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1.3 Doing Applied Linguistics: Methodological Considerations

If the Applied Linguist is a Jack of all trades, or a go-between across different disciplines and approaches, does Applied Linguistics have a coherent methodology? Does it need one? How would an Applied Linguistics methodology be different from that of, say, formal linguistics, or sociolinguistics and psycholinguistics? To try to answer questions such as these, which often exercise those new to the field, let us, first of all, remind ourselves of the distinction between method and methodology. There is quite a lot of confusion about the meanings of these two terms. *Methods* refer to specific techniques of collecting and analysing data. For example, a survey questionnaire is a method, and ethnographic fieldwork is another. Sometimes people use 'methods' to refer to tools or instruments, for instance, computer software for analysing data, or multiple choice questions (MCQs). Students are often very concerned about choosing the right method for their research project, and they want to learn how to do it, be it doing an interview or using a data bank. But the method chosen for a particular research project depends on the methodology, which is the underlying logic of methods. More precisely, *methodology* is the principle or principles that determine how specific methods or tools are deployed and interpreted. In one sense, Applied Linguistics is a methodology in itself, because it is concerned with real-world problems in which language plays a central role. Such a problem-solving approach distinguishes Applied Linguistics from other methodologies where the main concern may be hypothesis testing or theorization. In the meantime, Applied Linguists can employ a wide range of methods in collecting and analysing data, many of which are commonly used by sociolinguists, psycholinguists, clinical linguists, educational linguists and others.

There are various ways of characterizing different research methodologies. People often think of research methodology in terms of a quantitative versus qualitative dichotomy. In general terms, *quantitative methodology* aims to uncover facts and truths in an objective way by delineating patterns or structures, whereas *qualitative methodology* attempts to interpret meanings of and relationships between objects in context. For instance, a language class could be regarded as an object for investigation. A quantitative

Table 1.1 Four worldviews used in research

Postpositivism	Constructivism	Advocacy and Participatory	Pragmatism
Determination	Understanding	Political	Consequences of actions
Reductionism	Multiple participant meanings	Empowerment and issue oriented	Problem centred
Empirical observation and measurement	Social and historical construction	Collaborative	Pluralistic
Theory verification	Theory generation	Change oriented	Real-world practice oriented

approach might focus on how the class is structured, what the key components of the class are, and what role each component plays in the structuring of the class in terms of frequency and regularity. A qualitative perspective, on the other hand, would be most likely to ask what the definition of a class is in comparison with some other event, how the different components of a class (e.g. participants, topic, setting) are related to each other, and why a particular language class takes place in the way it does. Quantitative methodology is used a great deal in science disciplines, while qualitative methodology is more common in the humanities and arts. The social sciences often use both: there are social scientists who are more interested in the 'what' and 'how' questions and adopt a quantitative perspective, while others are more concerned with the 'how' and 'why' questions and lean towards a qualitative methodology. Applied Linguistics as a problem-solving approach does, on the surface, seem to lean towards the qualitative perspective, although there are also plenty of Applied Linguists who are interested in facts and figures and therefore adopt a quantitative methodology.

Perhaps a better way to understand the differences in the various methodologies is to look at the objectives of the research. Creswell (2003: 6) proposed the classifications listed in Table 1.1, which he terms 'worldviews in research'. Such a classification helps us to think of research methodologies in more practical ways and avoids the quantitative versus qualitative dichotomy and the potential confusions between methodology and methods. One can use specific quantitative or qualitative methods and techniques, or a combination of the two, within each of these methodological perspectives.

Whatever methodology you choose to adopt, there are certain steps you need to take in conducting a research project. These typically include

1. defining the research question or questions;
2. collecting evidence;
3. analysing and presenting findings.

1.3.1 Defining the Research Question

Defining the research question is a crucial first step. The question has to be researchable, which means that

1. there are potentially different answers to it;
2. there is evidence available for you with which to answer the question.

The most common ways of finding research questions are through personal experience or reading other people's work. These two ways also often go hand in hand with each other. Many Applied Linguists come into the field because of professional and personal interests. Some may have taught languages in different parts of the world, to different groups of learners, at different levels, and they are interested in researching questions that are directly related to their work experience. Others may themselves be multilingual, have raised children in diverse linguistic and cultural environments, worked in a particular institution, for example multinational corporates, the media, translation and interpreting services, and would like to gain knowledge and understanding of the key issues in these domains. Most of the people entering Applied Linguistics with professional or personal interests tend to have a better idea of the broad area or topic they want to research into than of a specific, researchable question. For example, they may say that they are interested in researching heritage language schools, or intergenerational communication in multilingual families, or attitudes towards certain languages in a particular community. To make the journey from such broad areas of interests to specific research(able) questions is not always an easy or straightforward process. This is where critical reading of the literature comes in.

A good literature review serves two closely related purposes:

1. to make the reader understand why you are doing what you are doing in the way you are doing it; and
2. to prepare your own argument.

It should cover the following questions:

- What has been done on the topic or area of interest? Are you interested in exactly the same topic or area, or in something that is similar but different?
- What are the questions asked by the other researchers? Can you ask the questions in a different way? Do you have other questions to ask?
- From what methodological perspective did they ask the questions: postpositivism, constructivism, advocacy and participatory, or pragmatism? What methodology would you use?
- What methods and data did they use in answering the questions? Can you improve on the research design and method? Is there other evidence that you can provide to address the questions?
- How did the researchers interpret their results and what argument did they put forward on the basis of their data analysis? Do you agree with their analysis? Are there other ways of interpreting the data?

In other words, a good, critical review should show that not only have you read extensively the existing work in the field but you have also understood the methodology and arguments, by pointing out the strengths and weaknesses, by comparing the results of different studies and by evaluating them with reference to your own interests. Once you have answered the above questions, you are likely to have a research question or even a set of questions for your own project.

1.3.2 Research Design

It is often said that a research project only really begins when one starts to collect evidence or data. Many students are anxious about the amount of data they collect and whether the

data they have collected is 'good enough'. To ensure that the data you have is of sufficient quantity and quality, you need to consider carefully a number of design issues. The first and foremost is: 'given this research question (or theory), what type of evidence is needed to answer the question (or test the theory) *in a convincing way*?' (de Vaus, 2001: 9, original emphasis). Using an analogy, de Vaus compares the role and purpose of research design in a project to knowing what sort of building one is planning (such as an office building, a factory for manufacturing machinery, a school, etc.). You can normally get a sense of what kind of evidence or data is appropriate for the research question by reviewing existing studies – what evidence did other researchers use to support their arguments? More specifically, you can ask the following questions:

1. Is the primary aim of the study to compare two or more individuals, situations, behaviours, or to focus on just one? (etic vs. emic)
2. Is the data collected and analysed in numerical form or not? (quantitative vs. qualitative)
3. Is the data collected under controlled conditions or not? (experimental vs. non-experimental)
4. Is the study conducted over a period of time or at one point in time? (longitudinal vs. non-longitudinal)
5. Does the study involve one single participant, a small group of participants or a large number of participants? (case study vs. group study)

The terms in brackets after each of the above questions are different types of research design. An *etic* study is often known as a comparative study, which involves comparing one individual, or situation, or behaviour, with another. An *emic* study, on the other hand, is one in which researchers try to explore and discover patterns and meanings *in situ*. The use of numerical data lies behind the difference between *quantitative* and *qualitative* research design. A quantitative study is essentially about explaining phenomena and identifying trends and patterns by collecting and analysing data numerically, while a qualitative design is an umbrella term that covers a variety of methods which focus on the meaning of the phenomenon being investigated and do not involve numerical data. *Experimental* studies collect data under controlled conditions. The purpose of the 'control' is to keep everything, except for the variables under investigation, as similar or comparable as possible so that the experimental results can be reliably attributed to the changes in variables. In a *non-experimental* design, researchers do not manipulate the conditions. This design is suitable for research questions that aim to explore the phenomena in a more natural manner, such as spontaneous interaction, to find out opinions, attitudes or facts or to assess current conditions or practice. *Longitudinal* design refers to studies in which data are collected from a small number of subjects over a period of time, and is suitable for answering research questions that aim to explore changes and development over time or to evaluate the effectiveness of a training programme or the impact of an experience. *Cross-sectional* design, on the other hand, refers to the type of studies in which data is collected at one point in time from a large number of subjects grouped together according either to age or to other variables such as length of stay in a new country. It can be used to explore the relationship between various variables, for example, the correlation between the degree of appropriateness in use of the speech act by an English-as-a-foreign-language learner and the length of stay in an English-speaking country; or to describe the developmental pattern of a particular feature or skill such as the development of Intercultural

Communicative Competence. *Case study* design is an in-depth investigation of, usually, a single subject. It can be used to describe the linguistic or communicative behaviour of an individual member of a group, to refute a claim by providing counter-evidence, or alternatively to show what is possible as positive evidence. *Group study* involves a group of individuals instead of one subject. Single case study and group study are very often combined with longitudinal and cross-sectional designs. For example, a case study can be conducted longitudinally, and a group study can be done cross-sectionally.

There are two further types of research that are increasingly popular in Applied Linguistics, namely, *action research* and *critical research*. Action research belongs to the pragmatist and the advocacy and participatory methodological perspectives in Creswell's framework. It is a reflective process of problem solving. Some people think of action research as case studies. It is true that most often action research is done on a case-by-case basis. But the key to action research is that it is aimed at improving the way the individuals involved in the research process address issues and solve problems. Action research can also be undertaken by larger organizations or institutions, assisted or guided by researchers, with the aim of improving their strategies, practices, and knowledge of the environments within which they practise. Kurt Lewin, who is believed to have coined the term *action research*, described it as 'a comparative research on the conditions and effects of various forms of social action and research leading to social action' that uses 'a spiral of steps, each of which is composed of a circle of planning, action, and fact-finding about the result of the action' (1946). Action research has been particularly popular among language teaching professionals who wish to improve their own as well as their organization's professional practice through the reflective research process.

Critical research cuts across the constructivist, the advocacy and participatory as well as the pragmatist methodological perspectives. Critical research has two rather different origins and histories, one originating in literary criticism and the other in sociology. This has led to the rather literal use of 'critical theory' as an umbrella term to describe theoretical critique. Starting in the 1960s, literary scholars, reacting against the literary criticism in the previous decades which tried to analyse literary texts purely internally, began to incorporate into their analyses and interpretations of literary works semiotic, linguistic and interpretive theory, structuralism, post-structuralism, deconstruction, psychoanalysis, phenomenology and hermeneutics, as well as feminist theory, critical social theory and various forms of neo-Marxist theory. With the expansion of the mass media and popular culture in the 1960s and 70s, social and cultural criticism and literary criticism began to be intertwined in the analysis of popular cultural phenomena, giving rise to the field of Cultural Studies. Critical research in the sociological context, on the other hand, arose from a trajectory extending from the non-positivist sociology of Weber, the neo-Marxist theory of Lukács, to the so-called Frankfurt School of social theorists, most notably Horkheimer and Habermas. It is underpinned by a social theory that is oriented toward critiquing and changing society in its totality, in contrast to traditional theories oriented only to understanding or explaining it. It was intended to be a radical, emancipatory form of social research and concerned itself with 'forms of authority and injustice that accompanied the evolution of industrial and corporate capitalism as a political-economic system' (Lindlof and Taylor, 2002: 52). A newer, postmodern version of the critical social theory focuses on what has been called the 'crisis of representation' and rejects the idea that a researcher's work is considered an 'objective depiction of a stable

other'; instead, it tries to politicize social problems 'by situating them in historical and cultural contexts, to implicate themselves in the process of collecting and analyzing data, and to relativize their findings' (Lindlof and Taylor, 2002: 53). Meaning itself is seen as unstable because of the rapid transformation in social structures and as a result the focus of the research is centred on local manifestations rather than broad generalizations.

Critical research has been particularly appealing to some Applied Linguists because of the shared interests in language, symbolism, text and meaning. In the 1970s and 1980s, Jürgen Habermas redefined critical social theory as a theory of communication, that is, communicative competence and communicative rationality on the one hand, distorted communication on the other. Applied Linguists who adopt the critical research perspective have focused on the processes of synthesis, production or construction by which the phenomena and objects of human communication, culture and political consciousness come about. This is reflected in much of the discussion on language ecology, language rights and linguistic imperialism, as well as on gender and ethnicity in language learning and language use (e.g. Pennycook, 2001; Sealey and Carter, 2004). Sociolinguistics, once focused on linguistic variation and change in relation to societal structures and speaker identities, has also taken a critical turn in the last two decades, leading to further blurring of boundaries with Applied Linguistics and other adjacent approaches such as Critical Discourse Analysis. Nowadays, it is common to find in sociolinguistics journals studies that are concerned with topics such as linguistic ideology, media representation of minority language users or equality and discrimination in workplace communication.

1.3.3 Data Collection

The data that Applied Linguists are interested in can be broadly identified in two categories: interactional and non-interactional data. As has been discussed in Section 1.2, Applied Linguistics research should have language as its main object. This does not mean, however, that it has to be language in interaction; it could be language attitude, language awareness, motivations and strategies for language learning, language policy, language assessment, and so on. In fact, interactional data only constitutes the database for a small proportion of Applied Linguistics.

Interactional data consist of a continuum with elicited conversation and naturally occurring conversation at each end, according to the degree of naturalness. Conversation can be elicited through a range of methods and techniques such as discourse completion tasks, recall protocols, or role play. The key issue for the interaction obtained through elicitation is its comparability to naturally occurring interaction. For naturally occurring conversation, the key issue is how to capture it (using observation sheet vs. audio-visual recording, for example) and how to strike the balance between details and analytical approach (Interactional or Conversation Analysis). In addition to elicited and recorded conversation, conversation data are also available in a number of other sources such as data banks, the Internet and other mass and social media.

The so-called *non-interactional data* are data about language practices rather than samples of language practices themselves. Surveys, questionnaires, interviews, self-reports, standard assessments and laboratory experiments can all be used to collect

non-interactional data. They are often used to collect large amounts of information from sizeable populations. With the exception of self-reports, the researcher normally has an expectation of what the responses (i.e. data, findings) will be. They are therefore more often used to test hypotheses or verify existing findings and claims. Some Applied Linguists are also interested in critical analysis of public discourse or media language.

Ethnography is sometimes used as a data collection technique when the researcher is particularly interested in exploring the meaning of a phenomenon. Ethnography is in fact more of a methodology than a method; it is a holistic approach to social phenomena and social practices, including linguistic practices, with specific references to both historical and present contexts. Ethnography requires rich data, often collected through a combination of different means including recordings, interviews and questionnaires. But the key data collection method for ethnography is *in situ* observation. Observation enables the investigator to describe events, actions, behaviours, language use, and so on, in detail and to interpret what has happened in context. During observation, researchers make field notes of what they see in as much detail as possible. There are different types of observations, depending on the researcher's role and visibility in the event under study. Researchers can either actively take part in observation and have maximum contact with the people being studied or remain as unobtrusive as possible. The main advantages of ethnographic observation are that it allows the researcher to uncover information previously unknown, to gain an in-depth description, and to capture a series of events and processes over time. The challenges are several: researchers may have biases in selecting what to note down; it is difficult to differentiate describing from interpreting what has happened; documenting an event while observing and participating in activities can be a demanding task.

There is a huge amount of published literature on specific techniques and tools for collecting data. Some of the key references and useful guides are given at the end of the chapter, and in the Resources List at the end of this book.

1.3.4 *Analysing and Presentation Findings*

Data analysis follows closely from research design. It is advisable to consider how you intend to analyse and present the findings during the design stage of the research process, before you start collecting data.

Quantitative data are most often analysed through statistics and presented in various figures, tables, graphs and diagrams. There are ample guide books for students on how to do quantitative and statistical data analysis. Qualitative data, on the other hand, are usually presented in discursive accounts, with quotations and samples of actual data. For both quantitative and qualitative data analysis, accuracy and accountability are paramount. We are talking about accountability to the participants, to the situation that has been investigated, to the researcher himself or herself, as well as to the wider audience. The researcher should be truthful and honest not only in describing what they have observed but also in explaining what their ideological stance may be, what they expected to find, and how their identity and relationship with the people they studied impacted on the findings.

If you have collected interactional data, transcription is the key first step towards analysis. There are different techniques of transcribing language in interaction; for

example, Conversation Analysis (CA) specifies a set of conventions for sequential analysis. There are also computer software and other new technologies to assist you in transcribing interactional data, including nonverbal communication and multimodality data. However, most people do not follow a specific set of transcription conventions tightly. And most people do not transcribe everything that has been recorded. It could be argued that one cannot transcribe everything after the event has taken place anyway. There are, therefore, certain decisions one has to make in transcribing interactional data: what is to be transcribed and what is to be left out; what gets highlighted or emphasized and how; what should be done to ambiguous elements, for example, when it is not clear who the speaker was, or what was being referred to. As Ochs (1979) remarked over 30 years ago, such decisions in transcription are also theoretical decisions that would affect the way data is interpreted.

1.3.5 Ethical Considerations

As Applied Linguistics research often involves human subjects, ethical considerations are crucial. These include

- Justification: the proposed research will achieve worthwhile objectives and the time and resources needed for the research are justifiable. Participants' welfare and public responsibility are paramount. Where the project may potentially put the participants at risk, either physically or psychologically, care must be taken to ensure that the benefits of the project outweigh the risks. Appropriate support mechanisms need to be provided to minimize any potential risk. Where there is a possible conflict of interest (e.g. the work is to be carried out in the same organization or sponsored by an organization), again a case must be made.
- Access to participant(s): this includes issues of participants' privacy, the need to reduce invasiveness of the presence of researchers, issues of confidentiality and anonymity, and so on.
- Informed consent: when seeking consent, participants need to be fully informed about the aim and nature of the project and any potential risks. They should be made aware of their rights in the project, such as the right to withdraw at any time, the right to refuse to answer any question, the right to ask any question, and so on. With young and school-age children and vulnerable populations such as patients, consent must be sought from their parents, guardians, carers or schools (if the research is carried out on the school premises or with assistance from the school).

Other ethical concerns relevant to studies in Applied Linguistics include

- Participants' language ability: whether participants' language ability is sufficient for them to understand the informed consent form.
- Cross-cultural differences in ethics: there may be differences in the ethical considerations between the culture in which the research is carried out and the culture from which participants come. This issue is particularly relevant to studies on Study Abroad and intercultural interactions. It is important to anticipate any potential differences and clarify any misunderstandings.

Most educational institutes have an ethics committee which oversees the ethical approval and a set of ethical approval procedures. Students must check the procedure and seek approval before carrying out data collection. In addition, ethical guidelines are provided by some professional bodies or research journals. For example:

- TESOL Quarterly Research Guidelines are available at: www.tesol.org/.
- British Association for Applied Linguistics (BAAL) has a set of recommendations for good practice in Applied Linguistics student projects at: www.baal.org.uk/.
- American Association for Applied Linguistics (AAAL) has passed a range of resolutions that affirm the commitment to promoting diversity, oppose discrimination on the basis of accented speech, support the use of language analysis in relation to questions of national origin in refugee cases, oppose the labelling of English as the national language in the US, and so on: www.aaal.org/.

Wray and Bloomer (2006) also provides useful information on the differences between confidentiality and anonymity and on data protection laws.