



substantial concerns related to the validity and reliability of the instrument.

01-150 Takala, Sauli and Kaftandjieva, Felianka (U. of Jyväskylä, Finland; *Email*: sjtakala@cc.jyu.fi). Test fairness: a DIF analysis of an L2 vocabulary test. *Language Testing* (London, UK), **17**, 3 (2000), 323–40.

The purpose of the study reported here is to analyse gender-uniform differential item functioning (DIF) in a second language (L2) vocabulary test with the tools of item response theory (the separate calibration *t*-method), and to study potential gender impact on the test performance measured by different item composites. The English vocabulary test used was part of the Finnish Foreign Language Certificate Examination test battery, Intermediate Level, and was taken by 475 adults (182 males and 293 females). The results show that, despite the fact that there are test items with indications of DIF in favour of either females or males, the test as a whole is not gender-biased. In spite of this, it was demonstrated that some item composites are gender-biased. In view of item bank building and use, it means that some of the tests constructed on the basis of an item bank might be biased if the item bank contains items with indication for DIF. Although the results of some empirical research suggest that the requirements for items with DIF to be excluded from the final test version may on the whole be too restrictive, this study demonstrated that the traditional advice of excluding biased items gains new significance in the light of item bank building and use, since doing so will prevent possible biased item composites.

01-151 Turner, Carolyn E. (McGill U., Canada). Listening to the voices of rating scale developers: identifying salient features for second language performance assessment. *The Canadian Modern Language Review / La Revue canadienne des langues vivantes* (Toronto, Ont.), **56**, 4 (2000), 555–84.

This article describes the process and discourse stances of a team of teachers involved in deriving a rating scale for writing ability. The research was carried out within a Ministry of Education of Quebec project whose objective was to develop empirically based rating scales for secondary-level English as a Second Language provincial exams. The study focused on instances during the process where actions of the participants and/or their use of the data sample (i.e., student writing samples) could be shown to influence the criteria for the rating scale and in turn the final ratings (i.e., areas where there was potential for variation within the two test method characteristics of scale development team and sample used). Through a qualitative analysis, it expands on earlier research (Turner & Upshur, 1999) which reports on the quantitative results of method characteristics in such empirically derived scales. This study provides a description of the nature of these test method characteristics.

Teacher education

01-152 Burgess, John (U. of Manchester, UK; *Email*: john.burgess@man.ac.uk) and **Spencer, Sheila**. Phonology and pronunciation in integrated language teaching and teacher education. *System* (Oxford, UK), **28**, 2 (2000), 191–215.

This paper addresses the relationship between two fields: (1) teaching and learning pronunciation in a second or foreign language; and (2) the study of pronunciation-teaching and of phonology in the training and education of language teachers. It reports research conducted to inform the planning of the phonology component of an initial teacher-training course in TESOL (Teaching English to Speakers of Other Languages). The research involved two strands: a questionnaire, and an analysis of some current English as a Foreign Language textbooks, and was intended to provide a picture of current teacher attitudes towards, and pedagogic practice in, the teaching of pronunciation. The paper argues for a strongly integrated approach to the relationship between the two fields addressed, but for different priorities in those fields.

01-153 Wildner, Siegrun (U. of Northern Iowa, USA; *Email*: wildner@uni.edu). Technology integration into preservice foreign language teacher education programs. *CALICO Journal* (San Marcos, TX, USA), **17**, 2 (2000), 223–50.

Using national technology goals and standards, and institutional factors as a framework, this article describes the planning process and the initial phases of the implementation of a model of technology integration into the foreign language preservice teacher education program for K–12 teachers. It also provides suggestions for instructional goals and subject-related content areas for a curricular component on technology for foreign language teachers.

Bilingual education/ bilingualism

01-154 Dijkstra, Ton, de Bruijn, Ellen, Schriefers, Herbert and Ten Brinke, Sjoerd (U. of Nijmegen, The Netherlands; *Email*: dijkstra@nici.kun.nl). More on interlingual homograph recognition: language intermixing versus explicitness of instruction. *Bilingualism: Language and Cognition* (Cambridge, UK), **3**, 1 (2000), 69–78.

This paper reports a study which contrasted the effect of instruction-induced expectancies and language

intermixing in an English lexical decision task performed by Dutch-English bilinguals. At the start of the experiment, participants were instructed to respond to interlingual homographs and exclusively English words by giving a 'yes' response, and to English non-words and exclusively Dutch words by giving a 'no' response. In the first part of the experiment the stimulus list did not contain any Dutch words; in the second part, Dutch items were introduced. No significant differences were found between interlingual homographs and controls in the first part of the experiment, while strong inhibition effects were obtained for interlingual homographs in the second part. These results indicate that language intermixing rather than instruction-based expectancies drives the bilingual participants' performance. Consequences for current views on bilingual word recognition are discussed.

01-155 Francis, Norbert (Northern Arizona U., USA; *Email*: norbert.francis@nau.edu). The shared conceptual system and language processing in bilingual children: findings from literacy assessment in Spanish and Náhuatl. *Applied Linguistics* (Oxford, UK), **21**, 2 (2000), 170-204.

This article reports findings from a series of literacy assessments in which four classes of bilingual 3rd and 5th grade students from an indigenous community in Central Mexico participated. Subjects who completed the battery of tests of reading and writing in Spanish and Náhuatl range from balanced bilinguals to Spanish-dominant speakers with at least receptive language proficiency in Náhuatl, the principal indigenous language of the region (Tlaxcala and Puebla states). Typically, in bilingual schools in Mexico, instruction is predominantly or exclusively in Spanish. In the case of the present study, virtually all literacy teaching is carried out in Spanish, thus presenting investigators with the opportunity to examine the application of literacy skills learned through one language to literacy tasks in another language which children understand, but in which they have not had the opportunity to practise reading and writing. The findings are seen as offering a different vantage point from which to conceptualise the models of linguistic interdependence, common underlying proficiency, and transfer, developed and elaborated upon by researchers in the field of bilingual education. The author highlights the need, in the study of bilingualism and second language learning, to specify more precisely which aspects of language competence and language use are interdependent and which aspects are separate, i.e., what precisely interdependence refers to; what the conditions are under which knowledge and skills stored in a common underlying proficiency can be accessed, in particular under special circumstances of language contact (for example, those that involve indigenous languages); and whether transfer is a useful concept for describing the various aspects of bilingual proficiency.

01-156 Hornberger, Nancy H. (U. of Pennsylvania, PA, USA; *Email*: nancyh@

gse.upenn.edu) and **Skilton-Sylvester, Ellen.** Revisiting the continua of biliteracy: international and critical perspectives. *Language and Education* (Clevedon, UK), **14**, 2 (2000), 96-122.

The continua model of biliteracy offers a framework in which to situate research, teaching, and language planning in linguistically diverse settings. Arguing from this model, and citing examples of Cambodian and Puerto Rican students in Philadelphia's public schools as illustrative of the challenge facing American educators, Hornberger has suggested that the more their learning contexts allow learners to draw on all points of the continua, the greater are the chances for their full biliterate development. The present paper revisits the continua model from the perspective of several international cases of educational policy and practice in linguistically diverse settings – Brazil, Peru, Ecuador and Bolivia, and from a critical perspective which seeks to make explicit the power relationships which define bi(multi)literacies in these contexts. Building from these perspectives and from continuing research in Philadelphia's Cambodian and Puerto Rican communities, the authors propose an expanded continua model which takes into account not only biliterate contexts, media, and development, but also, crucially, the content of biliteracy. They conclude with comments on how the insights of the continua model of biliteracy can contribute to our understanding not only of linguistically diverse classrooms, but also of all classrooms.

01-157 Lasagabaster Herrate, David (U. del País Vasco, Spain). Language learning and the development of metalinguistic awareness. *Rassegna Italiana di Linguistica Applicata* (Rome, Italy), **32**, 1 (2000), 103-16.

Age and education are both known to affect speakers' metalinguistic skills – i.e., the ability to analyse language and reflect on its use – but very little research is available on learners above the age of 10. This article assesses the effect of bilingual/monolingual education on the development of metalinguistic awareness in young EFL (English as a Foreign Language) learners in the Basque region of Spain. Pupils from six different schools, aged 10-11 and 13-14 respectively, were tested for the level of synonymy, acceptability and ambiguity in their written English. The highest relative score was achieved by those children whose vehicle language was Basque, with Spanish and English as second language subjects, but bilingualism itself was not sufficient to facilitate EFL acquisition unless combined with formal training. It is concluded that the interaction between these two factors deserves further attention and is clearly crucial to the development of language processing skills in young learners.

01-158 MacSwan, Jeff (Arizona State U., USA; *Email*: macswan@asu.edu). The architecture of the bilingual language faculty: evidence from intrasentential code switching. *Bilingualism*:

Language and Cognition (Cambridge, UK), **3**, 1 (2000), 37–54.

In this article, the author addresses the question of how the mind represents two languages in simultaneous bilingualism. Some linguistic theories of intrasentential code switching are reviewed, with a focus on the Minimalist approach of MacSwan (1999); the author concludes that evidence from code switching suggests that bilinguals have discrete and separate Lexicons for the languages they speak, each with its own internal principles of word formation, as well as separate phonological systems. However, the author argues that computational resources common to the two languages generate monolingual and bilingual syntactic derivations alike. Advantages of the Minimalist Program for the analysis of code switching data are discussed at some length.

01-159 Meador, Diane, Flege, James E. (U. of Alabama at Birmingham, USA; *Email*: jeflege@uab.edu) and **Mackay, Ian R. A.** Factors affecting the recognition of words in a second language. *Bilingualism: Language and Cognition* (Cambridge, UK), **3**, 1 (2000), 55–67.

The study reported here examined the recognition of English words by groups of native speakers of Italian who differed in age of arrival in Canada and amount of continued native language use. The dependent variable was the number of words correctly repeated in English sentences presented in noise. Significantly higher word recognition scores were obtained for early than late bilinguals, and for early bilinguals who used Italian seldom than for early bilinguals who used Italian relatively often. A hierarchical regression analysis showed that the native Italian participants' ability to perceive English vowels and consonants accounted for a significant amount of variance in the word-recognition scores independently of age of arrival, amount of first language use, and length of residence in Canada. The native language use effect was interpreted to have arisen from differences in the extent to which the early bilinguals' Italian phonetic system influenced the representations they developed for English vowels and consonants.

01-160 Roberts, Gareth (U. of Wales Bangor, Wales, UK; *Email*: eds053@bangor.ac.uk). Bilingualism and number in Wales. *International Journal of Bilingual Education and Bilingualism* (Clevedon, UK), **3**, 1 (2000), 44–56.

There is a considerable body of research in the general area of language and mathematics. By contrast, there is little systematic research into number usage in bilingual contexts. This paper explores a particular context, that of the use of number in bilingual Wales. Speakers of Welsh in Wales have a number of systems available to them when they refer to numbers. The choice of system by individuals is determined by a mixture of historical and social factors. The systems are explained in

the paper, and their use is compared within different domains, including religion, broadcasting and the media, education, business and commerce and everyday conversational contexts. The notion of mathematical multilingualism is explored within this framework.

01-161 Sanz, Cristina (Georgetown U., USA; *Email*: sanzc@gusun.georgetown.edu). Bilingual education enhances third language acquisition: evidence from Catalonia. *Applied Psycholinguistics* (Cambridge, UK), **21**, 1 (2000), 23–44.

Studies on the acquisition of a third language in a bilingual context have shown that literacy in two languages facilitates the acquisition of a third. The study reported here seeks to contribute to this line of research by comparing the acquisition of English as a third language by Catalan/Spanish bilingual high school students in an immersion programme with the acquisition of English by Spanish monolinguals. Data from 201 participants were submitted to a hierarchical multiple regression analysis, rendering results which show that bilingualism indeed has a positive effect on the acquisition of a third language. The evidence is discussed from a cognitive perspective.

Sociolinguistics

01-162 Evans, Stephen (Hong Kong Polytechnic U.). Workplace communication in a time of transition: the case of Hong Kong's construction industry. *Hong Kong Journal of Applied Linguistics* (Hong Kong), **4**, 2 (1999), 57–78.

The study reported in this article was conducted in response to the clear need for up-to-date descriptions of language use and language needs in Hong Kong's business sector. The objective of the study was to investigate the use of English, Cantonese and written Chinese in the territory's construction industry, which is one of the key sectors of Hong Kong's economy. The study was carried out in the final months of British rule, and thus provides a 'snapshot' of workplace language use in this important sector in the final stage of Hong Kong's transition from British to Chinese rule. The findings, based on a questionnaire survey of 150 engineers working in the construction field, show that English is the principal language of record and formal written communication in the workplace. Written Chinese tends to be restricted to informal interpersonal communication and bilingual documents such as notices and newsletters. Cantonese is the usual medium of everyday spoken communication, while spoken English appears to be restricted to more formal workplace communication, particularly situations where expatriates are present. Most of the participants felt that Putonghua and written Chinese would become increasingly important in Hong Kong's construction