

# Appraising Research in Second Language Learning

*A practical approach  
to critical analysis  
of quantitative research*

SECOND EDITION

Graeme Keith Porte

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# Preface

This book is written to guide student and novice researchers through their critical reading of a research paper in the field of second language (L2) learning. My aim is to help these readers relate the basic knowledge they acquire during introductory courses on investigation in applied linguistics to their own independent reading of research papers. They will be shown ways of approaching the appraisal of the abstract and the introductory section of the study, both of which set the stage by describing the rationale as well as the objective of the work. Similarly, the reader will be given ideas about how to assess the method and procedures section so that he or she can decide, for example, whether the research design was appropriate, and what precautions were taken to guard against threats of validity to the findings. They will become more familiar with, and confident about, interpreting results from commonly-used descriptive or inferential statistical procedures and checking how appropriately these have been presented. Finally, the reader should be in a position to assess his or her overall confidence in the paper and critically to evaluate the researcher's own interpretation of the findings in terms of the extent to which the conclusion is justified, can be generalised, and has limitations.

A knowledgeable reader will also contribute enormously to research practice. Above all, there is the obvious help and experience critical reading gives us towards the better description and presentation of our own studies. Informed criticism of others' work inevitably also helps us to discover new areas of research that have emerged as a direct result of this critical reading. This said, I will *not* be focussing here specifically on designing and conducting a critique of research as direct preparation for carrying out, writing up, and publishing one's own study. Indeed, as will become clear in the text, different journals and other media adopt different policies with regard to the presentation and writing up of research for publication, varying in accordance with the orientation and objectives of the particular medium. Nevertheless, learning to read research appropriately is, indeed, intimately connected with learning to write it effectively, and it is to be hoped that the experience of appraising in this way will help the reader better to present their own work for publication and peer evaluation.

Research in L2 learning<sup>1</sup> contexts takes place in many forms and follows many research traditions, of course. Quantitative research is only one of these approaches, along with others such as ethnographic and survey research, observational techniques

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1. Except where indicated, "L2" refers to both second language and foreign language learning contexts.

and more introspective methods – all of which have provided us with excellent insights into how second languages are learnt and taught. Within the area of quantitative research much of the focus in this book is on so-called “quasi-experimental” studies using statistical approaches with participants in intact classroom situations. The book helps readers to appraise the most common statistical procedures used in applied linguistics and L2 research such as *t*-tests, correlation, chi-square, and factor analysis. This should not be taken as a recommendation about the “best” way to do research in our field: the real-life world of L2 learning places considerable limits on a researcher being able satisfactorily to select and assign participants and impose conditions on the experiment. Such intact groups imposed by the local administration often mean that it is difficult – on occasions impossible – to meet the many threats to data validity present in such research, in particular those relating to selection of participants, allocation of groups, and experimental procedures. Conversely, for many of us working in the area of L2 learning, undertaking studies with intact groups is the only practical way of conducting research. This is not to belittle the contribution already made – and still to be made – by such studies: our research objectives and appraisal of research will always need to take such unavoidable constraints into account. But this reality means that we should learn not only how to use such familiar designs to our advantage, but also how to appraise what has gone on in other researchers’ experiments. In this way, we can search out answers to our research hypotheses and questions, while acknowledging the inevitable limits imposed on the interpretation of results obtained in these research contexts.

## **Why do we need to appraise research?**

The importance of the book lies in the fact that it responds to a continuing need in the field. Students and potential researchers may have read many academic papers and absorbed considerable theory about research design and how to implement it in their own study. Indeed, more and more universities and teaching colleges are including courses in their degrees aimed at providing students with a basic introductory knowledge of research techniques and practice. This is a particularly timely response to a perceived need for students who will ideally want to contribute to their chosen field of study. However, conducting research is much more than merely knowing how to carry out the investigation. Sound preparation for research also requires the ability to situate and defend our proposed study in the light of existing knowledge. In order to do this, we need to be able to appraise others’ work adequately and appropriately enough to help justify the contribution our own work is intended to make to current awareness in the field.

Although my assumption is that all of us work and/or study in the area of L2 learning, our interest in academic papers will inevitably vary according to our own

personal line of research. Thus, while the extracts and sample papers the reader is going to study in this book reflect important areas of research, we will inevitably all be approaching a paper from different backgrounds, interests, and needs. Nevertheless, our overall critical approach to the object of our reading will be similar. It will, therefore, always be important for anyone involved in any kind of research in our area to be able to approach the reading of a study both from the point of view of an uncommitted critical reader and/or that of a researcher interested in one focal aspect of that area.

## Who is this book for?

This book is primarily intended as a main course text (or supplementary to a research-techniques book such as those mentioned in the “Further reading” list) and is aimed at classes of both undergraduate and postgraduate students reading for language or applied linguistics degrees who are required to submit work which entails the understanding of the theory and practice of research principally based on quantitative analyses. It also links with the growing number of applied professional courses and should prove of considerable interest to those participating in language teacher-training programmes or degrees, as well as those practising teachers anxious to embark on their own classroom research. Both groups need to be research literate and, as Altman (1988) maintained, “second language teachers have a professional obligation to make sense of research that has a potential impact on their classrooms”<sup>2</sup> – even if they do not wish actively to participate in their own research.

Appraisal of research papers not only requires common sense, but also some degree of literacy in this kind of research. To take full advantage of this text, the reader should already understand the basic principles of research in this field and needs to have some rudimentary knowledge of how the most common inferential and descriptive statistical procedures – as in correlation or comparing means and frequencies – might be used in data analyses. A good number of excellent books are already available which provide an introduction to terminology and the most useful quantitative and qualitative techniques typically used in research in the area of L2 teaching and learning (see “Further reading”). Where descriptive or inferential statistical procedures are discussed in this text, the emphasis is on the appropriateness and consequences of their application in the context of what we have read in the paper, rather than on the way these procedures should actually be carried out. Furthermore, a large number of illustrative examples and a “Glossary of key terms in quantitative research” have

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2. Foreword to Brown, J. (1991). *Understanding research in second language learning* (p.vii). Cambridge: Cambridge University Press.

been included to facilitate the critical process. Nevertheless, the book provides only an introduction to key issues in certain statistical matters, such as the advantages and disadvantages of parametric and non-parametric procedures, or the implicit assumptions to be applied when using a particular test, and always strictly in terms of the way such concerns have an impact on the way we appraise any outcomes. Readers who intend to move beyond critique to employing some of these procedures in their own research need to obtain more profound knowledge and are referred to more detailed accounts in the recommended books.

## How is the material to be used?

An important objective of this book is to provide the reader with a suggested methodology that can eventually be applied to his or her own independent appraisal of quantitative research. To this end, the practice of appraisal in this book goes from worked samples, through guided, and finally on to unguided papers.

The appraisal of a research paper requires the ability to be attentive throughout the reading and thereby be able to react recursively to the text based both on what we know and what we have been told. Continually stimulating and channelling such reactions to the reading forms the basis of the learning approach applied in this book. The principal innovative methodology used here to arouse the reader's critical faculties is awareness-raising. The reader is encouraged to react to information at the moment of reading rather than – as usually happens – in a subsequent review of the whole text. Thus, my assumption throughout is that the critical reader approaches their reading in the usual sequential manner. In other words, they will normally evaluate each section as and when they meet it, without looking ahead to other sections of the paper, but recalling what they have already read. I have adopted such a progressive *modus operandi* not only out of practical considerations, but also because it represents a very sound reading strategy when one is learning how to appraise research: it encourages the critical reader to begin to build up a response to what they are reading and eventually gauge their final confidence level based on the accumulation of input. Notwithstanding these assumptions, there will be times within the activities when a reader is encouraged to look ahead to what is said at later stages in the paper for further possible insights.

What this means in practice within a recursive appraisal methodology is that, at various points in the text, I encourage readers to pause in their reading, to summarise and question what has just been read, to ponder over the consequences of a statement, to predict outcomes, to think back to previous parts of the paper and ahead to upcoming sections, or to suggest possible problems or drawbacks in the perceived research design. Obviously, such spontaneous responses are only expressions of our preliminary reactions to something, and they may well be refuted by what subsequent

sections of the paper reveal. Consequently, they may or may not need to be modified in the light of that information. However, the exercise of raising our awareness and reacting to the text instinctively in this way is particularly helpful for a reader who is seeking to engage critically with the text. Essentially, it draws us immediately into the research itself and puts us in the role of an inquisitive observer, almost as if we were engaging in a real-time conversation with the author about the study – a scenario I put to practical use in the sample papers when readers are initially encouraged to record their instinctive reactions to what they read as if talking to the researcher face-to-face (see below, *How to use the workbook section*).

Here a word of warning. A popular notion exists that appraising a fellow-researcher's work consists of finding faults in that work. Given what should be the fundamentally supportive role of the critical reader of research, I would like to dissuade you from this notion at once. Appraisal of scientific research can be approached in many different ways but, by definition, will require us to adopt a cautious attitude to what we read and will involve us making judgements about the perceived quality and merit of what has been described. However, such remarks should be seen to have a constructive – rather than *deconstructive* – aim both for the author *and* the reader. As scientists and readers of such science it is in the interest of our field that we are sceptical; it is also by asking pertinent questions of the research we read that we ourselves may better shape the course of our *own* future research. We should not expect, as researchers or readers of research, to find a study which provides us with *all* the answers to *all* our questions. However, our reading should at least help put us in a better position to decide whether all the appropriate questions were being asked in the first place. Such appraisal needs to respond appropriately to the most consequential aspects of the study, rather than to some kind of check-list of essential elements of any research paper. Indeed, Gottfredson (1978)<sup>3</sup> identified no less than 83 attributes that many editors/reviewers may use in their appraisals. Given such a large number of elements, it is not surprising that many journal reviewers themselves end up in disagreement about the merits of a paper!

The main idea behind the awareness-raising approach to appraisal encouraged here is that readers see themselves not as judge and jury of a study, but rather as potential consumers of research. As such, we will initially need to evaluate the contribution and importance of the work to our own present interests. In turn, learning how to appraise will enable us to assess the amount of confidence we might reasonably have both in the findings and the interpretations made from these. A well-designed study will provide answers in which we can have confidence and will serve as an example, and perhaps a stimulus, for our own work. In this sense, the overall significance of this

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3. Gottfredson, S. (1978). Evaluating psychological research reports. *American Psychologist*, 33, 920–934.



book is that it shows the reader how to learn directly and indirectly from what he or she is reading.

## How to use the textbook section

This book has been written in a combination text- and workbook format. In the textbook section, the reader is introduced to the most typical component parts or sections of a quasi-experimental quantitative research paper in this field. Here a personal perspective on the paper is provided which explains and illustrates ways in which essential information may ideally be communicated to the reader and critically interpreted within that part. There is inevitably a degree of subjectivity involved in one reader appraising certain aspects of L2 research; however, I have tried throughout to provide authoritative advice on appraisal, rather than impose an authoritarian approach.

For the purposes of this approach to appraisal, a research paper is divided into four basic elements (i. Introduction; ii. Method; iii. Results; and iv. Discussion and Conclusions) and a number of subsections within these four. In the Introduction chapters readers will be presented with strategies for appraising the abstract, the background to the problem and the problem statement, the review of the literature, research objectives and variables, and operational definitions. Obviously, an adequate understanding of the value of the whole paper cannot be achieved without appreciating the sum of its parts. The reader is shown how the abstract may provide both context and landmarks: the kind of information which enables the reader to assess the immediate value the paper has for his or her current interests. Subsequently, the reader is taken through the process of locating and evaluating the background to the study and the problem statement and interpreting any variations found during the paper. The reader then decides how far the literature cited provides an adequate theoretical and empirical basis for the subsequent development of the study's hypotheses and/or research questions. Finally, he or she is encouraged to think about the operational descriptions and assignment of variables and constructs in the study. The advice and practice given in this section is aimed at helping the reader be in a better position to handle a posterior evaluation of the Results and Discussion sections of the paper being read, both in the light of the information provided here and the responses made to it.

Once it is established *what* the text tells us about the study and the background to, and nature of, the research question or hypothesis, we might look for a suitable description of *how* the study was carried out. Again, the recursive appraisal process here is one of constant action on the part of the author and reaction on the part of the reader. Thus, what is explained to us in this part of a paper will need continually to be appraised in the light of our reactions to the information in the Introduction. In the Method chapters the following main areas are treated: internal and external validity



issues; participant identification, processes of selection and group assignment; procedures; principal research designs; and proposed measurement and analysis. Thus, these chapters deal with the nuts-and-bolts of the research design. Issues which need to be appraised here include how participants have been selected for study and the consequences of such selection for any subsequent interpretation, the conditions in which participants are observed and the limitations imposed by such circumstances, the information and instructions given to the participants and the implications of these for the data obtained, or the way in which research designs with intact groups may differ from true experimental designs. Identifying a study's research design is helpful when evaluating the procedures described by the author. Since research design is not normally described by the authors themselves, it will often be up to the reader to assess the suitability of the procedures used. To this end, the reader is shown the benefits of considering designs graphically, highlighting their advantages and disadvantages using the help given. In this way, the reader is also encouraged to comment on any potential weaknesses in the design and suggest possible improvements.

Throughout, particular attention is paid to the possibility of replicating the research we read. That we might replicate research to confirm results is a condition of the self-correcting nature of scientific inquiry. In order to repeat research in this way we need to have access to the most important details of what went on and, for this reason, I encourage readers to judge the replicability of the research designs we are presented with. If the descriptions we read are vague, they are unlikely to facilitate either a future replication of the study nor allow the reader adequately to evaluate and interpret the information given in the subsequent Results section.<sup>4</sup>

Another of the interesting questions considered here is the appraisal of any proposed data analyses. After an introduction to the most commonly-used statistical analyses of data, the reader is encouraged to appraise with a view to verifying the extent to which the researcher has thought about and checked the assumptions underlying any proposed statistical analyses and/or whether he or she has allowed for the potential effects of violations on subsequent results.

In the Results chapter, the focus shifts to outcomes and their initial interpretation. In many cases, in the kind of study I am concerned with here, the selection of an appropriate analytical procedure will be extremely important to establish confidence in results – both for the author and the reader. That confidence, hopefully gained in previous sections of the paper, will ideally now be reinforced through the nature and presentation of the findings. Readers will need to see how to locate the most important results (i.e., those which have a direct bearing on the proposed problem statement).

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4. Further advice about how to carry out a replication study can be found in the journal *Language Teaching*, 41(1), 1-14.

Consideration for appraisal will include whether these have been stated or presented clearly enough for the reader to interpret them appropriately. To this end, the reader is shown how to make use of any tables or figures provided in the paper, particularly those that provide the basis for checks to be made on claims of relationships, similarities, or differences between variables. The reader is subsequently encouraged to assess the results as a consequence of the research context, the objectives of the study, the participants used, and the choice of instrument used for analysis. Therefore, particular attention is paid here to helping the reader assess what they are being told based on the information given and appraised earlier in the paper. The reader is also encouraged to check on typical but questionable practices, such as doing additional tests when the planned ones did not provide significant results, or using parametric statistical tests without enough evidence of normality in the original database.

Within this section, both statistical and practical significance (or meaningfulness) of results will also be a source of concern. Specifically, readers are shown how they might go about evaluating the significance of findings through any text or tables provided and, if these are reported, to see whether such outcomes actually represent the major question asked or some subsidiary, post-hoc question not really part of the original problem statement. As regards meaningfulness, the aim is to assess whether any apparently significant data reported are, in fact, interesting or important once placed within the context and objectives of the study.

In the final chapter, strategies are suggested to assess the quality of the Discussion and Conclusions. The first focus of appraisal in this section is the extent to which any conclusions drawn are consistent with the results. We will also want to be shown how far these outcomes fit in with what has been discussed in the previous literature review. The more studied interpretations we might expect to encounter in this section of the paper will need to be evaluated in terms of their reasonableness, and any explanations for unexpected outcomes carefully considered. If, for example, an author claims that a particular variable did not affect results in the way predicted, readers may want to judge how far the reason given is acceptable in the circumstances. Similarly, questions of generalisation and practical implications of findings are appraised here. The reader will need to be in a position to assess the justification for any claims that a particular conclusion can be applied to other situations. Finally, in such a practical field as ours, it will be important to weigh up the potential consequences of any outcomes reported for language learning and teaching practice.

At the beginning of each chapter (after the initial appraisal of the abstract), readers are firstly presented with the relevant section to read from the sample paper and are introduced to the initial critical appraisal strategies of summary and annotation of immediate reactions. They are also encouraged at this stage to formulate and attend to a set of initial Observations on any immediate issues noted (see below). At this worked appraisal stage, readers are shown my own approach to the task as an example. Once

readers have thereby familiarised themselves with the section of the paper in question, I then go on to discuss a specific appraisal issue in detail, explaining how each can be approached in our critical reading of the text. At the end of each sub-section I return to the sample paper read at the beginning of the chapter to carry out the appraisal itself based on the advice given. Each chapter ends with a second complete worked sample appraisal which readers can use as reinforcement of the theory and practice provided in the chapter just read.

## How to use the workbook section

In the subsequent workbook section the student is encouraged to see how this same approach to appraisal might be used in practice on two complete research papers, before trying it out on their own independent reading. These personal readings of fictitious research papers comprise a guided appraisal, followed by an unguided appraisal for students to work on alone.

The sample papers have been specially written for the book, but have objectives, method, data analysis, results, and conclusions that are based on a number of actual studies. The objective in writing these papers was to present them “warts and all”: there has been no attempt to hide weaknesses or limitations in order to present model pieces of research for appraisal. Although the way a researcher expresses him- or herself on the page is a crucial element in communicating to the reader, adequacy of language or style of expression will not be specific objects of appraisal here, except where this reflects directly on the understanding or discussion of the research undertaken.

The worked, guided and unguided appraisals all follow the same procedure: they begin with part of the text of a paper followed by leading questions, all of which are closely linked to the suggestions made in the relevant textbook section and which focus on an awareness-raising approach to critical reading.<sup>5</sup> In the two worked sample appraisals, students can consider my own responses to these leading questions, alongside the ideas expressed in the relevant textbook section. In the subsequent (guided and unguided) papers in the workbook itself, readers should attempt their own responses based on the advice given in the textbook making use, if they wish, of the guidance provided by a number of additional specific prompts and suggestions.

As an initial recommended reading and response strategy for any paper read, and before embarking on these questions, the reader is encouraged to take notes on either

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5. This initial pedagogical orientation towards critical reading owes much to the general advice and criteria offered by Bruce Tuckman in his 1994 book *Conducting educational research*. New York: Harcourt Brace College.

side of the text, summarising, where appropriate, what has been read and then recording spontaneous reactions to it – much as if he or she were engaged in a dialogue with the researcher. An integral part of the approach to appraisal advocated here is that the reader begins to stimulate their critical faculties through such a stream of consciousness on the very first encounter with the text. Clearly, such spontaneous feedback may well need to be revised in the light of what is read elsewhere in the paper; however, both kinds of initial response will stand the reader in good stead as important references and points of departure for future discussion.

In the book, these spontaneous, initial reactions, and others noted in subsequent readings, are then assembled and formulated as observations (see below) interspersed throughout that text. These will provide suggestions which initially help alert the reader to ambiguous or incomplete information, potential flaws or inconsistencies, weak arguments, or simply points to follow up in the remaining text. The worked example aims to help the student appreciate the nature and degree of critical attention required during a reading and the kind of subsequent questions that might be posed as he or she is reading the rest of the paper. Clearly, both my responses to the leading questions and the observations made are merely suggestions for what could be passing through the mind of a critical reader; doubtless, readers themselves will be able to supply more of their own based on their experience and the textbook procedures.

As these initial activities imply, trying to approach a piece of published research using an awareness-raising strategy is very much about learning to become constantly responsive to what you are being told. This requires a different, more meticulous, approach to reading than you may be used to. I have attempted to convey this need for constant critical receptiveness during appraisal through these preliminary reading strategies and subsequent observations, thereby encouraging the reader regularly to attend to their inner voice during the reading. The objective is to help the students, in their own subsequent independent reading, to raise critical awareness sufficiently to enable them to pause, assimilate something they have just been told in the text, and form the pertinent response – either as a question or, as it were, an aside to oneself for later use. This pause – as one judiciously approaches and responds to a section of the text – is visualised in the workbook samples as a numbered symbol (①, ②, etc.) in the text itself. In the worked appraisal after each chapter, these symbols correspond to the kind of response and/or question I found myself asking as I read the text. Subsequently, in the guided and unguided papers in the workbook, the reader is encouraged to respond independently to the points raised.

In this sense, and in terms of actual class practice, the book lends itself to more than one method of exploitation (see below, *Notes on the second edition*). The approach should appeal to those who seek a way to combine teacher input, student input, and student interaction, and provide for different learning phases during and across classes. The short textbook sections and subsequent worked sample material can be used as

the basis for teacher input, group activity, and later discussion. The guided appraisal could be used as self-access material through which a student can work before submitting the responses to individual presentation, peer and/or teacher discussion.

The fact that the textbook chapters are ordered in the way they are is not to be seen as indicative of the way the book must be worked through. Rather, the units follow the format of a typical research paper in this genre. There is no intended progression as regards subject matter or complexity, although readers *are* advised to consider separately the section of the worked sample alongside the relevant textbook pages before attempting their own appraisal of the guided sample and going on to their own independent reading. Doubtless, some readers will want to concentrate on the appraisal of certain sections of a paper more than others, and this is facilitated in the worked samples by constant reference to what was addressed earlier in that particular paper.

## Acknowledgements

Grateful acknowledgement is made to the following sources for permission to reprint material in this book.


*Table* adapted from Brown, J.D. (1992). Statistics as a foreign language: Part 2. *TESOL Quarterly*, 26(4), 629–664.

*Flow chart* reprinted from Hatch, E., & Lazaraton, A. (1991). *The research manual*. New York: Newbury House Publishers.

All website links mentioned were live at the time of writing (February 2010)

## Notes on the second edition

In the early 2000s, as a frequent referee of research studies submitted to learned journals in our field, and amid the growing interest in practical approaches to carrying out experimental research in L2 learning, I became convinced of the need for a book which guided both novice and experienced researchers in the equally crucial skill of critical appraisal of the final product. Since then, there has been a further increase in the number of practical how-to-do research books (see “Further reading”), but this volume remains the only systematic, instructional manual on how to appraise what we read as we read it. Almost a decade after *Appraising Research in Second Language Learning* first appeared on the scene, the success of the first edition and its current use as a set or recommended textbook on more than a hundred undergraduate and post-graduate courses worldwide has demonstrated that there remains a recognised need for such a book.

This second edition gives me the chance to incorporate a number of additions and amendments, as well as suggestions made by the many reviewers, practitioners, and students who have taken the trouble to write to me. The basic textbook/workbook structure of the book remains the same since the feedback I received indicated this had worked well, but I was also encouraged to review the way in which students encountered the workbook itself after reading each chapter. There were many requests for better integration of the text- and workbook, with the frequent suggestion being made that students be introduced to the practical application of the advice in each textbook chapter sooner than was proposed in the first edition, where the workbook appeared in a separate section at the end of the book and was worked on once the theory chapter had been read. Likewise, the length of some of the chapters meant that readers had, on occasions, to work through daunting amounts of text before being able to see the practice of appraisal at work in the worked samples. A further, related request was that more obvious and closer connection should initially be made between the text and the worked guided appraisals to help readers refer back quickly from these appraisals to the text to see what comments refer to. I have sought to facilitate reading and introduce these suggestions in this edition not only by dividing up the previously rather more extensive chapters such as Introduction and Method into more manageable units, but also by providing section numbers within each chapter corresponding to the practice appraisal questions as well as a set of advance organizers after each section (indicated by the book symbol ). These encourage readers to stop their reading at this point and look immediately at how the advice in the text is then carried

out in practice in one of the two worked sample appraisals now included within each textbook chapter, rather than in the workbook itself. The reader may then choose to work independently through the second sample at the end of each chapter and the further guided and unguided examples in the Workbook.

As I foresaw in the preface to the first edition, testimony to its flexibility of use are the different routes the reader might follow through this book. Much will depend on issues such as whether the reader is using the book alone or as part of a class, whether he or she is a novice or a more experienced researcher, or whether the book is being read in a linear fashion or merely referenced for certain sections. The path I propose above is merely one suggestion for those who – alone or in groups – wish to work through the book from start to finish and want to experience a more immediate application of the ideas in the text to a real appraisal. In this way, the new presentation both helps to divide up the appraised sections into more accessible concepts and also encourages readers to raise their awareness about what is involved in appraising research by immediately seeing how what they have just read can be applied in practice. Other colleagues have suggested alternative routes: for example, I have taken up and extended Christine Goh's (National Institute of Education, Singapore) suggestion in this edition that students might start most chapters by skimming through the corresponding section in the worked sample appraisal first – before reading the text itself – in order to develop greater metacognitive awareness about the appraisal process and be better prepared for the explanations in the subsequent text. Another suggestion, from Renée Jourdenais (Monterey Institute of International Studies) is that readers might work alternately between the complete chapters and the corresponding sections of practice appraisal. Florencia Franceschina (Lancaster University) described the advantage of using the book also as a tool for writing up one's own research by writing down the list of questions used in each section and then using them as a checklist against which to compare one's own writing.

In the textbook there have also been a number of incorporations following reader recommendations and in the light of the kind of papers I am now seeing presented on a regular basis to learned journals. Firstly, there is more attention given to procedures such as meta-analysis and also to increasingly prominent statistical procedures such as logistic regression as an extension of linear regression and loglinear analysis as an extension of chi-square. The importance of being able to replicate research was emphasized in the first edition of the book. Specific calls for such research have since followed in journals such as *Language Teaching* and *Studies in Second Language Acquisition*, together with increasing interest evidenced in a recent colloquium on the subject at the 2009 *American Association for Applied Linguistics* conference, and a forthcoming book on the subject, have all prompted me to add more detailed and extensive reference to such procedures throughout this edition. Readers are firstly shown how the critique of papers can stimulate replication studies by addressing what to look out for in each



separate section: e.g., participants, method, analysis, etc., and then advised as to what studies may lend themselves to useful replication and why. The increasingly important critique of research ethics in L2 acquisition data gathering and research reporting has been addressed in considerably more detail and given a further appraisal question in its own right. The assessment of overall confidence in a paper has also been addressed and a further appraisal question provided. Finally, the references in text, where appropriate, have been revised and the final “Further reading” list completely updated.

In the workbook itself, and again in response to requests, I have included more guided as well as unguided practice material. This material was originally provided as a supplement to the first edition and on my website. It has now been adapted to the new appraisal questions where necessary.

In the preparation of this book, I have received the help and interest of colleagues and friends who have been kind enough to send me feedback on their experiences using the book on a large number of courses. As well as those students and staff who have taken the time to contact me with suggestions and comments, I would particularly like to thank the following for their help and input to this edition:

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I hope students and practitioners alike will continue to find the approach and content of this new edition both stimulating and useful. As always, any feedback and experiences using the book are gratefully received and individually acknowledged.

Graeme Porte  
Granada, 2010

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