be logical extensions of your findings and should be specific enough to be actionable. Avoid vague or general statements.
- *Targeted to Relevant Audiences* - Tailor your recommendations to the appropriate audiences (e.g., practitioners, policymakers, future researchers).

Types of Recommendations

1. *Recommendations for Practice* - These suggest how the findings can be applied in real-world settings to improve practices, programs, or interventions.
2. *Recommendations for Policy* - These suggest changes or adjustments to policies based on the research findings.
3. *Recommendations for Future Research* - These identify areas where further research is needed to address the limitations of the current study or to explore related questions.

Writing Effective Recommendations

1. *Start with a Clear Statement* - Begin each recommendation with a clear and concise statement that identifies the action to be taken. Use action verbs (e.g., "Implement," "Develop," "Conduct," "Investigate").
2. *Provide Rationale* - Briefly explain the rationale behind each recommendation, linking it to the relevant findings.
3. *Be Specific and Actionable* - Provide specific and actionable recommendations that can be readily implemented. Avoid vague or general statements.
4. *Prioritize Recommendations (If Necessary)* - If you have multiple recommendations, consider prioritizing them based on their importance or feasibility.
5. *Consider Feasibility and Resources* - Take into account the feasibility of implementing the recommendations, considering factors such as resources, time, and cost.
6. *Address Limitations (Where Appropriate)* - If limitations of your study affect the strength of your recommendations, acknowledge this and suggest how future research could address these limitations.

Example of a well-structured recommendation:**Recommendations**

Based on the findings of this study, the following recommendations are made:

	<ol style="list-style-type: none"> 1. Implement a standardized training program for teachers on effective online teaching strategies. The study revealed that teachers who received training reported higher levels of confidence and used more effective online teaching practices, which correlated with increased student engagement. A standardized training program would ensure that all teachers have access to this valuable professional development. 2. Develop and implement a school-wide social-emotional learning (SEL) program. The findings indicated a significant relationship between students' social-emotional well-being and their academic performance in online learning environments. Implementing a comprehensive SEL program could help students develop the skills they need to manage stress, build relationships, and succeed academically. 3. Future research should explore the long-term impact of online learning on student learning outcomes. This study focused on a single academic year. Longitudinal research is needed to understand the sustained effects of online learning on student achievement and well-being over time.
X. Dissemination and Advocacy Plans	<p>A robust dissemination and advocacy plan is crucial for translating research findings into real-world impact. It's a strategic process of sharing research outcomes with relevant audiences and promoting their interest in practice, policy, or further research. The following are the process in crafting the plan.</p> <ol style="list-style-type: none"> 1. <i>Defining Clear Objectives.</i> Begin by establishing specific, measurable, achievable, relevant, and time-bound (SMART) objectives for your dissemination and advocacy efforts. 2. <i>Identifying and Segmenting Target Audiences.</i> Pinpoint the key stakeholders who can benefit from or influence the application of your research. Segment these audiences based on their needs, interests, and preferred communication channels. 3. <i>Selecting Appropriate Dissemination Channels.</i> Choose channels that effectively reach your target audiences. Consider the strengths and limitations of each channel. 4. <i>Crafting Compelling Messages.</i> Develop clear, concise, and audience-tailored messages that highlight key findings and their implications. Use plain language and avoid jargon when communicating with non-academic audiences. 5. <i>Developing a Dissemination and Advocacy Strategy.</i> A comprehensive strategy should include: <ul style="list-style-type: none"> • <i>Key Messages</i> - Tailored to each target audience. • <i>Channels</i> - Specific platforms and methods for reaching each audience. • <i>Timeline</i> - A schedule for dissemination activities.

	<ul style="list-style-type: none">• <i>Responsibilities</i> - Clear roles and responsibilities for team members.• <i>Budget</i> - Allocated resources for dissemination activities.• <i>Evaluation Metrics</i> - How will you measure the impact of your efforts? <p>6. <i>Implementing the Plan</i>. Carry out the planned activities, ensuring consistent messaging and coordinated efforts.</p> <p>7. <i>Evaluating Impact</i>. Assess the effectiveness of your dissemination and advocacy efforts using pre-defined metrics. This could include:</p> <ul style="list-style-type: none">• Website traffic and social media engagement.• Media mentions and coverage.• Policy changes or adoption of new practices.• Feedback from target audiences.• Number of publications and citations. <p>Example Dissemination and Advocacy Plan (Simplified):</p> <ul style="list-style-type: none">• Research Topic - Impact of early childhood interventions on school readiness.• Objectives - Increase awareness among educators and policymakers and promote the adoption of effective interventions.• Target Audiences - Teachers, school administrators, policymakers, and parents.• Channels - Journal article, conference presentation, policy brief, website, parent workshops.• Key Messages - Early interventions improve school readiness and long-term academic success.• Timeline - Publication (Month 6), conference (Month 9), policy brief (Month 12), workshops (ongoing).• Evaluation - Track website visits, workshop attendance, and policy citations. <p>It can be presented in tabular form.</p> <p>Sample Table</p> <table><tr><th>Research Topic</th><th>Objectives</th><th>Target Audiences</th><th>Channels</th><th>Key Messages</th><th>Timeline</th><th>Evaluation Process</th></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	Research Topic	Objectives	Target Audiences	Channels	Key Messages	Timeline	Evaluation Process							
Research Topic	Objectives	Target Audiences	Channels	Key Messages	Timeline	Evaluation Process									
XI. References	<p>Creating a reference list in APA 7th edition involves adhering to specific formatting rules for different source types. The following are the guidelines:</p> <p>1. General Formatting for the Reference List</p> <ul style="list-style-type: none">• Placement - The reference list begins on a new page after the main body of your paper.• Title - Center the word "References" at the top of the page (no bolding, italics, or quotation marks).• Spacing - Double-space the entire reference list.														

- Hanging Indent - Each entry should have a hanging indent (the first line is flush left, and subsequent lines are indented 0.5 inches).
- Alphabetical Order - Entries are alphabetized by the first author's last name. If there is no author, alphabetize by the first significant word of the title (ignoring "A," "An," or "The").

2. Common Source Types and Examples

A. Journal Article

Format:

Author, A. A., Author, B. B., & Author, C. C. (Year). Title of article. Title of Periodical, volume number (issue number), page range. DOI or URL

Example:

Herculano-Houzel, S. (2009). The human brain in numbers: A linearly scaled-up primate brain. *Frontiers in Human Neuroscience*, 3, Article 31.
<https://doi.org/10.3389/neuro.09.031.2009>

B. Book

Format:

Author, A. A. (Year). Title of work. Publisher.

Example:

Wegener, D. T., & Petty, R. E. (1998). The elaboration likelihood model: Current status and controversies. Psychology Press.

C. Chapter in an Edited Book

Format:

Author, A. A. (Year). Title of chapter. In E. E. Editor & F. F. Editor (Eds.), Title of work (pp. page range). Publisher.

Example:

Haybron, D. M. (2008). Philosophy and the science of subjective well-being. In M. Eid & R. J. Larsen (Eds.), *The science of subjective well-being* (pp. 17-43). Guilford Press.

D. Website:

Format:

Author, A. A. (Year, Month Day). Title of page. Site Name. URL

Example:

National Institute of Mental Health. (2023, January). Anxiety disorders. U.S. Department of Health and Human Services, National Institutes of Health.
<https://www.nimh.nih.gov/health/topics/anxiety-disorders/>
No Date: If no date is available, use (n.d.).

E. Report:

Format:

Author or Organization. (Year). Title of report (Report Number). Publisher.

Example:

	<p>American Psychological Association. (2010). Publication manual of the American Psychological Association (6th ed.). American Psychological Association.</p> <p>Citation management tools like Zotero, Mendeley, and EndNote can greatly simplify the process of creating and managing references. These tools can automatically format citations and bibliographies in APA style.</p> <p>The link below is an online citation generator that can assist in formatting references. https://www.bibliography.com/</p>
<p>XII. Financial Report</p>	<p>A financial report for a Basic Education Research Fund (BERF) project needs to be accurate, transparent, and compliant with DepEd's specific guidelines. Here's a breakdown of the process:</p> <p><u>Eligible and Non-Eligible Expenses.</u> BERF funding has specific categories for what can and cannot be covered. This is crucial for accurate cost estimation.</p> <p>Eligible Expenses</p> <ul style="list-style-type: none"> • <u>Supplies/Materials.</u> Consumable items needed for the research (e.g., paper, pens, printing ink). • <u>Reproduction.</u> Costs for printing, photocopying, and binding questionnaires, reports, etc. • <u>Communication.</u> Expenses related to communication (e.g., phone calls, internet access) are directly related to the research. • <u>Transportation.</u> Costs for travel directly related to data collection or dissemination activities within the Philippines. • <u>Food.</u> Limited funding for food during research activities, like focus group discussions. <p>Non-Eligible Expenses</p> <ul style="list-style-type: none"> • <u>Equipment.</u> Purchase of equipment like computers, cameras, or recorders. • <u>Software.</u> Purchase of software licenses. • <u>Salaries/Consultancy Fees.</u> Payment is for the researcher's time or that of external consultants. • <u>Utilities.</u> Costs for electricity, water, or internet are not directly tied to specific research activities. • <u>Overseas Travel.</u> International travel is not covered by BERF. <p>Components of a BERF Financial Report:</p> <p>A typical BERF financial report includes the following components:</p> <ol style="list-style-type: none"> 1. Executive Summary - A brief overview of the financial report, summarizing the total expenses incurred and any significant findings or issues.

2. Statement of Income and Expenses (or similar) - This is the core of the report. It details all income received (the BERF grant) and all expenses incurred. It's usually presented in a tabular format.
 - Columns typically include:
 - Date: Date of the transaction.
 - Particulars/Description: Description of the expense (e.g., "Photocopy of questionnaires," "Transportation to research site").
 - Receipt/Invoice Number: Reference number of the supporting document.
 - Amount (PHP): Amount of the expense in Philippine Pesos.
 - Category: Categorize expenses according to BERF's approved categories (e.g., Supplies/Materials, Reproduction, Communication, Transportation, Food).
3. Supporting Documents - Attach copies of all supporting documents, such as:
 - Official receipts from suppliers.
 - Invoices for services rendered.
 - Transportation tickets or receipts.
4. Summary of Expenses by Category - A summary table or chart showing the total expenses for each approved category. This helps to visualize how the funds were allocated.
5. Narrative Report (Optional but Recommended) - A brief narrative explaining any significant variances between the budgeted and actual expenses, any challenges encountered, and any other relevant financial information.

Sample Table

Date	Particulars/Description	Receipt/Invoice No.	Amount (PHP)	Category
2024-01-15	Photocopy of Questionnaires	OR #12345	500	Reproduction
2024-01-20	Transportation to Research Site	Ticket #6789	1000	Transportation
2024-02-05	Food for Focus Group	OR #98765	1500	Food
2024-02-10	Tokens for Participants	Acknowledgment forms	2000	Tokens
Total			5000	

III. Action Research Proposal

Part	Guidelines
Research Title	A good research title should be:

	<ol style="list-style-type: none"> 1. Concise and Specific. Avoid unnecessary jargon or overly broad terms. Aim for clarity and precision. Ideally, it should be no more than 12 words. There should be no acronym. 2. Accurate Representation. The title should accurately reflect the content and scope of your research. 3. Engaging. While accuracy is vital, a title that attracts interest can draw readers in. However, avoid being sensational or misleading. 4. Keyword-Rich. Incorporate relevant keywords that will help others find your research during database searches. 5. Appropriate for the Audience. Consider the intended audience and choose the language they will understand.
Title Page	<p>The research title should be written in Bold Letters, arranged in an inverted pyramid format, and centered on the title page. Begin 3-4 lines down from the top margin of the paper. Put a double-spaced blank line between the title and the byline. It should contain the following:</p> <ul style="list-style-type: none"> • Researcher/s name • Position • Schools Division Office, District, School Name • Month and Year the research was conducted • Page number in the upper right corner <p>Note: The manuscript title page must not contain the researcher/s name and school affiliation during the blind evaluation process.</p>
I. Context and Rationale	<p>The introduction sets the stage for your research. The following are the guidelines for writing the context and rationale.</p> <ol style="list-style-type: none"> 1. Start Broad. Begin with a general statement about the broader topic area (e.g., the importance of early childhood education). 2. Narrow the Focus. Narrow the focus to a specific issue within that area (e.g., the impact of play-based learning on social-emotional development in preschoolers). 3. Problem Statement. Clearly state the problem or gap in knowledge (e.g., limited research on the long-term effects of specific play-based interventions on social skills). 4. Brief Literature Review. Briefly review key studies that highlight the importance of social-emotional development and the potential benefits of play-based learning, while also pointing out the gap in long-term research. 5. Rationale/Justification. Explicitly state why your research is needed (e.g., to provide evidence-based insights

	<p>into the long-term impact of play-based interventions, which can inform educational practices and policy).</p> <p>6. Purpose/Objectives/Research Questions. State the purpose of your study (e.g., to investigate the long-term effects of a specific play-based intervention on the social skills of children from preschool to early elementary school).</p> <p>7. (Optional) Overview. Briefly mention the research design (e.g., a longitudinal study with follow-up assessments)</p>
II. Action Research Questions	<p>Crafting effective research questions is crucial for guiding your research and ensuring a focused investigation. Here are guidelines for writing strong research questions:</p> <ul style="list-style-type: none"> • Start Broad. Begin with a general area of interest. • Preliminary Research. Review existing literature to identify gaps and potential questions. • Refinement. Narrow your broad topic into a specific, researchable question. • Audience Consideration. Tailor your question to your target audience. <p>Experts generally agree there is no fixed number of research questions but offer these guidelines: research often uses 3-5 questions (Portland State University, n.d.); it's helpful to have one main question/objective with supporting sub-questions/objectives.</p> <p>Hypothesis/Hypotheses (if applicable)</p> <p>A hypothesis in educational research is a testable guess about a relationship between educational variables (Fraenkel et al., 2019). It guides the research process and helps answer questions about teaching, learning, and educational outcomes.</p> <p>However, the null hypothesis (H_0) in educational research is a statement that there is no significant relationship or difference between the variables being studied (Ary et al., 2010). It is the hypothesis that researchers aim to disprove.</p> <p>Here are simple guidelines for formulating a null hypothesis in educational research:</p> <ol style="list-style-type: none"> 1. Identify Variables. Clearly define the independent and dependent variables you are investigating (Fraenkel et al., 2019). 2. State "No Effect". Explicitly state that there is no significant relationship or no significant difference between the identified variables (Ary et al., 2010). Use phrases like "no significant difference," "no relationship," or "no effect." 3. Make it Testable. Ensure that this statement of "no effect" can be tested through statistical analysis of collected data (Creswell & Creswell, 2018).

	<p>4. <i>Keep it Concise.</i> Formulate the null hypothesis as a clear and brief statement.</p>
<p>III. Proposed Innovation, Intervention, and Strategy</p>	<p>Developing innovation, intervention, and strategy in research involves a systematic process of identifying a problem, designing a novel solution (innovation), implementing that solution (intervention), and outlining the plan for execution and evaluation (strategy).</p> <p>Innovation in research signifies introducing something new or significantly improved—a novel method, approach, theory, or understanding of a phenomenon.</p> <ol style="list-style-type: none"> 1. <i>Identify a Gap or Problem</i> - Begin with a thorough literature review to pinpoint a significant gap in existing knowledge or a pressing problem requiring a solution (Galvan, 2017). 2. <i>Generate Novel Ideas</i> - Employ brainstorming, design thinking, or other creative problem-solving techniques to generate potential solutions. Consider interdisciplinary perspectives and emerging trends. 3. <i>Evaluate Feasibility and Potential Impact</i> - Assess the practicality, cost-effectiveness, ethical implications, and potential impact of your innovative idea. 4. <i>Develop a Clear Rationale</i> - Articulate the need for your innovative approach and its potential contributions to the field. <p>The intervention is the specific action or set of actions implemented to effect change or improvement. It is the practical application of your innovation (Craig et al., 2008).</p> <ol style="list-style-type: none"> 1. <i>Define the Target Population</i> - Specify the individuals, groups, or systems that will be the focus of the intervention. 2. <i>Specify Intervention Components</i> - Detail the intervention's content, delivery method (e.g., online, in-person, group-based), frequency, duration, and intensity. 3. <i>Base Intervention on Theory and Evidence</i> - Ground the intervention in established theories and empirical evidence to provide a strong rationale for its expected effectiveness (Michie et al., 2013). 4. <i>Ensure Practicality and Acceptability</i> - Consider real-world implementation constraints and ensure the intervention is acceptable to the target population and feasible within the given context. 5. <i>Develop a Protocol or Manual</i> - Create a detailed protocol or manual to guide intervention delivery and ensure consistency and fidelity. <p>The strategy outlines how the intervention will be implemented and evaluated. It encompasses the overall research plan (Creswell & Creswell, 2018).</p> <p><i>Research Design</i> - Select an appropriate research design to evaluate the intervention's effectiveness.</p>

	<ul style="list-style-type: none"> • <i>Experimental Designs</i> - Randomized controlled trials (RCTs), factorial designs. • <i>Quasi-experimental Designs</i> - Interrupted time series, non-equivalent control group designs. • <i>Qualitative Designs</i> - Case studies, ethnographies, grounded theory. • <i>Mixed Methods Designs</i> - Combining quantitative and qualitative approaches. <p><i>Data Collection Methods</i> - Choose appropriate methods to measure the intervention's outcomes.</p> <ul style="list-style-type: none"> • Surveys, questionnaires, interviews, focus groups, observations, physiological measures, standardized tests, administrative data. <p><i>Data Analysis Plan</i> - Develop a detailed plan specifying the statistical tests or qualitative analysis techniques to be used.</p> <p><i>Implementation Plan</i> - Outline the steps, timeline, resources, and responsibilities for implementing the intervention.</p> <p><i>Evaluation Plan</i> - Describe how the intervention's effectiveness will be assessed, including outcome measures, data collection points, and criteria for success.</p> <p>Example:</p> <p>Problem: Low learners' engagement in online learning.</p> <p>Innovation: Develop a gamified online learning platform incorporating personalized learning paths and interactive challenges.</p> <p>Intervention: Implementation of the gamified platform in school-level online course for one semester, with learners earning points, badges, and virtual rewards for completing learning activities.</p> <p>Strategy: A quasi-experimental design comparing learners' engagement and learning outcomes in the gamified course to a control group using the traditional online course format. Data will be collected through online activity logs, surveys, and final exam scores.</p>
IV. Action Research Methods	<p>Research Design</p> <p>Research design serves as the framework for conducting studies, and it varies depending on the research question and objectives. The following are the common types:</p> <p>1. Quantitative Research - Emphasizes numerical data, statistical analysis, and objective measurements to test hypotheses and establish cause-and-effect relationships (Creswell & Guetterman, 2019).</p> <p>Types:</p> <ol style="list-style-type: none"> 1. <i>Experimental</i>. Manipulates independent variables to observe effects on dependent variables. <p><i>Example: A researcher randomly assigns students to either a traditional teaching method or a gamified learning method and compares their post-test scores.</i></p>

	<p>2. Correlational. Examines the relationships between variables without manipulation. <i>Example: A researcher analyzes existing school records to determine if there is a relationship between hours of homework completed and grade point average.</i></p> <p>3. Descriptive. Describes the characteristics of a population or phenomenon. <i>Example: A survey administered to high school seniors to determine their post-graduation plans.</i></p> <p>2. Qualitative Research. Focuses on understanding the meaning, experiences, and perspectives of individuals or groups through non-numerical data like interviews, observations, and documents (Merriam & Tisdell, 2016).</p> <p>Types:</p> <ol style="list-style-type: none"> 1. Narrative. Explores the life stories of individuals <i>Example: A researcher interviews a student about their educational journey and writes a detailed account of their experiences.</i> 2. Phenomenological. Seeks to understand the essence of a lived experience. <i>Example: A researcher interviews multiple teachers to understand their shared experiences of implementing new classroom technology.</i> 3. Case Study. In-depth examination of a specific individual, group, or situation. <i>Example: A researcher conducts extensive observations and interviews at a specific school to understand its unique approach to education.</i> 4. Ethnographic. Studies the culture and practices of a group in their natural setting. <i>Example: A researcher immerses themselves in a school community to observe and document the daily interactions and cultural norms.</i> 5. Grounded Theory. Develops theories from data collected through systematic analysis. <i>Example: A researcher conducts interviews and analyzes data to develop a theory about the stages of student motivation.</i> <p>3. Mixed Methods Research: Combines both quantitative and qualitative approaches to provide a more comprehensive understanding of a research problem (Creswell & Plano Clark, 2018).</p> <p>Types:</p> <ol style="list-style-type: none"> 1. Convergent parallel. Collects and analyzes both quantitative and qualitative data simultaneously and then compares the results. 2. Explanatory sequential. Collects and analyzes quantitative data first, followed by qualitative data to explain the quantitative findings.
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3. **Exploratory sequential.** Collects and analyzes qualitative data first, followed by quantitative data to test or generalize the qualitative findings.

In articulating the research design, the researcher must provide a clear and detailed explanation of the chosen methodology, clearly justifying its suitability for addressing the specific research questions and objectives. This involves demonstrating how the selected design aligns with the study's purpose and offers the most effective approach to generating valid and reliable findings.

A. Participants and/or other Sources of Data Information

Determining an appropriate sample size is a critical step in research design. It impacts the statistical power of your study, the generalizability of your findings, and the resources required for data collection.

Sample Size Determination

Different methods are used to calculate sample size, depending on the research design and the information available:

- **Power Analysis.** This is the most common method for quantitative studies. It involves using statistical software or formulas to calculate the sample size needed to achieve a desired level of power, given the effect size, alpha level, and population variability (Cohen, 1992).
- **Sample Size Calculators.** Many online calculators and statistical software packages (c.g., G*Power, R, Slovin, and Raosoft sample size calculator) are available to perform power analyses.
- **Rules of Thumb.** In some cases, rules of thumb or guidelines may be used, especially for certain types of research, but these should be used with caution and justified appropriately. For example, in survey research, a sample size of 300 is often considered a minimum for national surveys.
- **Saturation (Qualitative Research).** In qualitative research, sample size is often determined by data saturation, which is the point at which new data no longer provide new insights or themes (Guest, Bunce, & Johnson, 2006). Research using empirical data can reach information saturation quickly (9-17 interviews, 4-8 focus groups), especially with similar/ homogenous participants and focus groups (Hennink & Kaiser, 2022).

This portion must explain the research design to be used in the study. It also contains brief discussions of how the sample size will be determined and the sampling technique.

Sampling techniques are crucial in research as they determine how participants or data points are selected from a larger population. The choice of sampling technique significantly impacts the generalizability and validity of research findings. The following are the different sampling techniques for conducting research.

Probability Sampling (Random Sampling). Every member of the population has a known, non-zero chance of being selected. This allows for statistical inferences about the population.

- Systematic Sampling. Selecting every kth member of the population after a random start.
- Stratified Sampling: Dividing the population into subgroups (strata) based on shared characteristics (e.g., age, gender, education) and then randomly sampling from each stratum. This ensures the representation of all subgroups
- Cluster Sampling. Dividing the population into clusters (e.g., schools, neighborhoods) and then randomly selecting entire clusters to participate. This is often used when it is difficult or costly to sample individuals directly.
- Multi-Stage Sampling. Combining different probability sampling methods. For example, a researcher might use stratified sampling to divide a country into regions, then use cluster sampling to select cities within those regions, and finally use simple random sampling to select individuals within those cities.

In **non-probability sampling**, the probability of selecting any particular member of the population is unknown. These methods are often used in qualitative research or when probability sampling is not feasible.

- Convenience Sampling: Selecting participants who are readily available and accessible. This is the easiest and often the least expensive method, but it can lead to biased samples
- Quota Sampling. Selecting participants based on pre-determined quotas for different subgroups (similar to stratified sampling), but the selection within each quota is not random.
- Purposive/Judgmental Sampling: Selecting participants based on the researcher's judgment of their knowledge or experience related to the research topic. This is often used in qualitative research when specific expertise is needed.
- Snowball Sampling. Starting with a small group of participants and then asking them to refer other potential participants who meet the study criteria. This is useful for reaching hard-to-reach populations.

B. Data Gathering Methods

The following are the procedures for writing the data collection portion.

1. Recruitment of Participants. Explain how participants were recruited (e.g., advertisements, email invitations, snowball sampling), the inclusion and exclusion criteria, and the sample size (Creswell & Creswell, 2018).
2. Data Collection Instruments. Describe the instruments used to collect data (e.g., survey questionnaires, interview guides, observation protocols). If using established instruments, provide citations. If developing new instruments, explain the development process and any validity or reliability testing conducted.
3. Data Collection Setting. Describe the setting where data were collected (e.g., laboratory, classroom, online).
4. Data Collection Timeline. Specify the dates or times during which data were collected.
5. Data Recording and Storage. Explain how data were recorded (e.g., audio recordings, written notes, digital files) and how they were stored and protected to ensure confidentiality and security.

C. Data Analysis Plan

Statistical tools are essential for analyzing data and drawing meaningful conclusions in research. They range from simple descriptive statistics to complex inferential methods. The following is an overview of different statistical tools and their uses:

Descriptive statistics summarize and describe the main features of a dataset. They provide a basic understanding of the data's central tendency, variability, and distribution.

Measures of Central Tendency

- Mean - The average value of a dataset.
- Median - The middle value in a sorted dataset.
- Mode - The most frequent value in a dataset.

Measures of Dispersion/Variability

- Range. The difference between the maximum and minimum values.
- Variance. The average of the squared differences from the mean.
- Standard Deviation. The square root of the variance provides a measure of how spread out the data is.
- Interquartile Range (IQR). The range between the 25th and 75th percentiles is useful for non-normally distributed data.
- Frequency Distributions. Show how often each value or category occurs in a dataset.

Inferential statistics are used to make inferences or generalizations about a population based on a sample of data. They help researchers draw conclusions and make predictions beyond the immediate data.

- **Hypothesis Testing.** A formal procedure for testing a claim or hypothesis about a population. It involves setting up a null hypothesis (no effect) and an alternative hypothesis (an effect exists) and then using statistical tests to determine whether there is enough evidence to reject the null hypothesis.

Parametric Tests. It is used when reasonably assumed data comes from a known distribution (especially normal), has a larger sample size (often considered $n > 30$), and is working with interval or ratio data. Example: t-test for dependent means, t-test for independent means, Analysis of Variance (ANOVA), Pearson r

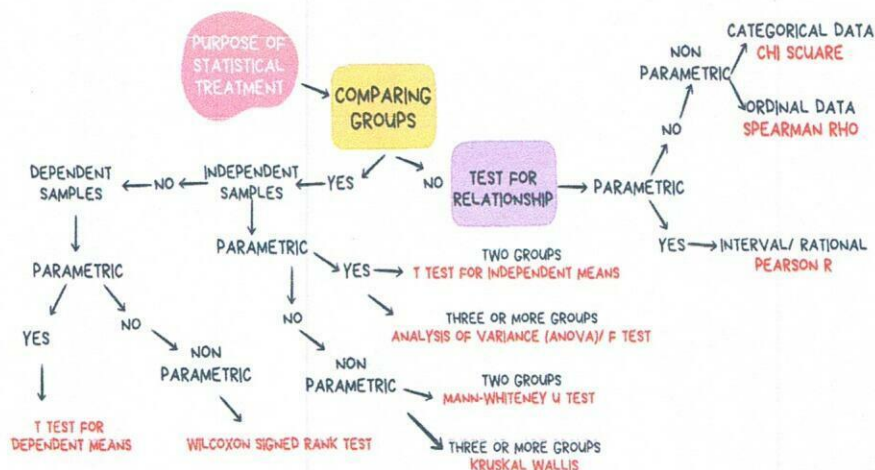
- **T-tests.** Use to compare the means of two groups.
 - Independent Samples t-test: Compare the means of two independent groups.
 - Paired Samples t-test: Compare the means of two related groups (e.g., pre-test and post-test scores).
- **ANOVA (Analysis of Variance).** Use to compare the means of three or more groups.
- **Correlation Analysis.** Examine the relationship between two continuous variables. It measures the strength and direction of the association using correlation coefficients (e.g., Pearson's r).
- **Regression Analysis.** Use to model the relationship between one or more independent variables and a dependent variable.
- **Linear Regression.** Model a linear relationship between variables.
- **Multiple Regression.** Model the relationship between multiple independent variables and a dependent variable.

Non-parametric Tests. It is used when the data violates the assumptions of parametric tests, has a small sample size, or the data is nominal or ordinal. Example: Wilcoxon Signed Rank Tests, Mann-Whitney U Test, Kruskal-Wallis, Chi Square, and Spearman Rho

- **Wilcoxon Signed Rank Tests.** It is used when there is paired data, the assumption of normality is not met, the data might be ordinal, and there is a need for testing the significance of the median difference between the related groups. It is a powerful non-parametric alternative to the paired t-test in many situations.
- **Mann-Whitney U Test.** It is used to compare two separate groups when you cannot assume your data follows a bell curve. It essentially checks if the distributions of the two groups are different.
- **Kruskal-Wallis.** It is a non-parametric statistical test used to determine if there are statistically significant differences between the medians of three or more independent groups.

- **Chi-Square Test.** Use to examine the relationship between two categorical variables.
- **Spearman Rho.** It is used when two variables move together in the same or opposite direction, without assuming a linear pattern or a normal distribution. It is particularly useful for ranked data or when outliers might skew a traditional Pearson correlation.

The following is the diagram that can assist in deciding the appropriate statistical tools to be used in a research study.



This portion of action research must identify and explain the different statistical tools to be used in the research study.

V. Action Research Workplan and Timelines

A timetable, also known as a timeline or schedule, is a crucial component of a research proposal or report. It visually represents the planned sequence and duration of research activities, ensuring that the project stays on track. The following are the tips for drafting the timetable.

- **Be Realistic.** Estimate realistic durations for each task. Don't underestimate the time required for certain activities.
- **Be Specific.** Break down large tasks into smaller, more manageable subtasks.
- **Include Buffer Time.** Allow for some buffer time in case of unexpected delays.
- **Regularly Review and Update.** Regularly review and update your timetable as the project progresses. This will help you stay on track and make necessary adjustments.
- **Consider Dependencies.** Clearly indicate any dependencies between tasks.
- **Use Visual Aids.** Use clear and easy-to-understand visuals (e.g., color-coding, different bar styles) in your Gantt chart or flowchart.

	Sample Table						
	ACTIVITIES	*Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
	1. Preparation of research questionnaire						
	2. Testing of validity and reliability of the questionnaire						
	3.						
	4.						
	5. Add rows if necessary						
Note: Shade the corresponding month per activity							
VI. Cost Estimates	<p>Cost estimation in Basic Education Research Fund (BERF) research follows specific guidelines to ensure appropriate use of funds. Here's a breakdown of the process:</p> <p><u>Eligible and Non-Eligible Expenses.</u> BERF funding has specific categories for what can and cannot be covered. This is crucial for accurate cost estimation.</p> <p>Eligible Expenses</p> <ul style="list-style-type: none"> • <u>Supplies/Materials.</u> Consumable items needed for the research (e.g., paper, pens, printing ink). • <u>Reproduction.</u> Costs for printing, photocopying, and binding questionnaires, reports, etc. • <u>Communication.</u> Expenses related to communication (e.g., phone calls, internet access) directly related to the research. • <u>Transportation.</u> Costs for travel directly related to data collection or dissemination activities within the Philippines. • <u>Food.</u> Limited funding for food during research activities like focus group discussions. <p>Non-Eligible Expenses</p> <ul style="list-style-type: none"> • <u>Equipment.</u> Purchase of equipment like computers, cameras, or recorders. • <u>Software.</u> Purchase of software licenses. • <u>Salaries/Consultancy Fees.</u> Payment for the researcher's time or external consultants. • <u>Utilities.</u> Costs for electricity, water, or internet are not directly tied to specific research activities. • <u>Overseas Travel.</u> International travel is not covered by BERF. <p>Steps in Cost Estimation:</p> <ol style="list-style-type: none"> 1. <u>Identify Research Activities.</u> Break down your research project into specific activities (e.g., literature review, 						

questionnaire development, data collection, data analysis, report writing).

2. Determine Required Resources. For each activity, identify the materials, supplies, and other resources needed.
3. Estimate Costs. Estimate the cost of each resource based on current market prices. Be realistic and consider potential price fluctuations.
4. Prepare a Detailed Budget. Create a detailed budget table or spreadsheet that lists each expense item, its quantity, unit cost, and total cost.
5. Justify Expenses. Provide a brief justification for each expense, explaining how it is directly related to the research activities.
6. Summarize Total Costs. Calculate the total estimated cost of the research project.

Sample Table

Activity	Item	Quantity	Unit Cost (PHP)	Total Cost (PHP)	Justification
Data Collection	Photocopy of Questionnaires	200	2	400	For distribution to participants during data collection.
Data Collection	Transportation Expenses	2 trips	500	1000	Travel to research site for data collection.
Focus Group Discussion	Food for Participants	20 pax	80	1600	Lunch for participants during the focus group discussion.
Report Writing	Printing and Binding	5 copies	200	1000	Printing and binding of the final research report for submission and dissemination.
Total				4000	

VII. Plans for Dissemination and Utilization

A robust dissemination and advocacy plan is crucial for translating research findings into real-world impact. It's a strategic process of sharing research outcomes with relevant audiences and promoting their uptake in practice, policy, or further research. The following are the process in crafting the plan.

1. *Defining Clear Objectives*. Begin by establishing specific, measurable, achievable, relevant, and time-bound (SMART) objectives for your dissemination and advocacy efforts.
2. *Identifying and Segmenting Target Audiences*. Pinpoint the key stakeholders who can benefit from or influence the application of your research. Segment these audiences based on their needs, interests, and preferred communication channels.
3. *Selecting Appropriate Dissemination Channels*. Choose channels that effectively reach your target audiences. Consider the strengths and limitations of each channel.
4. *Crafting Compelling Messages*. Develop clear, concise, and audience-tailored messages that highlight key findings

and their implications. Use plain language and avoid jargon when communicating with non-academic audiences.

5. *Developing a Dissemination and Advocacy Strategy.* A comprehensive strategy should include:

- *Key Messages* – Tailored to each target audience.
- *Channels* – Specific platforms and methods for reaching each audience.
- *Timeline* – A schedule for dissemination activities.
- *Responsibilities* – Clear roles and responsibilities for team members.
- *Budget* – Allocated resources for dissemination activities.
- *Evaluation Metrics* – How will you measure the impact of your efforts?

6. *Implementing the Plan.* Carry out the planned activities, ensuring consistent messaging and coordinated efforts.

7. *Evaluating Impact.* Assess the effectiveness of your dissemination and advocacy efforts using pre-defined metrics. This could include:

- Website traffic and social media engagement.
- Media mentions and coverage.
- Policy changes or adoption of new practices.
- Feedback from target audiences.
- Number of publications and citations.

Example Dissemination and Advocacy Plan (Simplified):

- **Research Topic** – Impact of early childhood interventions on school readiness.
- **Objectives** – Increase awareness among educators and policymakers and promote adoption of effective interventions.
- **Target Audiences** – Teachers, school administrators, policymakers, and parents.
- **Channels** – Journal article, conference presentation, policy brief, website, parent workshops.
- **Key Messages** – Early interventions improve school readiness and long-term academic success.
- **Timeline** – Publication (Month 6), conference (Month 9), policy brief (Month 12), workshops (ongoing).
- **Evaluation** – Track website visits, workshop attendance, and policy citations.

It can be presented in tabular form.

Sample Table

Research Topic	Objectives	Target Audiences	Channels	Key Messages	Timeline	Evaluation Process

VIII. References

Creating a reference list in APA 7th edition involves adhering to specific formatting rules for different source types. The following are the guidelines:

1. General Formatting for the Reference List

- Placement – The reference list begins on a new page after the main body of your paper.
- Title – Center the word “References” at the top of the page (no bolding, italics, or quotation marks).
- Spacing – Double-space the entire reference list.
- Hanging Indent – Each entry should have a hanging indent (the first line is flush left, and subsequent lines are indented 0.5 inches).
- Alphabetical Order – Entries are alphabetized by the first author’s last name. If there is no author, alphabetize by the first significant word of the title (ignoring “A,” “An,” or “The”).

2. Common Source Types and Examples*D. Journal Article***Format:**

Author, A. A., Author, B. B., & Author, C. C. (Year). Title of article. Title of Periodical, volume number (issue number), page range. DOI or URL

Example:

Herculano-Houzel, S. (2009). The human brain in numbers: A linearly scaled-up primate brain. *Frontiers in Human Neuroscience*, 3, Article 31.
<https://doi.org/10.3389/neuro.09.031.2009>

*E. Book***Format:**

Author, A. A. (Year). Title of work. Publisher.

Example:

Wegener, D. T., & Petty, R. E. (1998). The elaboration likelihood model: Current status and controversies. Psychology Press.

*F. Chapter in an Edited Book***Format:**

Author, A. A. (Year). Title of chapter. In E. E. Editor & F. F. Editor (Eds.), Title of work (pp. page range). Publisher.

Example:

Haybron, D. M. (2008). Philosophy and the science of subjective well-being. In M. Eid & R. J. Larsen (Eds.), *The science of subjective well-being* (pp. 17–43). Guilford Press.

*G. Website:***Format:**

Author, A. A. (Year, Month Day). Title of page. Site Name. URL

Example:

National Institute of Mental Health. (2023, January). Anxiety disorders. U.S. Department of Health and Human Services, National Institutes of Health.
<https://www.nimh.nih.gov/health/topics/anxiety->

	<p>disorders/No Date: If no date is available, use (n.d.).</p> <p>H. Report:</p> <p>Format: Author or Organization. (Year). Title of report (Report Number). Publisher.</p> <p>Example: American Psychological Association. (2010). Publication manual of the American Psychological Association (6th ed.). American Psychological Association.</p> <p>Citation management tools like Zotero, Mendeley, and EndNote can greatly simplify the process of creating and managing references. These tools can automatically format citations and bibliographies in APA style.</p> <p>The link below is an online citation generator that can assist in formatting references. https://www.bibliography.com/</p>
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IV. Completed Action Research Template

Part	Guidelines
Research Title	<p>A good research title should be:</p> <ol style="list-style-type: none"> 1. Concise and Specific. Avoid unnecessary jargon or overly broad terms. Aim for clarity and precision. Ideally, it should be no more than 12 words. There should be no acronym. 2. Accurate Representation. The title should accurately reflect the content and scope of your research. 3. Engaging. While accuracy is vital, a title that attracts interest can draw readers in. However, avoid being sensational or misleading. 4. Keyword-Rich. Incorporate relevant keywords that will help others find your research during database searches. 5. Appropriate for the Audience. Consider the intended audience and choose the language they will understand.
I. Title Page	<p>The research title should be written in Bold Letters, arranged in an inverted pyramid format, and centered on the title page. Begin 3-4 lines down from the top margin of the paper. Put a double-spaced blank line between the title and the byline. It should contain the following:</p> <ul style="list-style-type: none"> • Researcher/s name • Position • Schools Division Office, District, School Name • Month and Year the research was conducted • Page number in the upper right corner

	Note: The manuscript title page must not contain the researcher/s name and school affiliation during the blind evaluation process.
II. Abstract	<p>The abstract should not exceed 200 -250 words in one paragraph containing the following:</p> <ol style="list-style-type: none"> Purpose – Objectives of the research Methodology – This includes the research design, sampling and the sample size, data collection methods, and statistical tools used in the study. Findings – This contains data analysis and discussion. Conclusion and Recommendations – This includes the significant results of the research and recommendation. Keywords – This consists of a listing of keywords that will facilitate the search for the research study and should be italicized.
III. Acknowledgment	<p>The acknowledgments section of a research paper is where you express gratitude to individuals and organizations who contributed to the research but do not meet the criteria for authorship. It's a brief but important part of your paper, demonstrating professionalism and acknowledging support.</p> <p><i>What to Include in the Acknowledgements?</i></p> <ol style="list-style-type: none"> Specific Contributions – Clearly state the nature of the contribution made by each individual or organization. Avoid vague statements like “for their help.” Be specific about what they did. Formal Tone – Maintain a formal and professional tone, even when acknowledging personal support. Avoid overly casual language or slang. Conciseness – Keep the acknowledgments brief and to the point. Focus on the most significant contributions. Proper Titles and Affiliations – Use correct titles (e.g., Professor, Dr.) and affiliations (e.g., university department, organization name) when acknowledging individuals.
IV. Context and Rationale	<p>The introduction sets the stage for your research. The following are the guidelines for writing the context and rationale.</p> <ol style="list-style-type: none"> Start Broad. Begin with a general statement about the broader topic area (e.g., the importance of early childhood education). Narrow the Focus. Narrow the focus to a specific issue within that area (e.g., the impact of play-based learning on social-emotional development in preschoolers). Problem Statement. Clearly state the problem or gap in knowledge (e.g., limited research on the long-term effects of specific play-based interventions on social skills). Brief Literature Review. Briefly review key studies that highlight the importance of social-emotional development and the potential benefits of play-based learning, while also pointing out the gap in long-term research.

	<p>5. Rationale/Justification. Explicitly state why your research is needed (e.g., to provide evidence-based insights into the long-term impact of play-based interventions, which can inform educational practices and policy).</p> <p>6. Purpose/Objectives/Research Questions. State the purpose of your study (e.g., to investigate the long-term effects of a specific play-based intervention on the social skills of children from preschool to early elementary school).</p> <p>7. (Optional) Overview. Briefly mention the research design (e.g., a longitudinal study with follow-up assessments)</p>
<p>V. Innovation, Intervention, and Strategy</p>	<p>Developing innovation, intervention, and strategy in research involves a systematic process of identifying a problem, designing a novel solution (innovation), implementing that solution (intervention), and outlining the plan for execution and evaluation (strategy).</p> <p>Innovation in research signifies introducing something new or significantly improved—a novel method, approach, theory, or understanding of a phenomenon.</p> <ol style="list-style-type: none"> 1. <i>Identify a Gap or Problem</i> – Begin with a thorough literature review to pinpoint a significant gap in existing knowledge or a pressing problem requiring a solution (Galvan, 2017). 2. <i>Generate Novel Ideas</i> – Employ brainstorming, design thinking, or other creative problem-solving techniques to generate potential solutions. Consider interdisciplinary perspectives and emerging trends. 3. <i>Evaluate Feasibility and Potential Impact</i> – Assess the practicality, cost-effectiveness, ethical implications, and potential impact of your innovative idea. 4. <i>Develop a Clear Rationale</i> – Articulate the need for your innovative approach and its potential contributions to the field. <p>The intervention is the specific action or set of actions implemented to effect change or improvement. It's the practical application of your innovation (Craig et al., 2008).</p> <ol style="list-style-type: none"> 1. <i>Define the Target Population</i> – Specify the individuals, groups, or systems that will be the focus of the intervention. 2. <i>Specify Intervention Components</i> – Detail the intervention's content, delivery method (e.g., online, in-person, group-based), frequency, duration, and intensity. 3. <i>Base Intervention on Theory and Evidence</i> – Ground the intervention in established theories and empirical evidence to provide a strong rationale for its expected effectiveness (Michie et al., 2013). 4. <i>Ensure Practicality and Acceptability</i> – Consider real-world implementation constraints and ensure the intervention is acceptable to the target population and feasible within the given context.

	<p>5. <i>Develop a Protocol or Manual</i> – Create a detailed protocol or manual to guide intervention delivery and ensure consistency and fidelity.</p> <p>The strategy outlines how the intervention was implemented and evaluated. It encompasses the overall research plan (Creswell & Creswell, 2018).</p> <p><i>Research Design</i> – Select an appropriate research design to evaluate the intervention's effectiveness.</p> <ul style="list-style-type: none"> • <i>Experimental Designs</i> – Randomized controlled trials (RCTs), factorial designs. • <i>Quasi-experimental Designs</i> – Interrupted time series, non-equivalent control group designs. • <i>Qualitative Designs</i> – Case studies, ethnographies, grounded theory. • <i>Mixed Methods Designs</i> – Combining quantitative and qualitative approaches. <p><i>Data Collection Methods</i> – Choose appropriate methods to measure the intervention's outcomes.</p> <ul style="list-style-type: none"> • Surveys, questionnaires, interviews, focus groups, observations, physiological measures, standardized tests, administrative data. <p><i>Data Analysis Plan</i> – Develop a detailed plan specifying the statistical tests or qualitative analysis techniques to be used.</p> <p><i>Implementation Plan</i> – Outline the steps, timeline, resources, and responsibilities for implementing the intervention.</p> <p><i>Evaluation Plan</i> – Describe how the intervention's effectiveness will be assessed, including outcome measures, data collection points, and criteria for success.</p> <p>Example:</p> <p>Problem: Low student engagement in online learning.</p> <p>Innovation: Develop a gamified online learning platform incorporating personalized learning paths and interactive challenges.</p> <p>Intervention: Implementation of the gamified platform in a university-level online course for one semester, with students earning points, badges, and virtual rewards for completing learning activities.</p> <p>Strategy: A quasi-experimental design comparing student engagement and learning outcomes in the gamified course to a control group using the traditional online course format. Data will be collected through online activity logs, surveys, and final exam scores.</p>
<p>VI. Action Research Questions</p>	<p>Crafting effective research questions is crucial for guiding your research and ensuring a focused investigation. Here are guidelines for writing strong research questions:</p> <ul style="list-style-type: none"> • Start Broad. Begin with a general area of interest.

	<ul style="list-style-type: none"> • Preliminary Research. Review existing literature to identify gaps and potential questions. • Refinement. Narrow your broad topic into a specific, researchable question. • Audience Consideration. Tailor your question to your target audience. <p>Experts generally agree there's no fixed number of research questions but offer these guidelines: research often uses 3-5 questions (Portland State University, n.d.); it's helpful to have one main question/objective with supporting sub-questions/objectives.</p> <p>Hypothesis/Hypotheses (if applicable)</p> <p>A hypothesis in educational research is a testable guess about a relationship between educational variables (Fraenkel et al., 2019). It guides the research process and helps answer questions about teaching, learning, and educational outcomes.</p> <p>However, the null hypothesis (H_0) in educational research is a statement that there is no significant relationship or difference between the variables being studied (Ary et al., 2010). It is the hypothesis that researchers aim to disprove.</p> <p>Here are simple guidelines for formulating a null hypothesis in educational research:</p> <ol style="list-style-type: none"> 1. <i>Identify Variables.</i> Clearly define the independent and dependent variables you are investigating (Fraenkel et al., 2019). 2. <i>State "No Effect".</i> Explicitly state that there is no significant relationship or no significant difference between the identified variables (Ary et al., 2010). Use phrases like "no significant difference," "no relationship," or "no effect." 3. <i>Make it Testable.</i> Ensure that this statement of "no effect" can be tested through statistical analysis of collected data (Creswell & Creswell, 2018). 4. <i>Keep it Concise.</i> Formulate the null hypothesis as a clear and brief statement.
VII. Action Research Methods	<p>Research Design</p> <p>Research design serves as the framework for conducting studies, and it varies depending on the research question and objectives. The following are the common types:</p> <ol style="list-style-type: none"> 1. Quantitative Research – Emphasizes numerical data, statistical analysis, and objective measurements to test hypotheses and establish cause-and-effect relationships (Creswell & Guetterman, 2019). <p>Types:</p> <ol style="list-style-type: none"> 1. <i>Experimental.</i> Manipulates independent variables to observe effects on dependent variables.

	<p><i>Example: A researcher randomly assigns students to either a traditional teaching method or a gamified learning method and compares their post-test scores.</i></p> <p>2. Correlational. Examines the relationships between variables without manipulation. <i>Example: A researcher analyzes existing school records to determine if there is a relationship between hours of homework completed and grade point average.</i></p> <p>3. Descriptive. Describes the characteristics of a population or phenomenon. <i>Example: A survey administered to high school seniors to determine their post-graduation plans.</i></p> <p>J. Qualitative Research. Focuses on understanding the meaning, experiences, and perspectives of individuals or groups through non-numerical data like interviews, observations, and documents (Merriam & Tisdell, 2016).</p> <p>Types:</p> <ol style="list-style-type: none"> 1. Narrative. Explores the life stories of individuals <i>Example: A researcher interviews a student about their educational journey and writes a detailed account of their experiences.</i> 2. Phenomenological. Seeks to understand the essence of a lived experience. <i>Example: A researcher interviews multiple teachers to understand their shared experiences of implementing new classroom technology.</i> 3. Case Study. In-depth examination of a specific individual, group, or situation. <i>Example: A researcher conducts extensive observations and interviews at a specific school to understand its unique approach to education.</i> 4. Ethnographic. Studies the culture and practices of a group in their natural setting. <i>Example: A researcher immerses themselves in a school community to observe and document the daily interactions and cultural norms.</i> 5. Grounded Theory. Develops theories from data collected through systematic analysis. <i>Example: A researcher conducts interviews and analyzes data to develop a theory about the stages of student motivation.</i> <p>K. Mixed Methods Research: Combines both quantitative and qualitative approaches to provide a more comprehensive understanding of a research problem (Creswell & Plano Clark, 2018).</p> <p>Types:</p> <ol style="list-style-type: none"> 1. Convergent Parallel. Collects and analyzes both quantitative and qualitative data simultaneously and then compares the results.
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2. **Explanatory Sequential.** Collects and analyzes quantitative data first, followed by qualitative data to explain the quantitative findings.
3. **Exploratory Sequential.** Collects and analyzes qualitative data first, followed by quantitative data to test or generalize the qualitative findings.

In articulating the research design, the researcher must provide a clear and detailed explanation of the chosen methodology, clearly justifying its suitability for addressing the specific research questions and objectives. This involves demonstrating how the selected design aligns with the study's purpose and offers the most effective approach to generating valid and reliable findings.

A. Participants and/or other Sources of Data Information

Determining an appropriate sample size is a critical step in research design. It impacts the statistical power of your study, the generalizability of your findings, and the resources required for data collection.

Sample Size Determination

Different methods are used to calculate sample size, depending on the research design and the information available:

- **Power Analysis.** This is the most common method for quantitative studies. It involves using statistical software or formulas to calculate the sample size needed to achieve a desired level of power, given the effect size, alpha level, and population variability (Cohen, 1992).
- **Sample Size Calculators.** Many online calculators and statistical software packages (e.g., G*Power, R, Slovin, and Raosoft sample size calculator) are available to perform power analyses.
- **Rules of Thumb.** In some cases, rules of thumb or guidelines may be used, especially for certain types of research, but these should be used with caution and justified appropriately. For example, in survey research, a sample size of 300 is often considered a minimum for national surveys.
- **Saturation (Qualitative Research).** In qualitative research, sample size is often determined by data saturation, which is the point at which new data no longer provide new insights or themes (Guest, Bunce, & Johnson, 2006). Research using empirical data can reach information saturation quickly (9-17 interviews, 4-8 focus groups), especially with similar/ homogenous participants and focus groups (Hennink & Kaiser, 2022).

This portion must explain the research design used in the study. It also contains brief discussions of how the sample size was determined and the sampling technique.

Sampling techniques are crucial in research as they determine how participants or data points are selected from a larger population. The choice of sampling technique significantly impacts the generalizability and validity of research findings. The following are the different sampling techniques for conducting research.

Probability Sampling (Random Sampling). Every member of the population has a known, non-zero chance of being selected. This allows for statistical inferences about the population.

- Systematic Sampling. Selecting every kth member of the population after a random start.
- Stratified Sampling: Dividing the population into subgroups (strata) based on shared characteristics (e.g., age, gender, education) and then randomly sampling from each stratum. This ensures the representation of all subgroups
- Cluster Sampling. Dividing the population into clusters (e.g., schools, neighborhoods) and then randomly selecting entire clusters to participate. This is often used when it's difficult or costly to sample individuals directly.
- Multi-Stage Sampling. Combining different probability sampling methods. For example, a researcher might use stratified sampling to divide a country into regions, then use cluster sampling to select cities within those regions, and finally use simple random sampling to select individuals within those cities.

In **non-probability sampling**, the probability of selecting any particular member of the population is unknown. These methods are often used in qualitative research or when probability sampling is not feasible.

- Convenience Sampling: Selecting participants who are readily available and accessible. This is the easiest and often the least expensive method, but it can lead to biased samples
- Quota Sampling. Selecting participants based on pre-determined quotas for different subgroups (similar to stratified sampling), but the selection within each quota is not random.
- Purposive/Judgmental Sampling: Selecting participants based on the researcher's judgment of their knowledge or experience related to the research topic. This is often used in qualitative research when specific expertise is needed.
- Snowball Sampling. Starting with a small group of participants and then asking them to refer other potential participants who meet the study criteria. This is useful for reaching hard-to-reach populations.

B. Data Gathering Methods

The following are the procedures for writing the data collection portion.

	<ol style="list-style-type: none"> 1. <u>Recruitment of Participants</u>. Explain how participants were recruited (e.g., advertisements, email invitations, snowball sampling), the inclusion and exclusion criteria, and the sample size (Creswell & Creswell, 2018). 2. <u>Data Collection Instruments</u>. Describe the instruments used to collect data (e.g., survey questionnaires, interview guides, observation protocols). If using established instruments, provide citations. If developing new instruments, explain the development process and any validity or reliability testing conducted. 3. <u>Data Collection Setting</u>. Describe the setting where data were collected (e.g., laboratory, classroom, online). 4. <u>Data Collection Timeline</u>. Specify the dates or times during which data were collected. 5. <u>Data Recording and Storage</u>. Explain how data were recorded (e.g., audio recordings, written notes, digital files) and how they were stored and protected to ensure confidentiality and security.
VIII. Discussion of the Results and Reflection	<p>Interpreting research data and findings is the crucial process of making sense of the collected data and drawing meaningful conclusions in relation to the research questions or hypotheses. It involves going beyond simply reporting the results to explaining their implications and significance.</p> <p>Organization and Structure</p> <ol style="list-style-type: none"> 1. <i>Order of Presentation</i> – Present findings in a logical sequence, typically mirroring the order of your research questions or hypotheses. This creates a clear narrative for the reader. 2. <i>Integration of Tables and Figures</i> – Integrate tables and figures within the text, referring to them by number (e.g., “As shown in Table 1...”) and providing concise explanations of their content. Place the table as close as possible to their first mention. <p>Presenting Quantitative Results</p> <ol style="list-style-type: none"> 1. Descriptive Statistics First – Begin with descriptive statistics (means, standard deviations, frequencies, percentages) to summarize the data and provide context. 2. Inferential Statistics Next – Report the results of inferential statistical tests (t-tests, ANOVAs, correlations, regressions). Include: <ul style="list-style-type: none"> • Test statistic (e.g., t, F, r, χ^2). • Degrees of freedom (df). • p-value (report exact p-values unless $p < .001$, in which case report $p < .001$). • Effect sizes (e.g., Cohen’s d, eta-squared, r^2). These quantify the practical significance of the findings. 3. Use Precise Statistical Language – Avoid vague terms. Use correct statistical terminology.

4. Tables for Detailed Data – Use tables to present large amounts of numerical data efficiently. Follow APA table formatting guidelines.

Table 1
Numbers of Children With and Without Proof of Parental Citizenship

Grade	Girls		Boys	
	With	Without	With	Without
Wave 1				
3	280 ^a	240 ^b	281	232
4	297	251	290	264
5	301	260	306	221
Total	878	751	877	717
Wave 2				
3	201	189	210	199
4	214	194	236	210
5	221	216	239	213
Total	636	599	685 ^c	622

Table notes:
Note. This table demonstrates the elements of a prototypical table. A general note to a table appears first and contains information needed to understand the table, including definitions of abbreviations (see Sections 7.14–7.15) and the copyright attribution for a reprinted or adapted table (see Section 7.7).
* A specific note appears in a separate paragraph below the general note.
^b Subsequent specific notes follow in the same paragraph (see Section 7.14).
^c A probability note (for p values) appears as a separate paragraph below any specific notes; subsequent probability notes follow in the same paragraph (see Section 7.14).

Image Source: <https://apastyle.apa.org/style-grammar-guidelines/tables-figures/tables>

5. Figures for Visual Representation – Use figures (graphs, charts) to illustrate relationships, trends, or patterns in the data. Follow APA figure formatting guidelines.

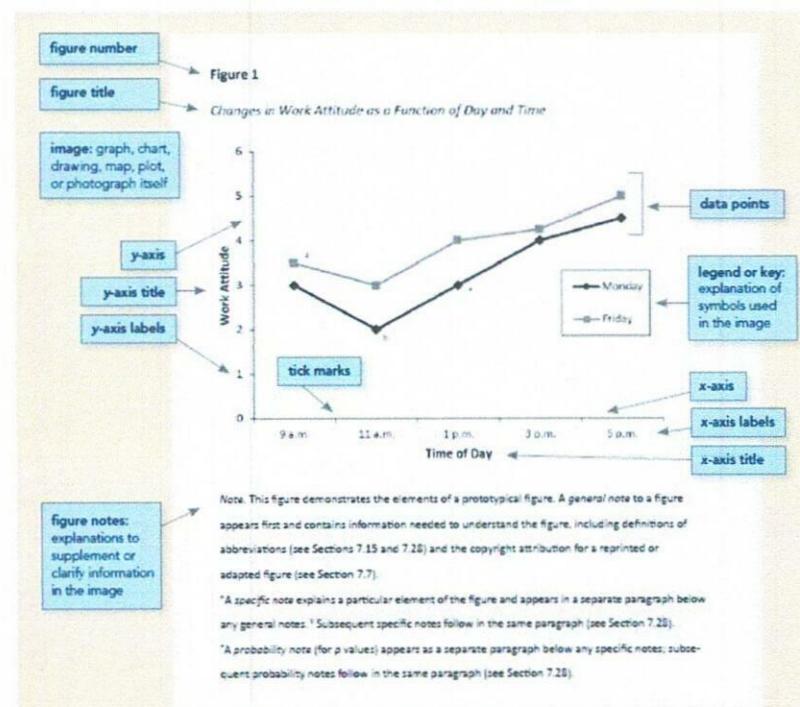


Image Source: <https://apastyle.apa.org/style-grammar-guidelines/tables-figures/figures>

Example (Quantitative)

“Participants in the experimental group ($M = 85.3$, $SD = 7.2$) demonstrated significantly higher scores on the anxiety scale compared to the control group ($M = 78.1$, $SD = 6.9$), $t(198) = 4.21$, $p < .001$, $d = 0.60$. This indicates a moderate to large effect of the intervention on anxiety levels (see Table 1).”

Presenting Qualitative Results

1. *Identify Themes or Patterns* – Present the key themes, patterns, or categories identified during analysis.
2. *Provide Rich Supporting Evidence* – Use direct quotations from participants or excerpts from other data (field notes, documents) to illustrate and substantiate the themes.
3. *Maintain Participant Anonymity* – Protect participant confidentiality using pseudonyms or other identifiers.
4. *Integrate Quotations Smoothly* – Embed quotations within the text, providing context and interpretation. Use block quotations for quotes longer than 40 words.

Example (Qualitative)

“Participants frequently described a sense of isolation during online learning. As one participant noted, ‘It was really hard to feel connected to anyone. I felt like I was just learning by myself, all the time’ (Sarah, personal communication, October 26, 2023). This sentiment was echoed by several others, highlighting the theme of social disconnection.”

General Guidelines

The results and reflection (often called the “Discussion” or “Discussion and Conclusion” section) are distinct but interconnected parts of a research paper. The results section presents the findings objectively, while the reflection section interprets those findings and discusses their implications.

The reflection/discussion section is where you interpret your findings, discuss their implications, and relate them to existing literature.

1. *Summarize Key Findings* – Briefly summarize the main findings of your study.
2. *Interpret the Results* – Explain what the findings mean in the context of your research questions or hypotheses. Did your findings support your hypotheses? Did they answer your research questions?
3. *Relate to Existing Literature* – Discuss how your findings compare to previous research. Do they confirm, contradict, or extend existing knowledge?
4. *Discuss Implications* – Explain the practical or theoretical implications of your findings. What are the

	<p>real-world implications of your research? What are the implications for future research?</p> <ol style="list-style-type: none"> 5. <i>Acknowledge Limitations</i> – Acknowledge any limitations of your study (e.g., sample size, methodology) that might affect the interpretation or generalizability of the findings. 6. <i>Offer Alternative Explanations (if applicable)</i> – If there are alternative explanations for your findings, discuss them. 7. <i>Conclusion</i> – Briefly summarize the main conclusions of your study and restate its significance. <p>Example</p> <p>“The significant decrease in anxiety scores in the intervention group provides strong evidence for the effectiveness of the program. This finding aligns with previous research on similar interventions (Smith et al., 2020) and suggests that this type of program can be beneficial for reducing anxiety. The qualitative data further supports this conclusion, with participants reporting feeling calmer and more in control of their stress levels. However, this study was limited by its small sample size and short duration. Future research should investigate the long-term effects of the program with a larger and more diverse sample.”</p>
IX. Action Plan	<p>A robust action plan is crucial for translating research findings into real-world impact. It's a strategic process of sharing research outcomes with relevant audiences and promoting their uptake in practice, policy, or further research. The following are the process in crafting the plan.</p> <ol style="list-style-type: none"> 1. <i>Defining Clear Objectives</i>. Begin by establishing specific, measurable, achievable, relevant, and time-bound (SMART) objectives for your dissemination and advocacy efforts. 2. <i>Identifying and Segmenting Target Audiences</i>. Pinpoint the key stakeholders who can benefit from or influence the application of your research. Segment these audiences based on their needs, interests, and preferred communication channels. 3. <i>Selecting Appropriate Dissemination Channels</i>. Choose channels that effectively reach your target audiences. Consider the strengths and limitations of each channel. 4. <i>Crafting Compelling Messages</i>. Develop clear, concise, and audience-tailored messages that highlight key findings and their implications. Use plain language and avoid jargon when communicating with non-academic audiences. 5. <i>Developing a Dissemination and Advocacy Strategy</i>. A comprehensive strategy should include: <ul style="list-style-type: none"> • <i>Key Messages</i> – Tailored to each target audience. • <i>Channels</i> – Specific platforms and methods for reaching each audience. • <i>Timeline</i> – A schedule for dissemination activities.

	<ul style="list-style-type: none">• <i>Responsibilities</i> – Clear roles and responsibilities for team members.• <i>Budget</i> – Allocated resources for dissemination activities.• <i>Evaluation Metrics</i> – How will you measure the impact of your efforts? <p>6. <i>Implementing the Plan.</i> Carry out the planned activities, ensuring consistent messaging and coordinated efforts.</p> <p>7. <i>Evaluating Impact.</i> Assess the effectiveness of your dissemination and advocacy efforts using pre-defined metrics. This could include:</p> <ul style="list-style-type: none">• Website traffic and social media engagement.• Media mentions and coverage.• Policy changes or adoption of new practices.• Feedback from target audiences.• Number of publications and citations. <p>Example Dissemination and Advocacy Plan (Simplified):</p> <ul style="list-style-type: none">• Research Topic – Impact of early childhood interventions on school readiness.• Objectives – Increase awareness among educators and policymakers and promote the adoption of effective interventions.• Target Audiences – Teachers, school administrators, policymakers, and parents.• Channels – Journal article, conference presentation, policy brief, website, parent workshops.• Key Messages – Early interventions improve school readiness and long-term academic success.• Timeline – Publication (Month 6), conference (Month 9), policy brief (Month 12), workshops (ongoing).• Evaluation – Track website visits, workshop attendance, and policy citations. <p>Sample Table</p> <table><tr><th>Research Topic</th><th>Objectives</th><th>Target Audiences</th><th>Channels</th><th>Key Messages</th><th>Timeline</th><th>Evaluation Process</th></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	Research Topic	Objectives	Target Audiences	Channels	Key Messages	Timeline	Evaluation Process							
Research Topic	Objectives	Target Audiences	Channels	Key Messages	Timeline	Evaluation Process									
X. References	<p>Creating a reference list in APA 7th edition involves adhering to specific formatting rules for different source types. The following are the guidelines:</p> <p>1. General Formatting for the Reference List</p> <ul style="list-style-type: none">• Placement – The reference list begins on a new page after the main body of your paper.• Title – Center the word “References” at the top of the page (no bolding, italics, or quotation marks).• Spacing – Double-space the entire reference list.														

- Hanging Indent – Each entry should have a hanging indent (the first line is flush left, and subsequent lines are indented 0.5 inches).
- Alphabetical Order – Entries are alphabetized by the first author's last name. If there is no author, alphabetize by the first significant word of the title (ignoring "A," "An," or "The").

2. Common Source Types and Examples

L. Journal Article

Format:

Author, A. A., Author, B. B., & Author, C. C. (Year). Title of article. Title of Periodical, volume number (issue number), page range. DOI or URL

Example:

Herculano-Houzel, S. (2009). The human brain in numbers: A linearly scaled-up primate brain. *Frontiers in Human Neuroscience*, 3, Article 31.
<https://doi.org/10.3389/neuro.09.031.2009>

M. Book

Format:

Author, A. A. (Year). Title of work. Publisher.

Example:

Wegener, D. T., & Petty, R. E. (1998). The elaboration likelihood model: Current status and controversies. Psychology Press.

N. Chapter in an Edited Book

Format:

Author, A. A. (Year). Title of chapter. In E. E. Editor & F. F. Editor (Eds.), Title of work (pp. page range). Publisher.

Example:

Haybron, D. M. (2008). Philosophy and the science of subjective well-being. In M. Eid & R. J. Larsen (Eds.), *The science of subjective well-being* (pp. 17–43). Guilford Press.

O. Website:

Format:

Author, A. A. (Year, Month Day). Title of page. Site Name. URL

Example:

National Institute of Mental Health. (2023, January). Anxiety disorders. U.S. Department of Health and Human Services, National Institutes of Health.
<https://www.nimh.nih.gov/health/topics/anxiety-disorders/>
 No Date: If no date is available, use (n.d.).

P. Report:

Format:

Author or Organization. (Year). Title of report (Report Number). Publisher.

Example:

American Psychological Association. (2010). *Publication manual of the American Psychological Association* (6th ed.).

	<p>American Psychological Association.</p> <p>Citation management tools like Zotero, Mendeley, and EndNote can greatly simplify the process of creating and managing references. These tools can automatically format citations and bibliographies in APA style.</p> <p>The link below is an online citation generator that can assist in formatting references.</p> <p>https://www.bibliography.com/</p>
<p>XI. Financial Report</p>	<p>A financial report for a Basic Education Research Fund (BERF) project needs to be accurate, transparent, and compliant with DepEd's specific guidelines. Here's a breakdown of the process:</p> <p><u>Eligible and Non-Eligible Expenses.</u> BERF funding has specific categories for what can and cannot be covered. This is crucial for accurate cost estimation.</p> <p>Eligible Expenses</p> <ul style="list-style-type: none"> • <u>Supplies/Materials.</u> Consumable items needed for the research (e.g., paper, pens, printing ink). • <u>Reproduction.</u> Costs for printing, photocopying, and binding questionnaires, reports, etc. • <u>Communication.</u> Expenses related to communication (e.g., phone calls, internet access) directly related to the research. • <u>Transportation.</u> Costs for travel directly related to data collection or dissemination activities within the Philippines. • <u>Food.</u> Limited funding for food during research activities like focus group discussions. <p>Non-Eligible Expenses</p> <ul style="list-style-type: none"> • <u>Equipment.</u> Purchase of equipment like computers, cameras, or recorders. • <u>Software.</u> Purchase of software licenses. • <u>Salaries/Consultancy Fees.</u> Payment for the researcher's time or external consultants. • <u>Utilities.</u> Costs for electricity, water, or internet are not directly tied to specific research activities. • <u>Overseas Travel.</u> International travel is not covered by BERF. <p>Components of a BERF Financial Report:</p> <p>A typical BERF financial report includes the following components:</p> <ol style="list-style-type: none"> 1. Executive Summary – A brief overview of the financial report, summarizing the total expenses incurred and any significant findings or issues. 2. Statement of Income and Expenses (or similar) – This is the core of the report. It details all income received (the BERF grant) and all expenses incurred. It's usually presented in a tabular format.

- Columns typically include:
 - Date: Date of the transaction.
 - Particulars/Description: Description of the expense (e.g., "Photocopy of questionnaires," "Transportation to research site").
 - Receipt/Invoice Number: Reference number of the supporting document.
 - Amount (PHP): Amount of the expense in Philippine Pesos.
 - Category: Categorize expenses according to BERF's approved categories (e.g., Supplies/Materials, Reproduction, Communication, Transportation, Food).
- 3. Supporting Documents – Attach copies of all supporting documents, such as:
 - Official receipts from suppliers.
 - Invoices for services rendered.
 - Transportation tickets or receipts.
- 4. Summary of Expenses by Category – A summary table or chart showing the total expenses for each approved category. This helps to visualize how the funds were allocated.
- 5. Narrative Report (Optional but Recommended) – A brief narrative explaining any significant variances between the budgeted and actual expenses, any challenges encountered, and any other relevant financial information.

Sample Table

Date	Particulars/Description	Receipt/Invoice No.	Amount (PHP)	Category
2024-01-15	Photocopy of Questionnaires	OR #12345	500	Reproduction
2024-01-20	Transportation to Research Site	Ticket #6789	1000	Transportation
2024-02-05	Food for Focus Group	OR #98765	1500	Food
2024-02-10	Tokens for Participants	Acknowledgment forms	2000	Tokens
Total			5000	

References:

- American Psychological Association. (2020). Publication manual of the American Psychological Association (7th ed.). Specifically, see section 2.4 on "Manuscript Elements and Format")
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- *Relevance.* How closely does the source relate to your research question?
- *Quality.* Is the source peer-reviewed, reputable, and methodologically sound?
- *Currency.* How recent is the source? (Consider the field; some fields require more recent sources than others.)
- *Authority.* Who is the author or publisher? Are they experts in the field?

3. Organize and Synthesize Information

- *Identify Themes.* Look for recurring themes, patterns, and debates in the literature.
- *Group Studies.* Organize studies by topic, methodology, or theoretical approach.
- *Create a Synthesis Matrix.* Use a table or chart to compare and contrast key aspects of different studies.

4. Write the Literature Review

- *Introduction.* Briefly introduce the topic and provide an overview of the literature to be reviewed.
- *Body.* Organize the literature into sections based on **themes aligned with research questions**. Discuss each source in relation to the overall themes and to your research.
- *Analysis.* Do not just summarize; analyze the information. Identify key findings, contradictions, and gaps in the research.

When crafting the literature review, maintain a formal and objective tone, ensuring your writing remains free from personal opinions or biases. Clarity and conciseness are key; therefore, use straightforward language and avoid jargon or overly complex sentence structures. Crucially, all sources must be cited accurately using the APA 7th Edition format.

Moreover, as a synthesis of existing research on a given topic, a literature review relies heavily on the proper attribution of sources. Accurate and consistent in-text citations are not only essential for avoiding plagiarism but also for giving due credit to the original authors. The subsequent section will focus on the specific application of APA 7th Edition guidelines within the context of constructing a literature review.

1. Basic Principles

- **Author-Date Method:** APA uses the author-date method for in-text citations. This means you include the author's last name and the year of publication in the text.
- **Purpose:** In-text citations serve to:
 - Attribute ideas, research findings, and information to their original sources.
 - Direct readers to the full reference in the reference list.
 - Avoid plagiarism.
- **Frequency:** Cite every time you refer to, paraphrase, or quote from another source.

2. Types of In-Text Citations

- Parenthetical Citation: The author's last name and year of publication appear in parentheses.
 - Example: (Smith, 2020).
- Narrative Citation: The author's name is part of the sentence, and the year of publication appears in parentheses.
 - Example: Smith (2020) found that...

3. Specific Citation Scenarios

- One Author:
 - Parenthetical: (Jones, 2022).
 - Narrative: Jones (2022) stated...
- Two Authors:
 - Parenthetical: (Garcia & Lee, 2021).
 - Narrative: Garcia and Lee (2021) concluded...
- Three or More Authors:
 - Parenthetical: (Brown et al., 2023).
 - Narrative: Brown et al. (2023) argued...
 - "et al." means "and others." Use it from the first citation.
- Group Author (Organization, Association):
 - Parenthetical: (American Psychological Association [APA], 2020).
 - Narrative: American Psychological Association (APA, 2020) reported...
 - If the group author has a well-known abbreviation, you can introduce it in the first citation and use it in subsequent citations.
- Unknown Author:
 - Use the title of the work.
 - If the title is from a periodical, book, brochure, or report, italicize it.
 - Parenthetical: (Title of the Work, 2019).
 - If the title is from a work that is part of a larger work (article, chapter, webpage), use quotation marks.
 - Parenthetical: ("Title of the Article," 2020).
- No Date:
 - Use "n.d." (no date).
 - Parenthetical: (Johnson, n.d.).
- Direct Quotations:
 - Include the author, year, and page number(s).
 - Parenthetical: (Smith, 2020, p. 145).
 - Narrative: Smith (2020, p. 145) stated, "..."
 - For sources without page numbers (e.g., websites), use paragraph numbers, section headings, or other locators if available.
 - (Smith, 2020, para. 3).
 - (Organization, 2021, Results section).
- Paraphrasing:

	<ul style="list-style-type: none"> ○ Include the author and year. Page numbers are not required, but they can be helpful to the reader, especially in longer works. <ul style="list-style-type: none"> ▪ Parenthetical: (Jones, 2018). ▪ Narrative: Jones (2018) suggested... • Multiple Works in One Citation: <ul style="list-style-type: none"> ○ List works alphabetically, separated by semicolons. <ul style="list-style-type: none"> ▪ Parenthetical: (Brown, 2019; Garcia & Lee, 2021; Smith, 2020). • Multiple Works by the Same Author in the Same Year: <ul style="list-style-type: none"> ○ Use lowercase letters (a, b, c, etc.) after the year to distinguish them. <ul style="list-style-type: none"> ▪ Parenthetical: (Smith, 2015a; Smith, 2015b). • Authors With the Same Last Name: <ul style="list-style-type: none"> ○ Include the authors' initials. <ul style="list-style-type: none"> ▪ Parenthetical: (J. Smith, 2022; A. Smith, 2020). • Secondary Sources: <ul style="list-style-type: none"> ○ Cite the source you consulted (the secondary source). In the text, name the original source and say that it was cited in the secondary source. <ul style="list-style-type: none"> ▪ Example: Joseph (2019, as cited in Sorensen & van Dyk, 2022) advises... ○ In the reference list, provide only the details of the secondary source. be significant. <p>Synthesis</p> <p>Synthesizing conceptual and research literature is a crucial step in building a strong foundation for your research study. It involves integrating different sources to create a coherent and comprehensive understanding of the topic.</p> <ul style="list-style-type: none"> • In synthesizing the conceptual literature, analyze and summarize the main findings of the literature review and highlight the implications for your research. State how your research will address the identified gaps or build upon existing knowledge. • In the research literature, explain the similarities and differences of the cited research study to the current study. Highlight gaps in the existing research and suggest directions for future studies. • Use transition words and phrases (e.g., "however," "in contrast," "similarly," "furthermore") to create a smooth flow between ideas.
VI. Research Questions	<p>Crafting effective research questions is crucial for guiding your research and ensuring a focused investigation. Here are guidelines for writing strong research questions:</p>