Book reviews

ICT and Language Learning: Integrating Pedagogy and Practice, Angela
Chambers, Jean Conacher and Jeanette Littlemore. University of Birmingham
Press, 2004. ISBN: 1902459504. Price: £41.71.*

On first reflection, this book appears to be a useful reference book for how to integrate
ICT into language learning and teaching. The book is divided broadly into two sections:
the first three chapters provide an overview of where language learning and teaching is
at the moment and therefore set the scene for the potential role that computer technology
can play in this process. The remaining seven chapters then look at specific examples of
how particular computer technologies can be integrated into language instruction. This
macro-analysis from the general to the specific is important as it sets the use of
computer technology in the current context of language learning and teaching, although
the question that springs to mind is why is the division in content not nearer the middle
of the book given the title.

In Chapter 1, Conacher, Taalas and Vogel discuss the importance of a structured
learning environment. While accepting that computer technology plays a part in such an
environment, the chapter does not discuss in any detail how computer technology may
fit, but rather describes a learning environment as the processes which take place within
individual learners and between learner, teacher and materials (p. 27). The chapter
provides a comprehensive overview of the need to facilitate different learning styles and
therefore sets the context for integrating computer technology into the teaching and
learning process.

Jager provides a balanced and informative discussion of learning platforms in Chapter
2, looking specifically at Virtual Learning Environments (VLEs). By using the
imaginary teaching scenario of an English teacher at the University of Groningen who
develops course materials on Blackboard, the chapter presents an informative overview
of how this VLE can be used for language learning. The chapter points to the need for a
sound pedagogical base for using VLEs and the Web in general for language learning
and suggests that an integrative approach, where no one tool is used exclusively in the
learning and teaching process, is desirable. It would seem more appropriate to have
included this chapter later in the book, possibly even using it as a bridging chapter
between both parts because it discusses the context for language learning and specific
examples of ICT integration in language learning.

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* University of Birmingham Press has now been taken over by Continuum Press, who are
  responsible for marketing and selling this book.

Chapter 3 draws the first section of book to a close by examining the role of learning resource centres (LRCs) in language learning. Conacher and Murphy argue that it is crucial to integrate LRCs into the general learning environment and list a number of factors to be borne in mind when creating such centres. These include creating a clear infrastructure for the centre, such as a user-friendly physical design of the facilities, suitable access to the resources and staff and student training in their use. Most of these factors have universal application to any learning environment. The chapter concludes by confirming that LRCs will continue to play an important role in language learning and teaching. The chapter contains some very practical information for instructors or university managers involved in creating learning resource centres, although it may have been more useful to locate this chapter just after Chapter 1 given the discussion on learning styles and methods.

Murray provides a succinct checklist of evaluation criteria to be used in assessing CALL and web-based materials: one of the key questions he asks throughout is whether the software is integrated into the classroom context, and it seems that Murray is inviting all CALL practitioners to approach the use of software with a critical eye to ensure that the maximum benefits of the material can be elicited and used in the teaching process. With this in mind, the reader now undertakes the second half of the book, which examines individual aspects of computer technology and their relevance to the language learning process and, consequently, is invited to adopt Murray's critical checklist as each of the technologies is examined.

Littlemore and Oakley provide an insight into the value of using the Internet for language learning, discussing how it can be used as a resource and for communication. The authors refer to a number of useful websites and pinpoint some useful language learning activities that can be conducted online. The chapter is clearly designed to provide a mere snapshot of the potential for the Internet and does not really address many of the drawbacks of the Internet, although it should prove an excellent introduction to teachers and educators who find the Internet uncharted territory.

The role of the Internet as a resource and a tool is illustrated further in the two following chapters. Firstly, Mishan looks at the pedagogical value of using a task-based approach to learner Web-authoring. The chapter provides a detailed theoretical discussion of the value of this approach and provides some practical examples of how to encourage students to use the Web to develop some resources themselves, such as using authoring packages (Hot Potatoes, for example) to produce linguistic exercises. While the chapter provides some suggestions for follow-up activities based around learner Web-authoring, some more practical examples would be welcome because the author makes a very clear case for the pedagogical benefits of this approach to language instruction.

O'Dowd's chapter on intercultural e-mail exchanges again argues very effectively the pedagogical benefit of this form of technology-enhanced language teaching, while also outlining some of its main drawbacks, including communication breakdown. He provides a synopsis of how language instructors have used tandem e-mail exchanges in their teaching. O'Dowd also offers some guidelines on how to ensure effective exchanges and provides examples of good practice. On the whole, this chapter seems invaluable to instructors who are contemplating using tandem e-mail exchanges effectively.

Rüschoff looks at how authoring tools can be used in CALL materials. Instead of focussing solely on how teachers might wish to use these authoring tools, he discusses

how they might be used by students as a cognitive tool: as a student tutorial, for example. Rüschoff provides a brief summary of some of the main authoring packages available and how they have been used; he then goes on to look at some of the considerations and constraints that need to be borne in mind when using authoring tools and, in particular, when using them to create materials that students are expected to meaningfully interact with. R˛schoff takes the level of student interactivity further by reporting on projects where authoring programs have been used by students to create their own materials for their peers, creating crossword puzzles for their classmates to complete, for example. This approach is relatively unexplored and because of space constraints, a more detailed discussion of it could not be undertaken by the author. Clearly, a more detailed discussion would have been useful although, like in the rest of the book, it seems that editors have been rigorous in the chapter content to provide simply a taster of what ICT in language learning in all about.

In the penultimate chapter, Chambers and Kelly discuss the potential of corpora in the language learning context, especially its role in the student-led approach to learning, which is a common trait throughout the book. For anyone who has a limited understanding of how corpora can be used in language learning and teaching, this chapter provides a succinct and informative discussion of its role – looking at how corpora can be used in grammar teaching, translation, literary analysis and cultural studies. The chapter provides evidence of how the authors and others have used corpora in the above areas and these will doubtlessly inform many other language instructors of the potential of corpora and concondancing tools. In their conclusion, the authors tackle the reason for under-use of corpora, namely that many teachers feel ill-equipped to use these tools. Perhaps, though, with its clear description of the practical applications of corpora in language instruction, this chapter may go some way to changing this.

In the final chapter, Cauldwell challenges many of the traditional views on listening as a language learning skill and defends his belief that students need to be taught how to listen and how to become familiar with the act of listening. Cauldwell explains how a CALL package, Motormouth is used to deconstruct listening passages from the point of view of content and of the pattern of speech. The chapter offers a comprehensive review of a very useful CALL package. Overall this chapter is useful in helping to define a new model for teaching listening and suggests how computer packages like Motormouth can help the teaching of these activities, although to keep this chapter in line with the general trend of the rest of the book, it would have been useful to discuss other examples of programs and packages to give readers, especially those new to CALL, a broader overview of what is available.

The editors claim that it is a practical and pedagogical guide to the effective integration of ICT (p.2) and that is exactly how it appears. It is well written and contains many useful references and examples of good practice. It will appeal in particular to language instructors and potential researchers who are unfamiliar with the potential of ICT in language learning, although it also contains some fresh approaches and re-opens many pedagogical discussions on the use of ICT and, more widely, on language instruction in general, which will cater for the tastes of the more seasoned CALL practitioners and researchers. It is certainly recommended reading!

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Artificial Intelligence in Second Language Learning: Raising Error Awareness, Marina Dodigovic. Multilingual Matters, 2005. 304 Pages. ISBN: 1-85359-830-5 /EAN 978-1-85359-830-2 (hbk). ISBN: 1-85359-829-1 /EAN 978-1-85359-829-6 (pbk). Price: £79.95.

Artificial Intelligence in Second Language Learning: Raising Error Awareness published by Multilingual Matters Ltd is a cross-disciplinary volume that brings together instances of research in second language acquisition (SLA), language awareness, computer assisted language learning (CALL) and natural language processing (NLP). According to Dodigovic, the book is written for language teachers, students in applied linguistics and language engineering as well as for applied linguists in general. Moreover, and due to its cross-disciplinary nature, the book assumes very little background knowledge in these sub-disciplines of CALL.

The book is divided into six chapters, each posing a specific question that centers around the crossroad of artificial intelligence and language learning. In addition, the book contains an introduction, a conclusion and three appendices that provide test case sentences and software reviews of the Intelligent Tutor of Academic English, that is the language learning software featured in the book. Ushering the reader into one of the more fundamental questions, "Can another language be learnt?", Chapter 1 discusses SLA theories relevant to the project at stake, in particular, the discussion emphasizes the interlanguage theory as first introduced by Selinker (1972). As suggested by the title of the book, the focus is on error awareness and correction and Dodigovic supports the notion that raising language awareness can significantly contribute to language learning. This is also the underlying reasoning for the Intelligent Tutor that Dodigovic designed and tested with learners of English. The interlanguages researched and described in the book are mainly Chinese and Indonesian with English as the target language.

Chapter 2, "Where does research end and CALL development begin?" discusses the role of research in CALL development projects. The chapter argues that to design and implement a successful CALL project we not only need post-development research, i.e., evaluation, but also a pre-developmental stage that includes a needs analysis. As part of the design process, Dodigovic defines a total of 13 phases with needs analysis, user and peer testing as well as evaluation as the most significant stages because they require the most extensive research. Dodigovic further argues that the line between research and non-research in CALL becomes a difficult one to draw due to the cyclical nature of project development.

Chapter 3 addresses the question "Why the Web?" and provides good reasons for choosing the Internet as a dissemination tool for the Intelligent Tutor of Academic English which is being discussed later in the book. As argued by many other scholars elsewhere, the Internet can overcome limitations of physical space and time in addition to bringing an almost unlimited free source of authentic language in context with opportunities for authentic tasks to the language learning classroom. Moreover, Dodigovic discusses ways in which the Internet conforms to learning theories, in particular, cognitivism and social learning both of which underlie the conceptual design of the Intelligent Tutor.

Chapter 4, "Can computers correct language errors?" examines the current state of the art in the realm of artificial intelligence and natural language processing. From a

language teaching point of view, the discussion focuses on feedback and reinforcement while, from a computational point of view, this chapter provides an overview of rule-based vs. probabilistic parsing systems. Dodigovic argues for a pedagogical parser that is based on the learners' interlanguage and, according to her, is able to capture and correct student errors by providing appropriate feedback. A brief discussion of speech processing in CALL concludes the chapter.

Chapters 5 and 6 cover design and evaluation aspects of the Intelligent Tutor for Academic English. In particular, Chapter 5 "How to develop an artificially intelligent tutor" describes the pre-developmental research and the resulting development effort of an NLP system. The chapter presents three studies that were conducted with 45 learners of Academic English to examine their learning styles, academic English as the target language and the student interlanguage. Study results were subsequently used to design the Intelligent Tutor. The remaining part of the chapter provides a very brief introduction to Sicstus Prolog, the programming language used for the Intelligent Tutor followed by illustrations of sample dialogues between the user and the Intelligent Tutor for Academic English.

In the final chapter "How does it work", Dodigovic describes the results of an assessment of the Intelligent Tutor. The system was evaluated by students and teachers both quantitatively and qualitatively. Study results indicate that, from a pedagogical perspective, the Intelligent Tutor for Academic English performed very well indicating a significant difference between the pre-test and post-test in the test group. Teachers' comments about the system were also positive, however, students were confused by the interface. Dodigovic concludes that an improvement in interface design would positively change the way students perceive the system.

The most praiseworthy aspect of Dodigovic's book is that it provides a comprehensive overview of theoretical issues and concepts of the interface of artificial intelligence and second language learning. It also describes in much detail its relationship and relevance to CALL. It is noteworthy that, unlike recent publications (e.g., Heift & Schulze, 2003) which are compilations of papers usually derived from a conference, this is the first comprehensive, single-authored book in the cross-disciplinary field of NLP and CALL. Dodigovic not only covers a vast amount of related and relevant research, but also provides her own studies on which she bases her analysis and the development and particular design of the artificially intelligent system that is being introduced in this book.

Despite all the above virtues, I would like to point out a few concerns about the book: First, while it is good to be all-inclusive, it is difficult to provide an in-depth discussion. This is particularly evident in the sections on written errors and grammar formalisms in Chapter 4 and/or the code examples in Chapter 5. To follow and understand the discussion and examples provided, a fair amount of familiarity not only with parsers and grammar formalisms in general but also with Prolog is required. It is unfortunate that these NLP sections do not focus on a subset of relevant issues to allow for a more detailed explanation and/or examples also meaningful to NLP novices. Moreover, the book makes little mention of the overall coverage and/or scope of the artificially intelligent Tutor and it is left up to the reader to decide on the level of sophistication of the system. The reader is also left wondering about other components, such as a spell checker that is mandatory for a functioning intelligent tutor. Resulting from user

comments, Dodigovic states, however, that the addition of grammatical knowledge to the current version of the Intelligent Tutor would be appreciated by its users.

Second, the grammar of the parser is based on the learner's interlanguage and, in this regard, a brief description of the work that is currently carried out in corpus linguistics would have been useful to the reader. As we know, much of the needs analysis can be drawn from this vast body of research.

Finally, while the book provides a detailed assessment of learner preferences and thus concedes that there are differences in the way learners use learning software the discussion on "How to develop an artificially intelligent tutor" falls short on system design issues. Research that evaluates student usage of online systems indicates that much more attention has to be given to program and interface design, in particular, their impact on different learners using different CALL systems. Dodigovic, however, concedes that future development will include a stronger focus on interface design.

Overall, the flaws are minor in comparison with its virtues. This volume is certainly a must-read for anyone interested in cross-disciplinary research of language learning and artificial intelligence.

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Mobile Learning: A Handbook for Educators and Trainers, Agnes Kukulska-Hulme and John Traxler (eds). Routledge, 2005. 192 Pages. ISBN 0-415-35740-3. Price: £24.99 Pbk

The two-stage UN World Summit on the Information Society (WSIS) that began in Geneva in 2003 and concluded in Tunis in November 2005, sought to clarify the role of Information and Communication Technologies (ICT) in the developing world, principally as a way of bridging the so-called digital divide between the technological 'haves' and 'have-nots'. One increasingly significant focus of this aim has been the rapid spread of mobile telephony, and with it the consolidation of mobile or m-learning as a successor to distance learning and e-learning. The phenomenal rate at which mobile phones have spread throughout Asia alone (especially in Japan, India and China) has led to the exchange of SMS text messages on a tremendous scale. Rates of mobile phone penetration are now increasing in Africa too, and it is no surprise that phone providers and instructional technologists are working together to target the educational sector, through the development of online reference works, e-books and interactive educational study tasks aimed at a form of 'blended' or 'short-bust' learning. In addition to the use of mobile phones, m-learning incorporates the use of hand-held devices such as Personal Digital Assistants (PDA), Tablet PCs and laptops that encourage 'anytime,

anywhere' and 'lifelong' learning. Mobile learning devices offer instructors the opportunity to develop more learner-centred models of teaching and learning. Learners, on the other hand, have the chance to use the technology to cultivate a more active, personal and independent engagement with the experience of learning that can be synched more successfully with modern patterns of work and study.

While m-learning has been prominent in international conferences over the last few years, and will be so again at the *International M-Learn Conference* 2006 <www.mlearn2006.org>, Kukulska-Hulme and Traxler's timely *Handbook for Educators and Trainers* has been heralded as the first academic book to bring together a collection of essays and case studies on the subject. Desmond Keegan, author of a number of foundational books on distance learning (Keegan, 1996) and one of the main advocates of m-learning (Keegan, 2003), has shown that unlike distance learning, e-learning achieved academic validation in a short period of time during the 1990s. Whether m-learning can emulate this feat is one of the main concerns of the book, and will define how the next generation of mobile learning technology is used.

While only one chapter on m-learning and language education is included in this edited collection, language education is perhaps one of the most conducive to m-learning developments in the future, as the recent use of the term Mobile Assisted Language Learning (MALL) indicates (Chinnery, 2006). Much of the excitement that currently surrounds the potential of mobile learning, however, will depend on the ability of next generation mobile devices to improve screen display, memory, and battery life, and overcome the skepticism about its potential to deliver enhanced learning outcomes.

Four framing questions are posed at the beginning of the book: Is it really possible to learn with such small mobile devices? What sorts of people use mobile devices for teaching and learning? What sorts of subjects and situations are appropriate for mobile learning? Are students already using handheld computers for learning? (p. 25). In response, the book includes eight short reflective essays, and twelve mini case studies that are aimed at establishing an academic context for the first generation of research projects on mobile learning. Kukulska-Hulme's introduction outlines the importance of three concepts that have followed the development of personal computing since the 1980s: ubiquitous, pervasive and ambient. M-learning has the potential to bring learners closer to satisfying all three conditions: the devices can be made available everywhere (ubiquitous); devices can be linked in embedded networks, and used in a number of tasks and environments (pervasive); and m-learning infrastructures could be integrated into the architecture of traditional learning and public spaces (ambient).

Chapter 2 provides an accessible guide to the key technologies and systems that support the development of the m-learning infrastructure. Chapter 3 notes that the focus until now has been on mobile learning rather than mobile teaching. The main emphasis of the chapter is to discuss how m-learning will affect pedagogical practices in the future. Two main types of learning are delineated: didactic learning, using materials from e-books and web caching, and discursive learning, relating to the support and interaction of discourse among mobile communities. Mobile learning is envisaged as a support activity for a range of other technologies and methods. The nature of the e-learning mix is set to be the task of the second generation; it has been the task of the first to reflect on current small-scale projects that have developed since the advent of 2G phones and PDAs. Chapters 4 and 5 focus on the important topics of usability and

accessibility, arguing that while mobile learning devices can further the goal of increased portability in the context of e-learning provision, designers need to be more inclusive so as to consider students with disabilities.

Chapter 6 provides an overview of the twelve case studies, which describe a series of small-scale projects that took place between 2000–2004 in schools, corporations, universities and colleges. The studies derive mainly from the USA, Far East/Pacific Rim, Scandinavia and the UK, and the diversity is testimony to the technology's appeal, though it is evident that many of the learning contexts share a concern with testing and defining future research questions, rather than measuring learning outcomes. All but one of the cases deals with projects using PDAs, the one exception being Mike Levy and Claire Kennedy's essay on 'Learning Italian via mobile SMS'. Two cases focus on the use of laptops and PDAs; one examines a combination of laptops, Tablet PCs, phones and PDAs. A closer look at Levy and Kennedy's case study provides an example of research in English as a Foreign Language, particularly the use of Short Message Service (SMS) to learn vocabulary.

Both memory research and second language vocabulary research indicate that the repetition of vocabulary items over a spaced period of time can be a more successful strategy than the use of a continuous period with high volume. SMS sent via mobile phone presents teachers and students with a way of achieving this goal, particularly when a vocabulary 'trigger' is used so that learners are engaged with the process of actively recalling the newly learnt words. In this instance, the vocabulary project concerned a course on 'Italian Literature and Society' and was conducted over a seven-week period at an Australian university. Mobile phones were used to send students new vocabulary items from an Italian novel studied on the course, along with definitions and example uses of the words. A process of regularly spaced-intervals was used according to two strategies – 'once only' and 'recurring delivery' – and vocabulary was sent prior to and between students' scheduled language lessons.

Feedback via telephone interviews, a snap poll, a questionnaire and focus groups with the eighteen students revealed a number of findings. Although a maximum of 160 characters could be displayed on the screens, significant periods of time were required for message preparation. As for content, students reacted most favorably to SMS concerned with grammar, vocabulary, news, literature and administrative matters. Timing – both in terms of most appropriate time of the day as well as the interval strategy adopted – was also a crucial issue. 94.4% of students gave favorable feedback, indicating that they had liked the use of SMS for learning vocabulary, especially the use of a prompt to aid retention, and the sending of messages outside of normal study times or prior to class. The strategy of repeated messages was not generally acceptable, however, with up to two-thirds of students indicating that they were not useful.

In general the project was a success though the major lesson learnt seems to be that course content must integrate in-class and out-of-class learning activities. While as Levy and Kennedy acknowledge, the ubiquitous nature of mobile phones does not indicate their effectiveness for pedagogical purposes, there are clear signs that in the area of vocabulary learning, they can be of great value, as previous research in language education in Japan (Dias, 2002a; 2002b) and the USA (Houser, et al, 2002) has suggested.

The concluding chapter of the book rightly focuses on the paradox of many instructional technologies, devices that were not designed for learning, being used for

learning purposes nevertheless. Among many questions posed for the future of mobile devices the main concerns are: the integration of multiple features on one device; their current lack of inclusivity vis-à-vis learners with disabilities; whether mobile learning devices can be used for collaborative as well as individual learning; and why mobile technologies appeal to certain disciplines and not others.

In terms of the structure of this edited collection, it might have been more appropriate to show a clearer division between the introductory chapters (1-6) and the twelve case studies (7-19), as the result is a constant stream of different cases from a diverse range of disciplines. In order to improve clarity, the case studies could have been numbered, rather than retain their original chapter numbers. Alternatively, the cases could have been introduced within the context of a chapter with a distinctive thematic concern, thus making the connection more apparent. Despite these deficiencies the book is written in an easily accessible style and format, and readers will benefit from learning about current international projects.

Returning to the questions posed at the beginning: the case studies attest to the fact that small mobile devices can be used for learning 'on the move'; mobile devices are currently being used by academics, corporate trainers, and school and college teachers; and they are being used across a wide range of disciplines, from music to nurse training. At the moment, most mobile devices are designed for personal use primarily connected with data management and organization. If they are to succeed and have more general pedagogical appeal, they will have to accommodate more collaborative modes of teaching and learning. Computer Assisted Language Learning is set to play a leading role in research into the pedagogical use of mobile devices in the future.

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