

1 Introduction

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Second language acquisition (SLA) research draws its research methodology and tools from a number of other fields including education, linguistics, psychology, sociology, and more. Partly for this reason, research methodology in second language studies is frequently evolving in response to developments in other fields as well as to developments in our own field. There is such a diversity of approaches to second language research methodology that a book like this one, where each chapter is authored by a person who is an experienced expert in that particular subarea, is one of the most efficient ways for research to describe and disseminate information about the method in which they have particular expertise.

Designing a research study and determining an appropriate method of investigation is a difficult task. But the task is made easier if one understands that research methods are not determined or decided upon devoid of context; research methods are dependent on the theories that they are designed to investigate. Thus, research questions are intimately tied to the methods used for determining an appropriate dataset.

This volume is intended as a guide for students as they design research projects. Each chapter presents some basic background to the area of research. This is a necessary feature since methodologies, as we noted above, cannot be understood in a vacuum. The book also has a pedagogical focus, with each chapter providing a practical, step-by-step guide to the method it covers, often informed by reference to studies using the method, carried out by the chapter's author. The method is discussed together with the theoretical frameworks within which it is commonly used. This how-to section takes students from beginning to end of a particular area. Finally, project ideas and resources (e.g., analytical tools when appropriate, references to more detailed discussions of a particular area), are also included, together with additional readings, and brief summaries of studies that have used the particular methodology, together with study questions that can be used as a basis for class

discussions. Summary study boxes are given to help readers grasp the main ideas of studies that have used the method in question.

The book is divided into two parts. The first is on data types, which includes representative types of the wide range of data that is commonly studied in SLA, including both newer data types, such as learner corpora, along with more traditionally studied data, such as case studies. The second part is on data coding, analysis, and replication, where we present chapters on topics like meta-analyses. We will briefly summarize the contributions and explain how they fit together. We must also remember, however, that no elicitation instrument or methodology is foolproof; all have their advantages and limitations. And, as we have stressed in our other books dealing with research methods (Mackey & Gass, 2005; Gass & Mackey, 2007), no research project should be undertaken without extensive pilot testing.

In chapter 2, “How to Use Foreign and Second Language Corpora,” Sylviane Granger covers learner corpus research, which she describes as originating in the late 1980s and involving the study of computerized databases of written or spoken texts. She focuses on frequency, variation, and co-text, and describes the powerful automatic analysis that can reveal quantitative information on a wide range of language from morphemes to lexical phrases. Tania Ionin’s chapter 3, “Formal Theory-Based Methodologies,” focuses on methods used in formal, generative SLA research. She describes the collection of empirical data on learners’ production and comprehension of the target language, which are used to draw conclusions about the underlying grammar. Methodologies she focuses on include grammaticality judgment tasks and interpretation tasks. In chapter 4, “Instructed Second Language Acquisition,” Shawn Loewen and Jenefer Philp focus on an often-studied context in SLA, providing a short review of the ways in which research on instructed SLA has been done, focusing on the practicalities of carrying out each one. Their chapter focuses in general on second language (L2) classroom instruction, and does not specifically address reading and writing research or investigations of individual differences, since those topics are covered in chapters 5, 8, and 9 in this volume.

In chapter 5, “How to Design and Analyze Surveys in Second Language Acquisition Research,” Zoltán Dörnyei & Kata Csizér explain how survey studies are carried out in the context of SLA research, including the required steps for designing a survey that can provide valid and reliable data. They also discuss quantitative data analysis in relation to questionnaire data, as well as how to report survey results. In chapter 6, “How to Carry Out Case Study Research,” Patricia A. Duff explains the background of one of the earliest methods used to underpin the field, characterizing its focus on a small number of research participants and occasionally just one individual (a focal participant or case) and explaining how behaviors, performance, knowledge, and perspectives are examined closely and intensively, often over an extended period of time. In chapter 7 “How to Use Psycholinguistic Methodologies for Comprehension and Production,” Kim McDonough and Pavel Trofimovich explain psycholinguistics as having the twin goals of understanding how people comprehend and produce language. In other words, these authors describe the methodologies used in the attempts to figure out what processes, mechanisms, or procedures underlie language use and learning. In chapter 8, “How to Research Second Language Writing,” Charlene Polio classifies empirical studies of L2 writing on the basis of the ways data

are collected, coded, analyzed, and interpreted with the goal of understanding L2 learning processes. This chapter on writing is complemented by Keiko Koda's chapter 9, "How to Do Research on Second Language Reading," in which she explains that reading is a multidimensional construct involving a wide range of subskills whose acquisition depends on various learner-internal and learner-external factors. Different approaches to SLA see reading as cognitive or sociocultural and, as she argues, it is important to clarify the theoretical and methodological orientations in relation to the problem motivating the research.

The final chapter in part I, by Debra A. Friedman, focuses on "How to Collect and Analyze Qualitative Data." As she explains, the rise of theoretical and analytical frameworks such as sociocultural theory, L2 socialization, and learner identity has brought important insights to the field. She first provides her perspective on what qualitative research is and what it can contribute to the field, and then takes the reader through the process of designing and conducting a qualitative research project, including theoretical and practical aspects of qualitative methods for data collection and analysis.

In part II, we move away from a focus on data types, and instead the chapters provide input on how to analyze and code data. Complementary to Friedman's chapter is chapter 11 by Andrea Révész, "Coding Second Language Data Validly and Reliably," which brings a welcome perspective on a topic which is critical to all areas of SLA research. Coding, as Révész explains, involves organizing and classifying raw data into categories for the purpose of further analysis and interpretation. She explains the concepts of validity and reliability in relation to coding with a focus on relatively top-down, theory- and instrument-driven coding methods. Qualitative coding which emerges bottom-up from the data is the topic of the preceding chapter, by Friedman, as well as the next chapter, by Baralt. In chapter 12, "Coding Qualitative Data," Melissa Baralt focuses on how to code data using NVivo in qualitative research. NVivo is a type of software that assists researchers in managing data and in carrying out qualitative analysis. As Baralt explains, qualitative data often include text, notes, video files, audio files, photos, and/or other forms of media, and SLA researchers are increasingly using computer-assisted qualitative data analysis software to manage all these data types, even if the researchers are not doing the kind of corpus work described earlier by Granger. Baralt provides coding examples based on NVivo software, but as she explains, the basic procedures presented in her chapter are also applicable to traditional pen-and-paper methods and other software programs.

Coding in both quantitative and qualitative paradigms having been considered, chapter 13, by Jenifer Larson-Hall, focuses on "How to Run Statistical Analyses." As Larson-Hall explains, inferential statistics let the reader know whether the results that have been found can be generalized to a wider population. She provides a brief survey of how to understand and perform the most basic and frequently used inferential statistical tests in the field of SLA. Chapter 14, by Luke Plonsky and Frederick L. Oswald, "How to Do a Meta-Analysis," defines meta-analyses in both their narrow and broader senses, and focuses primarily on the practical aspects of meta-analysis more broadly conceived. Meta-analyses and research syntheses are becoming more common in the field, representing a coming of age of the field, and

also the ability to draw more general conclusions from our increasingly wide body of knowledge. In the final chapter, by Rebekha Abbuhl, “Why, When, and How to Replicate Research,” we cover another crucial topic in the field and one which we believe is critically important for the future. If SLA is to continue to go from strength to strength, we need to proceed from a position of confidence in our findings. Replication will be a key part of that. This chapter by Abbuhl (and Porte [in press]) both suggest that replications, when carefully done, represent a cornerstone of our field. A recent UK grant by the Economic and Social Research Council (ESRC) to Emma Marsden (University of York, UK) and Alison Mackey (Georgetown University, US) for the project ‘Instruments for Research into Second Languages’ (IRIS) will support a database where research instruments can be uploaded and downloaded. This database will be fully searchable by a wide range of parameters including the first and second languages under investigation, the type of instrument, the age of the learner, and so on. The IRIS project aims to make the process of selecting and locating data collection instruments much more streamlined and efficient, which in turn will assist the process of replication in SLA research and, in the longer term, the scope and quality of meta-analyses. IRIS will also facilitate the scrutiny of instruments, so that researchers can more easily evaluate the validity, reliability, and generalizability of tools used for data collection. Replication, along with careful methodological approaches ranging from case studies to surveys to corpus-based studies, represent the past and future of SLA research. An understanding of the topics addressed in this volume is essential for the formation of a solid foundation for doing SLA research.

References

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