

Demonstrative Process on the Use of Research Abstracts in Writing the Literature Review for Senior High School Students

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Abstract— Preserving and improving the quality of human life is the main objective of the research process. There is a need to look at the teaching of research methods in this situation, as equipping students with these research literacy skills leads to increase individual research performance, especially on the demonstrative and preliminary steps in writing the literature review. Therefore, this research paper takes lead in research education to help students develop and maintain research skills using the research abstracts as a way to prepare and write the literature review on the research writing process. In this circumstance, this research article aimed to select relevant literature, synthesize information from relevant literature, use the research abstract in selecting related literature and studies, and present a written review of related literature. It is very important to understand research from the perspective of researchers, from its nature to the important guidelines, as well as the research process itself. In preparing the research abstracts for the literature review and writing the literature review itself, demonstrative processes are recommended to ensure consistency and efficiency in doing research. In this process, the research abstract tabular outline will help the students in organizing the references and establish the important details in writing the literature review. It will also identify what to be included in the literature review and what to be disposed of in reading and analyzing different resources and references. This research abstract form in tabular outline for research reading might help students in preparing and writing the literature review in the research writing process as it is beneficial to them to promote and sustain research endeavors.

Keywords— abstract, demonstrative process, illustrative example, literature review, research, research writing

I. INTRODUCTION

Research education and the adoption of uniform formats of scientific writing promotes evidence-based practice by improving information awareness, seeking, and eventual application of new practices [1] as it promotes the uniform conduction, interpretation, and response to research findings reported using familiar standard formats of scientific writing [2,3]. In the emergence of the K-12 curriculum, the students should develop critical thinking and problem-solving skills through research, and one of the

performance standards is that the learners should be able to present a written review of related literature [4]. The teaching of research methods has received a limited amount of attention [5,6]. Much of the institutions teaching on research methods focus more on knowledge transfer while giving little or no attention to context and application of the acquired knowledge [6,7]. In this case, this research article takes initiative in research education to help the students in establishing and maintaining the research skills with the use of research abstracts as a method in preparing and writing the literature review in the research writing process.

A. Purpose of the Study

This lack of context makes the learning of research even more difficult for the research naive senior high school students [8]. There is thus a need to look at the teaching of research methods, since equipping the students with these research literacy skills leads to increased research output by the individual [9]. Furthermore, this research article aimed to accomplish the following: select relevant literature, cite related literature using standard style (e.g. APA Manual of Style), synthesize information from relevant literature, use the research abstract in selecting related literature and studies, and present written review of related literature.

B. Literature Review in Research

The literature review or the review of related literature and studies is the process of compiling, classifying, and evaluating what other researchers have written on a certain topic. This can be any literature (theories, framework, related studies) that carries topics, variables, and terms related to the chosen study to obtain background information and helps to establish the rationale, significance, and justification in pursuing the research study. In some journals, cited literature must be within a decade range [10].

C. Characteristics of Related Literature and Studies

The surveyed materials must be as recent as possible, in the past 5 to 10 years [10]. Materials should be

appropriately objective and unbiased. Materials reviewed must relate to the study's central theme. Surveyed materials must have been based on genuinely original and useful information and research to make them valid and reliable. A file of the materials must be sufficient, but not too many. It must go beyond just summarizing professional literature. It must focus on a specific topic of interest and must include a critical analysis of the relationship among different published works and relate it to the researcher's work.

II. METHODOLOGY

A. Research Design

This study used a descriptive method to gather information about existing conditions, involving collecting data to respond to questions regarding the current situation of the subject of the study [11,12]. In this research design, the library method and literature review [13] were utilized to gather and synthesize the articles and scientific papers related to the use of research abstracts in writing the literature review in research. Based on the literature review, the researcher identified two significant concepts in the research writing process: research abstract and literature review.

B. Data Analysis

The data, the identified two concepts in research education, were analyzed through synthesis information [14] known as explanatory synthesis, a written discussion that draws on one or more sources then divide the subject into its parts and present them to the reader in a clear and orderly manner; through the use three criteria in analyzing the reviews such as the demonstrative process in preparing the research abstracts for the literature review, demonstrative process in writing the literature review, and illustrative lead sentences in writing the literature review. This process also describes and explains previously reported significant results that examine the same phenomenon, known as meta-analysis; the outcome of different data components and methodologies on the described results [15, 16].

III. RESULTS AND DISCUSSION

A. Research Abstracts for Literature Review

Abstract in a literature review is a brief review of the literature that summarizes major elements to enable a reader to understand the basic features of the article. The following are the important elements in the research abstracts: author and date, the title of the paper, place and publisher, objectives (research questions), theoretical and/or conceptual framework, participants, data gathering

procedure, data analysis, and findings. Figure 1 shows the sample format of the research abstract form in tabular outline for research reading.

Author and Date:					
Title of the Paper:					
Place and Publisher:					
Objectives/ Research Questions	Theoretical/ Conceptual Framework	Methodology			Highlights of the Findings
		<i>Participants/ Respondents</i>	<i>Data Gathering Procedure</i>	<i>Data Analysis</i>	

FIG. 1. RESEARCH ABSTRACT FORM IN TABULAR OUTLINE FOR RESEARCH READING

B. Research Abstract Tabular Outline

The research abstract tabular outline will help you in organizing your references and establish the important details in writing your literature review. It will also identify what to be included in your literature review and what to be disposed of as you read and analyze different resources and references.

C. Demonstrative Process in Preparing the Research Abstracts for the Literature Review

There are four basic steps in preparing research abstracts for the literature review. Remember the 4S - subdivide, search, skim, and sort. This will help you to find and establish your literature review. Follow the steps below:

Subdivide the Keywords. Begin by identifying keywords that are useful in locating materials in an academic library or some online databases; these keywords may emerge in identifying a topic or may result from preliminary readings.

In some journal articles, keywords are found immediately after the abstracts, yet in this case, keywords could be based on the variables in the proposed research title or topic as shown in Figure 2, illustrative title and keywords [17].

Perception of the Students between the School's Support in Academics and Sports towards the Promotion and Sustainability of Sports Activities

Keywords: academics, perception, promotion, sports, sports activities, support, sustainability

FIG. 2. ILLUSTRATIVE TITLE AND KEYWORDS [17]

Students' Perception in the Implementation of the IMRaD Structure Approach and Its Implications on the Research Writing Process

Keywords: approach; effects; learning process; research format; research writing method

FIG. 3. ILLUSTRATIVE TITLE AND KEYWORDS [8]

In Figure 2, keywords are evidently visible in the research title. However, there are some journal articles that exclude words already found in the title of the manuscript as shown in Figure 3 [8].

Search for Catalog and other Resources. With these keywords in mind, next, go to the library or online search engines and begin searching (i.e. articles, journals, books). You may search as well for computerized databases such as Elsevier, Scopus, ERIC, PsycINFO, Sociofile, Google Scholar, ProQuest, Academia, ResearchGate, and others. Be mindful of selecting your related literature and studies.

Skim the Articles and other Sources. Initially, try to locate approximately 60 reports of research in articles, books, or journals related to the topic of your research (the number of articles for the literature review depends on the type of paper, instructor, institution, or even journal publication). Skim the articles, and duplicate those that are central to your topic. You may find about 40 reports out of the initial 60 reports.

Sort the Articles and other Sources. Throughout the process, simply try to obtain a sense as to whether the article will make a useful contribution to your understanding of the literature. In this situation, for example, in terms of the requirement of a certain course subject, you should have at least 30 abstracts for the literature review. In some journal articles, they require 30 to 50 references in the references list [18], as shown in Table 1.

TABLE I
NUMBER OF REFERENCES [19]

Papers	References Limit
Systematic Reviews and Meta-Analyses	40
Short Reports and Commentaries	10
Editorials and Viewpoint Papers	5

As you have your research abstracts, do not lose your references. Keep the references for your research abstracts as you might need it later in the process of research writing (literature review) and for the references list.

D. Literature Review Writing Process

Several purposes are achieved by the literature review. The results of other studies that are closely related to the one being undertaken are shared with the reader. A study relates to a larger, ongoing literature dialogue, filling in gaps and extending previous studies [19,20]. In writing the literature review, it must go beyond just summarizing professional literature. It must focus on a specific topic of interest and must include a critical analysis of the relationship among different published works and relate it to the researcher's work.

If a separate review of the literature is used, consider whether the literature will be described as integrative summaries, theoretical reviews, or methodological reviews. A typical practice in research writing is to advance an integrative review.

Integrative Summaries. Cooper [19] suggested that reviews of literature can be integrative where they are merely summaries of previous research. This model is common in research proposals and studies (theses).

Theoretical Reviews. A theoretical review is a second form recommended by Cooper [19], in which the researcher focuses on the existing theory relating to the problem being studied. In journal articles in which the author integrates the theory into the introduction to the study, this form may be best demonstrated.

Methodological Reviews. A methodological review in which the researcher focuses on methods and definitions is the final form proposed by Cooper [19]. Not only a summary of studies but also an actual critique of the strengths and weaknesses of the method sections can be provided by such reviews. In studies (theses) and in "review of related literature" or "literature review" sections in journal articles, some authors use this form.

E. Demonstrative Process in Writing the Literature Review

There are three basic steps in writing your literature review. In this particular task, your research abstracts will be your references. Remember the 3S - summarize, synthesize, and structure. This will help you to prepare and write your literature review. After you sort the articles you have in your research abstracts tabular outline, proceed to the 3S. Follow the steps below:

Summarize the Relevant Articles. Begin to draft summaries of the most relevant articles; these summaries are combined into the final literature review that you write for your research study. Include precise references to the literature using an appropriate style guide (in-text and reference citation, e.g. APA style).

Synthesize the Information. After summarizing the literature of each article, combine the related literature according to concepts. Use transitional devices in connecting each article from the group of concepts.

Structure the Concepts. After synthesizing the literature, assemble the literature review by structuring it thematically (by themes) or organizing it by important concepts (conceptual literature). This group of concepts identified in step 2 (synthesize the information) will be described as a topic. In your 30 related literature, how many topics do you have? Each topic could be labeled according to your keywords.

F. Illustrative Lead Sentences in Writing the Literature Review

The following are some of the suggestions on how you will write your literature review in terms of your topic, and a sample lead sentences that you might use for each suggestion:

History of the Development of the Topic. This lead sentence somehow similar to integrative summaries. It answers “What you understand from a particular reference; what you understand from another reference”, as shown in Figure 4.

Studies about [topic] started on [developments] when [first author] studied about [what you understand from it]. [Second author] [what you understand from it].

FIG. 4. HISTORY OF THE DEVELOPMENT OF THE TOPIC ILLUSTRATIVE LEAD SENTENCE

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Latest Research and Developments of the Topic. The same with the lead sentence from the history of the development of the topic, an example lead sentence of the latest research and developments of a certain topic is shown in Figure 5.

It has been [number] years but researchers continue to ask questions about [topic]. The latest developments are [what you understand from the reference]. [Other author/s] [what you understand from it].

FIG. 5. LATEST RESEARCH AND DEVELOPMENTS OF THE TOPIC ILLUSTRATIVE LEAD SENTENCE

Research Theory and Philosophy. An example lead sentence of research theory and philosophy is shown in Figure 6.

This research will study the [topic] using the principle of [research theory or philosophy] similar to [what other reference did]. [What you understand from other references]. [Other author/s] [what you understand from it].

FIG. 6. RESEARCH THEORY AND PHILOSOPHY ILLUSTRATIVE LEAD SENTENCE

Research Methods Used for the Topic. An example lead sentence of research methods used for a certain topic is shown in Figure 7.

The mentioned researches used different methodologies. Among

them is the one used by [author] [what this reference did]. [What you understand from other references]. [Other author/s] [what you understand from it].

FIG. 7. RESEARCH THEORY AND PHILOSOPHY ILLUSTRATIVE LEAD SENTENCE

Differences of the Research Study from Others. Then, end the literature review with a summary of the major themes and suggest how your particular research study further adds to the literature as shown in Figure 8.

All of these researches showed [summary of the suggested samples mentioned above] but this study will [how does your work differ from what has been done].

FIG. 8. DIFFERENCES OF THE RESEARCH STUDY FROM OTHERS LEAD SENTENCE

An illustrative example of a literature review using some of the lead sentences in preparing and writing the review of the related literature and studies is shown in Figure 9 [21].

Teaching Approaches, Strategies, and Methods

The teaching method is an organized and systematic procedure that aims to facilitate learning and to achieve a specific aim of instruction (Asperas, 2005). According to Cooper (2014), teachers can easily modify and change their teaching practices with the help of a systematic and founded understanding of the teaching approach in emphasizing its utilization and outcome among the learners. In connection, Lynch and Star (2014) studied multiple teaching strategies that suit the teachers' way of giving instructions to the students as it implied a better learning experience. Groschner et al. (2015), Bal (2016), and Kolesnikova (2016) also identified different approaches and methods to increase the students' academic success with the use of both an active learning and traditional teaching method, called the combined method. The modifications in the practices of teachers affect in terms of its positive outcome and response. Aside from multiple and combined approaches, strategies such as project-based learning activities (Bakar et al., 2019), graphic design pedagogy in both analogue and digital education systems (Alhajri, 2016), experiential learning (Raja & Najmonnisa, 2018), and interactive methods including passive, active, and interactive teaching methods (Norin et al., 2018) are effective and evident towards students' learning process in building a better foundation of education and in helping them learn in various ways.

Perceptions towards the Teaching Practices

On the other hand, Kember and Kwan (2000) investigated the lecturers' conception of teaching practices in which approaches to teaching were strongly influenced by their conceptions of excellent teaching. In addition, Cao et al. (2019) researched the perception of teacher educators in which knowledge transmission is one of the essential elements in the student-centered approach, adopting both student and teacher-centered approaches. Further, Schwab et al. (2019) on the differentiation of teaching practices, Uibu et al. (2017) on the students' social development of teachers mentoring experience, May et al. (2017) on the classroom teaching practices, and Cabrillana and Mayan (2018) on the relationship of teaching styles with student achievement, also emphasized that teacher's way of teaching and its practices are related on how the achievements of the students can be, as they analyzed the teaching styles towards students' achievements. From these reviews, the researchers drew much of the processes in identifying the preferred teaching practices and procedures among the subject teachers towards the achievement and readiness of Grade 7 students in secondary school.

FIG. 9. ILLUSTRATIVE LITERATURE REVIEW (EXCERPT) [21]

G. Similar Research Abstract Tabular Outline Techniques

A useful technique for this step is to compile a list of literature references. A literature map is a visual summary of the studies that others have done, and it corresponds to the flow of the information in the paper. Different ways maps are organized and charted. One could be a hierarchical presentation, with an upper-level literature review, followed by the proposed study. A flowchart with the literature as a sequence of events from left to right, and the study as the furthest right-hand section. A third model could be a series of circles, one circle for each body of literature, and another circle where future research needs to happen due to an overlap between the circles. The main idea is that the researcher will begin to create a visual picture of current research on a topic, generally depicting research trends.

IV. CONCLUSION

The review or analysis of a body of literature is the compilation and classification of materials on a certain topic. This can be any type of literature (theories, frameworks, studies, etc.) that will provide relevant background information and will help to establish the rationale, significance, and justification for the research. Further, a search through the scientific literature is a key step in the development of a given field of research. There are many great resources for conducting an in-depth literature search. They vary in the type of work they are, including indexes to periodical literature, computer-based

reference services, CD-ROM, and internet databases and services, and specialized printed resources.

The method of writing the literature review on the research writing process such as the demonstrative process in preparing the research abstracts for the literature review, demonstrative process in writing the literature review, and illustrative lead sentences in writing the literature review, ensure consistency and efficiency in doing research. In this process, the research abstract form in tabular outline for research reading will help the students in organizing the references and establish the important details in writing the literature review. It will also identify what to be included in the literature review and what to be disposed of in reading and analyzing different resources and references.

In the whole process of preparing and writing the literature review, seven steps are recommended: subdivide the keywords, search for catalog and other resources, skim the articles and other sources, sort the articles and other sources, summarize the relevant articles, synthesize the information, and structure the concepts. This research abstract form in tabular outline for research reading might help students in preparing and writing the literature review in the research writing process as it is beneficial to them to promote and sustain research endeavors.

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