

**The Book Review of Appraising Research in Second Language Learning: A**

**Practical Approach to Critical Analysis of Quantitative Research by**

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*Abstract: This book concentrates on applied and methodological issues in the field of language pedagogy. Specifically, it focuses on second language writing and applied linguistics research design. This book is designed for the students of applied linguistics and second language acquisition on research training courses. It aims at helping students acquire basic knowledge of second language writing and have the ability to read critically. The students should comprehend the primary methods and principles of research based on quantitative analysis. It provides specific instructions how to approach the critical analysis of a research paper. This paper focuses on the reviews of the main components based on the book.*

*Keywords: Book Review, Language Pedagogy, Quantitative Research*

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## **1. INTRODUCTION**

The focus of the book is on subjects such as classroom discourse and interaction; language diversity in educational settings; language testing and language assessment; bilingual education; teaching methods and teaching performance; learning trajectories in second language acquisition; and written language learning in educational settings. It seeks to respond to a current need in the literature for a set of procedures that can be applied to the independent reading of quantitative research. In this book, the key components of a research paper in this field are listed. Innovative features of the workbook include awareness-raising reading tasks and guided exercises which aims at helping develop critical skills and appraise papers independently. Through informed and constructive appraisal of others work, readers can discover new areas for investigation so as to present their own work more effectively. What's more, appraisal of science research should be constructive. As we all know, quantitative and qualitative techniques are used in research in the area of second language learning and applied linguistics.

## **2. MAIN STRUCTURES**

In the section of table of contents and preface, we can acquire the main structures and information of the book. We know the reasons of appraising research and the potential beneficiary. In the textbook, there are four chapters including introduction, method and procedures, results and discussion, conclusions as well as some technical terms. In the following chapter: workbook. Some sample appraisal are listed such as abstract, the background to the problem, the problem statement, the review of the literature, research questions and hypotheses, variables, operational definitions, subjects, materials and so on. The next section is glossary of key terms in quantitative research. There are some definitions of technical terms in sequence in order to provide a clear typesetting. In the section of appendices, some charts and figures are provided. Then the further reading we can broad our horizon owing to these books. All of the above are the main structures of the book.

## **3. THE REVIEWS OF COMPONENTS**

In the "Introduction" chapter, we will be presented with the following information: The abstract, the background to the problem and the problem statement, the review of the literature, research questions hypotheses, variables and operational definitions. The role of the abstract is to summarize the most important points of the thesis. To some extent, we can make a preliminary evaluation of the research according to the abstract. In the meantime, we could get succinct information from the background to the problem. As to problem statement, variables (independent and dependent variables) and possible interactions should be provided. On the one hand, the research question should not be overly ambitious and overly challenging. On the other hand, problems are worth investigating and have either practical or theoretical value. The review of literature describes previous and current knowledge to further explore the problem. The review describes the most relevant work done and indicates its relative importance. It also has sufficient critical address of the literature. In my view, it helps the researchers summarize previous information and guide their future course of action. In addition, it communicates the main points related both to the background to the the problem statement. To some extent, the review should cover an adequate time-span and have adequate reference, where necessary to empirical work. More importantly, whether the review convinces you of the need for the study means a lot. In particular, the reader will need to ask him-or herself whether meaningful, significant, and innovative data are likely to be contributed to the body of knowledge as described in the review [1]. Slavin (1986), for example, recommends a "best-evidence" approach to the writing of this particular section, whereby strict criteria are established before a study is included for review [2].It should be logical and highly summarized. Meanwhile, we should keep a positive and enquiring attitude to appraising other researches.

The research questions usually come from personal interest and conferences with three types: exploratory, descriptive and explanatory. The research hypothesis provides a suggested response or expected outcome to the problem described in the problem statement, previously outlined and discussed in the review of literature [3].Hypotheses come from research questions,

problem statement, the review of the literature and personal experience. Usually, there are three kinds of hypotheses including positive, directional, or null form. The hypotheses offer direction and predict the differences or relationships between variables. In addition, the research questions and hypotheses should be unambiguous, consistent with the problem statement, feasible, and supported by the review of the literature.

Variables, as its name suggests, is a feature must be varied from person to person. Usually, we have independent variables, dependent variables, moderator variables or control variables. Owing to the functional differences, the variables have differences in their levels of measurement. As we all know, there are three levels of measurement: nominal, ordinal, or interval scales. Logically speaking, we should start with a conceptual definition of a variable and then move to operational definition because the operational definition may vary from different studies. This chapter presents elementary knowledge about thesis writing but some professional terms should be explained more specifically and detailedly so as to clean up the confusion of readers.

In the second chapter method and procedures, we can know whether the research design is appropriate and the validity of the results. In this chapter, the following aspects are involved: internal and external validity, subject identification, process of selection and group assignment, procedures, principal research design, proposed measurement and analysis. In a word, this chapter is related to the research design. We can know the disadvantages and advantages in the research design as well as the potential improvement.

Usually, the subject has two aspects: experimental group and control group. The subject section describes how many subjects have participated, who the subjects are, and how they are selected. The size of subjects is a cause for concern in studies. While there are few fixed rules for ideal numbers of participants required for the majority of analyses used in second language learning research, recommendations do exist and will need to be considered when appraising research design [4]. To some extent, the selected subjects should guarantee the internal and external validity at the same time. There are so many potential threats to validity within a study that it can become virtually impossible for a researcher to control for them all [5]. In other words, responses can provide right answers to the research questions. We also need pre-test and post-test according to the different researches. As we know, the following potential threats will influence the validity such as attrition, experience, age, gender and maturation. The Instruments section describes research tools used to measure variables in the study. We should know the conditions of subjects and the instruments will have direct influence on reliability of findings. A number of tests or processes are used with the instrument concerned to establish construct validity, and it would be the accumulated outcomes of these which would succeed in convincing us (or not) of the validity [6]. In addition, if we design a questionnaire, Likert-scale will be used. After knowing subjects and the instruments, we need to know how the two aspects interact. Some potential threats are involved such as observer effects, subject expectancy, age, gender, observer bias and environmental conditions. In the Data-collection section, information about gathering data is detailed. The following questions should be taken into

account: when were the data collected; who were responsible for data-collection; how was the data collected; and where? We should keep in mind the training of subjects is needed. The Data-analysis section is concerned with the procedure for analyzing the data and its reliability. Quantitative analysis will use statistical package and the missing values should be dealt with rightly. Furthermore, details of steps taken to increase the reliability of the analysis of quantitative data need to be reported. The limitation should be informed so that the reader will deal with the findings with caution.

In terms of the results in the third chapter, we will focus on the presentation and nature of findings. In this section, enough data should be provided so as to adequately respond to the research questions or hypotheses previously put forward. The most important results should be listed clearly and appropriately. In addition, the researcher should comprehend the tables or graphical displays of results. There are some tables in this chapter in order to show the relationships between the variables. Results are the answers to the research questions and the findings. The researcher should stick to the questions and answer the research questions all the time. Quantitative results should be reported by graphs followed by verbal account. In the results, the following aspects should be listed: frequencies, mode, media, mean, range, standard deviation, variance, probability. Usually, selecting appropriate statistics: summarize, compare means, correlate and regression. Correlation analysis is used to test the significance of the relationship between two variables. We also need to compare means in the study such as Independent-samples t-test, Paired-sample t-test and One-way ANOVA. Independent-samples t-test involves two different groups of people and Paired-sample t-test involves one group of people but two different variables. If you have more than two means to compare, you need to choose One-way ANOVA.

In the last chapter, we should focus on the discussion and conclusions. This part of the paper highlights the cyclical nature of any research study: what follows now should be an attempt on the part of the researcher to take the reader back to the introductory sections of the report and, in a descriptive and interpretative summary, show the extent to which findings have answered the questions or hypotheses proposed at that juncture[7].What's more, the researcher are supposed to recall what he has appraised decide whether what is argued has found an adequate response in the findings. We may explain the reasons of the findings, problems in the result as well as significance of the results. In other words, theoretical and practical implications of results should be taken into account. We need to go beyond the results and express our own ideas about the results. As to the conclusion, it should reflect on the research questions and hypotheses. The conclusion usually consists of three aspects: major findings, implications and recommendations for future research. In addition, the limitations or weaknesses should be identified so as to contribute to further research.

In the workbook section, some particular methods are listed to provide students detailed information. After reading carefully, students can appraise research independently and critically. These research papers consist of a worked sample and a guided appraisal. The

workbook includes all the aspects of research and students can consider their own opinions to the questions.

The section of glossary of key terms in quantitative research also provides different technical phases and graphs. In a word, although this book is a bit difficult for me, this book follows the format of a typical research paper and students should read more relevant books in order to appraise studies critically and effectively.

#### **4. CONCLUSIONS**

This book aims at guiding researchers through critical reading of research papers in the field of second language acquisition. It helps the researchers relate the primary knowledge they have acquired on investigation to their independent and critical reading of papers.

#### **REFERENCES**

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