

Introduction

Theorizing research methods in the ‘golden age’ of applied linguistics research

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The growth of applied linguistics research

Research in the emergent, broad, and inherently interdisciplinary field of applied linguistics has grown from its origins, which centred on understanding language development, acquisition, learning, and teaching. The origins of applied linguistics often involved two types of researchers: researcher-practitioners who were interested in exploring teaching and learning within language classrooms, and educational psychologists who were interested in exploring the cognitive and psychological processes of language learning. An expansion of forces, which largely centred on technological advancements and globalization, has since brought language into contact with a range of other disciplines such as business, politics, sociology, anthropology, medicine, and science. This expansion of scope in applied linguistics has resulted in an explosion in quantity and quality of applied linguistics research, and we are now at a time when applied linguistics research is growing at unprecedented rates. While more established fields have secured a firmer sense of their impact on knowledge, applied linguistics is just beginning to consider its current scope and future directions. This is evidenced by the emergence of a number of publications in recent years which aim to provide an overview of the field (e.g. Lei & Liu, 2019), bring greater clarity to what applied linguistics is (e.g. Cook, 2015; Hellermann, 2015), problematize the diminishing role of language teaching in applied linguistics research (e.g. McKinley, 2019; Rose, 2019; Rose & McKinley, 2017), and inform future directions of research within the field (e.g. Larsen-Freeman, 2018; Pfenninger & Navracscics, 2017).

The past 30 years in particular has been a period of substantial maturation in research within applied linguistics, where the range of topics covered within the field has blossomed, and so too have the research methods used to explore them. Much of the growth in research has been propelled by the increasingly mobile and multilingual world, where issues such as migration and globalization have fuelled the number of researchers working within applied linguistics to meet the linguistic demands brought about by language-related educational and social policy change. We are currently in a ‘golden age’ of applied linguistics research, where we are learning to strengthen the field through transparency and data sharing, helping to improve and assure quality of research, and advance knowledge more efficiently. We have simultaneously moved into an era of big data, which is punctuated by large scale surveys and corpus research,

as well as an era of highly nuanced qualitative research, which is characterized by contextualized explorations of language learning and language use. The field has also expanded into complex and dynamic ways to explore established topics, which has necessitated the need for new research designs, data collection techniques, and tools for analysis. As a field, we have moved beyond types of research that, while still of value, offers limited contribution, and towards highly impactful research. Immersed within this golden age, it is now necessary to take stock of what it means to ‘do research’ within applied linguistics, and theorize our available approaches, designs, methods, and data analysis techniques – a central aim of this handbook.

Theorizing research in applied linguistics

There has been a lack of theorization of research methods in applied linguistics, except perhaps for the developments of tests and measures in the associated field of second language acquisition, as well as in text-based research (such as corpus linguistics). Compared to other social sciences like psychology, applied linguistics does not have much in the way of theorization of field-specific methods on, for example, document methods, focus groups or diary methods. It is time to advance the field theoretically, which requires a clear understanding, and problematizing, of our own theoretical stances.

Doing research in applied linguistics carries with it a fundamental need to establish a clear theoretical stance, that is, the perspective from which the researcher approaches the phenomenon being studied. This is applicable for all research in the field – a breadth covered in this handbook – whether social (see most chapters in this volume), text-based (e.g. Wang), or physical (e.g. Pellicer-Sanchez and Conklin). For one, the field of applied linguistics is from time to time redefined (see Bhatia, 2017; Cook, 2005; Weideman, 2007), which can cause confusion about how to position and frame the research and the researcher; and two, as language holds an inherently social function, the researcher’s relationship with the investigated phenomenon must be negotiated to secure a solid foundation on which the study can be built. This chapter provides clarity on the sometimes evasive concept of *theory* in applied linguistics research, and in so doing, clarifies associated terms. In clarifying these terms, it should be understood that they work together to form a unified concept of the researcher’s intentions in carrying out research, which leads to greater clarity to a study’s contributions to knowledge in the field. Ultimately, whatever the endeavour, from whatever perspective, to move the field forward, applied linguistics research should aim to offer solutions, rather than just identify problems.

Doing applied linguistics research: clarity of terms

In this section, key terms in doing applied linguistics research are raised to illuminate their use, namely: paradigm, epistemology, ontology, approach, design, method, objective, and aim. While these common terms are used with varying levels of confidence by experienced researchers, when it comes to explaining the terms, there is often significant overlap between them. For a comprehensive overview of these terms, see ‘Approaches and methods in applied linguistics research’ (Paltridge & Phakiti, 2015).

Research paradigm, epistemology, and ontology

First, a research *paradigm* is defined as the *philosophy* supporting the knowledge or reality a researcher uses to understand a phenomenon. Common examples or research paradigms in

applied linguistics research are positivism, post-positivism, and interpretivism; further examples are critical inquiry, pragmatism, and participatory paradigm, among others. Briefly, these paradigms are defined as follows:

- Positivism – research will objectively test a hypothesis using scientific method and/or logic to prove it to be true
- Post-positivism – research acknowledges the researcher’s subjectivity, and maintains that it is not possible for everything to be known.
- Interpretivism – research is built on the idea that knowledge is actively constructed, usually through human interpretation of experience.
- Critical inquiry – research can refine and improve real-world knowledge by making reasonable claims about reality that are historical, and subject to chance and change.
- Pragmatism – research is problem-oriented and maintains that a research method be chosen according to its effectiveness in answering the research question.
- Participatory paradigm – research is built on the idea that knowledge is constructed through researcher participation with others involving reflection and action (sometimes referred to as ‘social constructivism’).

Next, *epistemology* and *ontology* are strongly linked to paradigm, as they identify the researcher’s reality. A researcher’s epistemology is essentially their core beliefs. It is often broken down as truth, belief, and justification: what is held as true and real, what is believed about it, and how the belief is reasonably justified. Epistemologies can differ greatly between people from different backgrounds, whether cultural, political, religious, socioeconomic, or otherwise. Such differences are at the heart of classic debates (one person’s ‘right’ is another person’s ‘wrong’). Common-sense boundaries of reasonable beliefs might be stretched, which is where the idea of ‘alternative facts’ comes from: while most will maintain that these are simply falsehoods, others will justify them as truths, despite contrary scientific evidence. Popular examples of this are the continued belief that global warming is a hoax, that vaccinations cause autism, or that the earth is flat. Such ‘an alternative belief’ is an example of an ontology, albeit a poorly constructed one. A researcher’s ontology, therefore, is a set of concepts used to identify the nature of a phenomenon’s existence. In applied linguistics research, an ontology can be understood as the implicit structures that shape and define how language is used.

Research approach, design, and method

A *research approach* is the generic term given to the manner in which a researcher engages with a study as a whole. It takes a macro-perspective of research methodology and incorporates both the overall methodological design of a study, the methods used for data collection and for data analysis. As a crude example, some researchers may state that they are taking a *quantitative approach* to research, which might then inform their choice of design (e.g. experimental or survey), their choice of data collection method (e.g. tests or questionnaires), and data analysis (e.g. statistical tests or modelling). In reality, an approach to research might be far more complex depending on the needs of the research questions; nevertheless, the chosen approach will aim to capture this complexity.

A *research design*, which many refer to more generally as a research method, refers to the structure of a study. It acts as a blueprint within which to populate the content of a research project. Thus, the general principles underlying this structure are retained across research

projects. For example, there is an expectation that experimental designs must contain certain features, such as the manipulation of a variable in order to explore its effect. Similarly, there are structural expectations surrounding expectations of what good survey research, action research, ethnography, or case studies should entail. Deviations from the expected design must often be justified in terms of assurances to the quality of the research data obtained.

A *method* can mean many things (including research design), but here I define it as the process of collecting data. For consistency, it might be best to use the full expression ‘data collection method’. While a tendency has been observed in research methods books to conflate data collection methods with approaches to research design, I prefer to reserve the word *method* to refer to data collection (see Rose, McKinley, & Briggs Baffoe-Djan, 2020). It is important, for example, not to discuss questionnaires (a data collection method) interchangeably with survey research (a research design), as some questionnaires are used for purposes other than ‘to survey’ (i.e. in qualitative research), and of course survey methods can involve data collection other than just questionnaires. Another example is to avoid listing data elicitation tasks and tests (data collection methods) with other elements of methodology such as experimental studies (a research design). Indeed, certain data collection techniques often accompany certain research designs, but it is important to maintain clear boundaries for these two dimensions of research. This will foster more creativity and freedom in applied linguistics research as of course, more than one data collection research method can be (and is) used within different research designs.

Research objective and aim

The final two terms to clarify are research *aim* – a statement of intention, and research *objective* – a statement of how desired outcomes will be achieved. With this understanding, it is recommended that researchers maintain consistency with use of these terms so as not to conflate them. First, broad statements of aims should be made that identify what the researcher hopes to achieve. For example, this would be where the purpose of the study is stated (“This study aims to . . .”). Objective statements need to be concrete, clarifying what specific processes that will be taken to achieve the purpose. In other words, the research objective is a summary of the overall research project as designed to produce expected outcomes (“The objective of this research is to provide a context-specific example of the phenomenon as it occurs in a real-world classroom through observations and data elicitation . . .”).

Problematizing ‘theoretical stance’

Theoretical stance is the researcher’s position in relation to the research. In this golden age of applied linguistics research, it is an area ripe for problematizing and introducing innovations in response to advance theory. Theoretical stance is often discussed as epistemological stance, as it is how the researcher proposes their way of thinking about the research. It is also often discussed in relation to a researcher’s paradigm. For example, positivist researchers ensure quality research by establishing their objectivity, or distance from the data, while post-positivist researchers do the same by establishing their subjectivity, or close proximity to the data, possibly through reflexivity (Meyrick, 2006). Reflexivity is the acknowledgement of the researcher’s own subjectivity, maintained throughout the research project (as opposed to reflection, which may be introduced later in a research project). It is a valuable tool when a researcher has personal experience with the topic being researched, inasmuch that the personal experience shapes the focus of the researcher’s findings (Sherrard, 1997).

Researcher stance or position is also discussed as *positionality*, or “how I identify myself in terms of my sense of where and to what I belong or do not belong, and the social relations that are affected by this” (McKinley, 2005, p. 141). Research positions are usually insider (shared cultural background with participants and/or research site) or outsider (no shared cultural experience), but have also been described as in-betweener (partial shared experience), or a *halfie*, which is a researcher “whose national or cultural identity is mixed by virtue of migration, overseas education, or parentage” (Abu-Lughod, 1991 in Subedi, 2006, p. 573).

As useful as these position identities are for clarifying a researcher’s relationship with the participants and/or research site, a major limitation is that they are stagnant. In qualitative research especially, we could do more conceptually with the idea of positionality if we consider it to be more of a process, rather than a place. This would allow us to consider how time plays a significant role in understanding our researcher identity. We might try an idea such as *dispositionality* – one that considers a researcher’s relation to, and flexibility with, timescapes so that they discover (im)possibilities and (im)mobilities through the research process (Bunn, Bennett, & Burke, 2018). Epistemologically, much qualitative research is a site of contestation over claims to truth and author/authority. If we take a temporal orientation to deep praxis, we can shift our (dis)positionality toward reflexive, iterative cycles of participatory meaning-making across differences, rather than lock ourselves into stagnant researcher positions that can do little with differences.

Positioning ourselves in the field

Applied linguistics researchers will sometimes position themselves in the field according to their research focus. We call ourselves *applied* linguists, *sociolinguists*, (applied) *cognitive* linguists, *psycholinguists*, *neurolinguists*, and so on. These labels are more than just research areas, however, as they carry with them particular philosophies, ones that are inherently vague. Some applied linguists will clarify their positions. For example, even those with prestigious academic positions still position themselves philosophically:

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(Book launch flyer for Language and Subjectivity, University of Birkbeck, 28 May 2019, emphasis my own)

Positioning ourselves philosophically may be a response to inherently subversive neoliberal, transformative, and/or subjective perspectives in applied linguistics research that challenge and advance theory. If we can rethink the recalcitrant orthodoxies underpinning research and pedagogical practices, we can facilitate disruptive moments and/or support and open up public and educational spaces. If we can transgress the frameworks we traditionally work within (the histories and current imperatives to produce/meet quota), we may be better positioned to have greater knowledge impact. However, evidence is seductive: we want to find the answers, but the problems may be entangled in deeply entrenched research traditions.

Perhaps it is a matter of how we ‘frame’ things, an act applied linguists may be well-positioned to carry out. Meaning-making processes of words or concepts, or the creation of *frames* (cognitive images or metaphors) used by individuals, has been shown by cognitive

and neuro-linguists to depend on specific language use and individual relationships in that usage (White & Lowenthal, 2011, p. 288): “The development of ‘frames’ – and thus meaning-making – is determined, at least in part, in relation to the power of the different players within a dialogue.” With this understanding, it may be that we regularly position and reposition ourselves in accordance with the positions of others in the ongoing discussions around our research.

Reasoning, approaches, and time in relation to theoretical stance

In our golden age of applied linguistics research, a discussion of theoretical stance in consideration of reasoning, approaches, and time might prove valuable for problematizing and advancing theory in the field. First, *reasoning* in relation to theoretical stance in applied linguistics research has traditionally been either inductive or deductive, but there is scope to expand this to other types of reasoning used in other fields, such as abductive. These types of reasoning relevant to applied linguistics research are defined as follows (Rose et al., 2020):

- Inductive reasoning – “the use of a premise as the basis for an investigation for which there is no hypothesized conclusion but rather leads to a non-predetermined probable conclusion” (p. 261). Such reasoning is most common in qualitative research.
- Deductive reasoning – “the use of a premise as a hypothesis, testing it to show whether it is true” (p. 259). Such reasoning is most common in quantitative research.
- Abductive reasoning – “the use of an unclear premise based on observations, pursuing theories to try to explain it” (p. 258). Such reasoning is uncommon in applied linguistics, but it could be argued that much of what we call inductive reasoning in applied linguistics research is actually abductive.

Next, *approaches* in relation to theoretical stance in applied linguistics research might include: interactionism, poststructuralism, critical realism, or complexity theory (complex dynamic systems theory), among others. These are briefly defined as follows:

- Interactionism – a perspective that maintains language is learned through interaction between low-proficiency and advanced users of the target language who want to communicate with them. It is based on Vygotsky’s sociocultural theory and Bruner’s theory of language acquisition.
- Poststructuralism – an approach to understanding the relationship between text and meaning as an integrated process where ethical choices are considered in achieving certainty in the act of meaning-making. It is based on Derrida’s theory of deconstruction.
- Critical realism – a perspective that there is a reality that is independent from human conceptions of reality, separating epistemology as a theory of knowledge from ontology as a theory of being. It is based on Bhaskar’s combination of a general science philosophy with a social science philosophy, and expanded into applied linguistics research by Corson (1997).
- Complexity theory (or complex dynamic systems theory) – a nonlinear system of understanding complex phenomena (such as language acquisition). It is based on the development of tools for modelling complex systems in science, engineering, and management (complexity theory) as well as applied mathematics (dynamic systems theory), and expanded into applied linguistics research by Larsen-Freeman (1997).

Finally, *time* in relation to theoretical stance in applied linguistics research is either synchronic or diachronic. It is defined as follows:

- Synchronic – a bottom-up, microscopic position analyzing language at a specific point in time, usually focused on language use and behaviour.
- Diachronic – a top-down, macroscopic position for analyzing changes in language over time, often focused on language order.

These ideas of reasoning, approaches, and time in relation to theoretical stance in applied linguistics research provide multiple ways of reconceptualising research methods in the field – ways that could contribute to new theorizations and knowledge. This handbook is one way its contributors hope to bring clarity to many of the methodological decisions that underpin applied linguistics theory.

Handbook overview

This handbook is divided into four parts. Part I, ‘Key concepts and current considerations’, covers a wide range of concepts in ten chapters that provide valuable suggestions and justifications for advancing theory and innovation in applied linguistics research. Part II, ‘Designs and approaches to research’, is made up of 12 chapters that each provide its own clear outline of approaches, both well-established but evolving and newly emerging ways of conducting applied linguistics research. Part III, ‘Data collection methods’, comprises nine chapters containing new perspectives on traditional methods that help pave the way for applied linguistics researchers to collect and elicit data successfully in the range of domains within which we conduct research. Finally, the ten chapters in Part IV, ‘Data analysis’, define and challenge traditional quantitative and qualitative analysis procedures to provide more ways to advance theory in the field.

Part I: key concepts and current considerations

As the amount of applied linguistics research continues to grow exponentially, we understand that it is well positioned to expand its impact. This idea is captured by Emma Marsden in the opening to Chapter 1, ‘Methodological transparency and its consequences for the quality and scope of research’, targeting replication research as fundamental to the field’s emerging impact. In Chapter 2, ‘Multi-perspective research’, Brian Paltridge provides insights into how we can greatly inform and innovate research in the field by varying our perspectives to conducting it. Along similar lines, Mohammad R. Hashemi challenges traditional conceptualizations of mixed-method research in Chapter 3, ‘Expanding the scope of mixed methods research in applied linguistics’, giving us new ideas for bringing together qualitative and quantitative approaches. Next, Masuko Miyahara raises a much-needed discussion about research participants and settings in Chapter 4, ‘Sampling: problematizing the issue’, taking on a number of unanswered questions about this fundamental feature of research.

Applied linguistics research in particular raises concerns about the conveyance of quality and effectiveness of our practices. In Chapter 5, ‘Ensuring translation fidelity in multilingual research’, Gene Thompson and Karen Dooley challenge the standards of translation in commonly applied linguistics practices, emphasizing the importance of accurate processes of translation when developing data collection methods. Similarly, in Chapter 6, ‘Researching multilingually in applied linguistics’, the research team of Jane Andrews, Prue Holmes,

Richard Fay, and Susan Dawson present key concerns particular to applied linguistics research concerning the use of multiple languages in various phases of a research project, offering valuable ways of dealing with multilingual participants in multilingual contexts.

Current considerations in applied linguistics research are found in various recent developments. We understand that widely cited applied linguistics research is often based in ‘the West’, but significant developments and invaluable contributions to knowledge are increasingly found in other parts of the world, as promoted by Cristine G. Severo and Sinfree Makoni in Chapter 7, ‘Solidarity and the politics of ‘us’: how far can individuals go in language policy? Research methods in non-Western contexts’. Regarding current efforts in quantitative research, Shawn Loewen and Aline Godfroid offer creative ideas for contributing to theory and knowledge in the field in Chapter 8, ‘Advancing quantitative research methods’. In Chapter 9, ‘Interdisciplinary research’, Jack Pun brings up-to-date current discussions of the interplay between applied linguistics and other fields. Closing out Part I, in Chapter 10, ‘Ethics in applied linguistics research’, research team Peter I. De Costa, Jongbong Lee, Hima Rawal, and Wendy Li problematize the far too under-theorized but always essential feature of ethical concerns to point toward effective ways of advancing the field.

Part II: designs and approaches to research

The chapters in Part II provide a wide overview of research approaches and designs, exemplifying how many traditional designs have evolved. Starting with Chapter 11, ‘Experimental and quasi-experimental designs’, John Rogers and Andrea Révész provide an overview of such designs while also weighing up the advantages and limitations of each, emphasizing how careful design and implementation can improve the validity of findings. In Chapter 12, ‘Case study research: making language learning complexities visible’, Patricia A. Duff clarifies how and why this research design has changed in the field of applied linguistics, raising implications and offering suggestions for assessing case study criteria for use in research. This is followed by Li Wei’s Chapter 13, ‘Ethnography: origins, features, accountability and criticality’, in which he discusses developments of the methodology both within and around the field of applied linguistics with examples from school and classroom-based research as well as community-wide society-based studies. Situated alongside this is Sue Starfield’s Chapter 14, ‘Autoethnography and critical ethnography’, which addresses lesser-adopted ways of conducting ethnographies, taking us from their origins to how we can use them to advance theory.

Like ethnographic research, other popular approaches are evolving in important ways. In Chapter 15, ‘Action research in language education’, Dario Luis Banegas and Sal Consoli explain that as an ‘interventionist and subjective’ methodology, action research is best practiced when organically intertwined with language pedagogies. In Chapter 16, ‘Core dimensions of narrative inquiry’, Gary Barkhuizen outlines four core dimensions of narrative inquiry and proposes them as four continua, focusing on the processes of data collection and analysis rather than on theoretical or epistemological underpinnings. Similarly refocusing a widely adopted approach, in Chapter 17, ‘Methodological issues in critical discourse studies’, Christian W. Chun emphasizes the value in the shift from critical discourse *analysis* to critical discourse *studies*, embracing the interdisciplinary nature of applied linguistics research to clarify that a critical approach is not a method of discourse analysis, but a critical application and critical theory.

Approaches that do not necessarily involve human participants are both established and emerging in applied linguistics research. In Chapter 18, ‘Integrating corpus tools into mixed methods research’, Ron Martinez highlights how popular approaches to corpus research such

as content analysis can be expanded by using corpus tools in exploring data qualitatively. In Chapter 19, ‘Systematic reviews in applied linguistics’, Ernesto Macaro defines this underutilized methodology in applied linguistics to delineate it from other types of reviews, and outlines the challenges and benefits for the field. In Chapter 20, ‘Meta-analysis in applied linguistics’, Yo In’nami, Rie Koizumi, and Yasuyo Tomita show how the methodology is effective not only for synthesizing empirical quantitative studies and indicating the overall effects but also for identifying the sources of inconsistent findings across studies. In Chapter 21, ‘Methods and approaches in language policy research’, Qing Shao and Xuesong (Andy) Gao argue that various methods may be used as resources by researchers adopting different approaches to explore context-dependent language policy practices.

Closing out Part II is Chapter 22, ‘Grounded theory method’, in which Gregory Hadley explains that grounded theory in applied linguistics research is often used inappropriately. He highlights that the methodology is significant in its theoretical contribution in the field as it can help researchers to maintain consistency while collecting qualitative data, provide ways for critically analyzing data, and allow for the construction of midrange theories that could contribute significantly to the lives of educators and students, and to scholarly communities outside applied linguistics.

Part III: data collection methods

Methods for data collection in applied linguistics research are generally well established, but the nine chapters here offer insights and clarity that are valuable for novice and expert researchers alike. The interview, the most common method in qualitative research, is challenged from an ethical perspective by Louise Rolland, Jean-Marc Dewaele, and Beverley Costa in Chapter 23, ‘Planning and conducting ethical interviews: power, language and emotions’. Next, in Chapter 24, ‘Focus groups: capturing the dynamics of group interaction’, Nicola Galloway provides a much-needed overview of using this method specifically in applied linguistics research, highlighting the features that delineate the method from group interviews. In Chapter 25, ‘Think-aloud protocols’, Lawrence Jun Zhang and Donglan Zhang draw on debates about the method as used in psychology and cognitive science to exemplify the advantages and disadvantages of its use in applied linguistics research. In Chapter 26, ‘Stimulated recall’, Hugo Santiago Sanchez and Trevor Grimshaw provide an analysis of empirical studies that use stimulated recall, examining purposes, procedures, and epistemological challenges, resulting in a thorough conceptualization of the method.

Also very popular in applied linguistics research are questionnaires and observations. While commonly designated to quantitative research, these methods are proving effective in qualitative research as well. In Chapter 27, ‘Questionnaires: implications for effective implementation’, Janina Iwaniec points out that superficial familiarity with the method creates a false impression that questionnaires are quick and easy, when in fact the design must be meticulous, and the platform for conducting this method, more often online, has significant influence. In Chapter 28, ‘Observations and field notes: recording lived experiences’, Xiao Lan Curdt-Christiansen provides an up-to-date overview of how these methods are influenced by researcher stance, and how they can be used together with other data collection tools to effectively capture human linguistic experience.

Finally, some significant data collection methods prominent in psychology are on the rise in applied linguistics research. In Chapter 29, ‘Diaries and journals: collecting insider perspectives in second language research’, Heath Rose draws on psychological literature to extend the use of journals and diaries in applied linguistics research. In Chapter 30, ‘Oral language

elicitation tasks in applied linguistics research’, Faidra Faitaki and Victoria A. Murphy take on standardized assessments and other measures to discuss the advantages and disadvantages of them in eliciting linguistic utterances, resulting in valuable recommendations to effectively conceive such tasks. Completing Part III is Chapter 31, ‘Eye tracking as a data collection method’, in which Ana Pellicer-Sánchez and Kathy Conklin show how the ‘gold standard’ method from psychology research can be a valuable tool in applied linguistics, allowing the investigation of the processing of different types of linguistic and non-linguistic stimuli.

Part IV: data analysis

The final ten chapters of this handbook provide new ways of working with data, from challenging traditions of conducting quantitative data analyses, to updated overviews of conducting qualitative and text analyses, and finishing with new and potential directions for data analysis in applied linguistics research.

In working with quantitative data, SPSS analysis software holds precedence, but in Chapter 32, ‘Using statistical analysis software (R, SPSS)’, Jenifer Larson-Hall and Atsushi Mizumoto argue for the superiority of the software R. In Chapter 33 ‘Descriptive statistics in data analysis’, Jessica Briggs Baffoe-Djan and Sarah Ashley Smith define and scrutinize methods of data analysis to offer options for how to visually present summarized quantitative data, as well as to offer both theoretical and practical guidance for using descriptive statistics. Situated alongside this is Chapter 34, ‘Inferential statistics in quantitative data analysis’ in which Simone E. Pfenninger and Hannah Neuser offer a discussion of the feasibility of investigating cause–effect relations – the traditional basis of inferential statistics – focusing on what the models are, how they work, and why and when applied linguists should use them. In Chapter 35, ‘Factor analysis and statistical modelling in applied linguistics: current issues and possibilities’, Yuliya Ardesheva, Kira J. Carbonneau, and Xue Zhang provide an overview of these techniques in instrument development and validation contexts, concluding with valuable recommendations.

Content analysis is significant and somewhat misunderstood in qualitative applied linguistics research, and in Chapter 36, ‘Qualitative content analysis’, Ali Fuad Selvi addresses this by drawing on the uses of the technique from other disciplines, providing its epistemological orientations, and identifying the procedures and the role of computers and applications in conducting it. In Chapter 37, ‘Text analysis’, Wei Wang explains how this differentiates from content analysis, providing a range of text analytical methods informed by three different academic traditions. In Chapter 38, ‘Analysis of corpora’, Averil Coxhead provides an overview of different kinds of methodological decisions, reasons for conducting, important principles, and suggestions for tools for conducting a corpus analysis in vocabulary research.

Data analysis in applied linguistics is yet one more area ripe for theoretical expansion, and the final three chapters all take this on. In Chapter 39, ‘A discursive psychological approach to the analysis of talk and text in applied linguistics’, Matthew T. Prior and Steven Talmy introduce a powerful cluster of theoretical and methodological affordances to the study of spoken discourse, showing how it contributes to the ‘applied’ and interventionist aims of the field. In Chapter 40, ‘Multimodal (inter)action analysis’, Jarret Geenen and Jesse Pirini provide an overview of this data analysis methodology developed to study social interaction based upon the theoretical notion of mediated action. The final contribution to the handbook is chapter 41 ‘Toward an expansive interactional analysis’, in which research team Suresh Canagarajah, Daisuke Kimura, Mohammad Naseh Nasrollahi Shahri, and Michael D. Amory

draw on questions raised by recent theoretical advances in poststructuralist schools to explore how we can develop a disciplined and close analysis of interactional data from such theoretical orientations.

Conclusion

This handbook has come out at a crucial time for applied linguistics research, when theory that has been problematized in recent decades is taking shape, coinciding with the exponential amount of research output in the field driven by changes in language-related educational and social policy. The theorization (and re-theorization) of applied linguistics research methods is providing myriad ways for researchers in the field to contribute to knowledge and increase the impact of applied linguistics research on disciplines across academia. This ‘golden age’ of applied linguistics is apparent in the contributions to this handbook, where traditional methods have been overviewed, scrutinized, and re-conceptualized, and emerging methods have been linked to new ways of thinking about who we are and what we do as applied linguists.

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