

RESEARCH ON LOW-EDUCATED SECOND LANGUAGE AND LITERACY ACQUISITION

Ineke van de Craats, Radboud University Nijmegen
Jeanne Kurvers, Babylon, Tilburg University
Martha Young-Scholten, Newcastle University

1 *The Multiple Ls of LESLLA*

For more than half a century, every adult in post-industrialized societies has been assumed to have had ten or so years of schooling. In these countries “many of the characteristic features of reading are so familiar and seem so natural that they have become invisible” (Chartier, 2004:493). What we take for granted is the impetus for research on the second language (L2) acquisition and reading development of adults with little or no formal education in their native or any other language.

Starting in the seventies and eighties of the last century, several groups of so-called newcomers in western societies have challenged the concept of the ‘naturalness’ of universal education. Statistics on migrants and refugees in several European countries reveal that a substantial percentage from Morocco, Turkey, Iraq, Iran, Afghanistan, some Asian and Southeast Asian countries (e.g. Sri Lanka, Vietnam, Thailand, Cambodia, Laos) and Sub-Saharan Africa are on average low educated, and statistics reveal that numbers for women (in most groups the main caretakers of young children) are even much higher than for men (UNESCO, 2004).

It is well known that poor oral and written proficiency in the L2 lead to social exclusion (Bynner, 2001; Dalglish, 1982). Based on self-reported L2 proficiency data, Dustmann & Van Soest conclude that the ability of immigrants “to communicate with members of their adopted country is probably the most important single alterable factor contributing to their social and economic integration” (2002:473, see also Dustmann & Fabbri, 2003). Parents’ education as well as language proficiency - particularly mothers’ - is found to be crucial to the educational support of their children. Seen from a wider perspective, literacy level is closely related to the economic productivity of that country (Coloumbe *et al.*, 2004).

This volume, and indeed the newly established research forum whose first meeting this book is based on, focuses on adults, where their development of literacy in an L2 takes centre stage. There are numerous reasons for focusing on adult immigrants, but we limit ourselves to only three here. First, immigrants who arrive at younger ages routinely receive education and engage in beneficial social interactions that are crucial to language acquisition, whereas those who arrive later often lack such opportunities (Stevens, 1999). (See Moyer (2004) on the relationship between opportunity for input

and ultimate attainment, particularly with respect to phonology.) The second reason is that researchers have devoted considerably more attention to the language acquisition and literacy development of school-age and adolescent immigrants (see e.g. Genesee *et al.* (2006) for an up-to-date overview). Third, while researchers have paid a good amount of attention to adult L2 reading (including on learning to read in a new script, e.g. Koda (1999), this has almost exclusively involved the population of educated students (e.g., Zamel & Spack, 2004). In contrast to both this body of research and the vast body of research on first language reading and dyslexia, there is next to nothing on the linguistic and cognitive processes underlying reading development by adults with little or no schooling.

This book thus focuses on adult L2 learners who have hardly any or no history of formal education, who are non-literate or low-literate, and who are faced with the task of acquiring oral second language skills and reading and writing abilities. They have to acquire these in the highly literate societies in which immigrants and refugees resettle including the USA, Canada, Australia, New Zealand and nowadays most European countries. These adults are expected to participate in communities in which the use of both oral and written second language belong to the daily routines of every resident. This makes the 21st century in these countries quite different from, for example, the 18th century (or any period before compulsory education) or from many rural areas in modern-day Africa: both frames of time and space in which non-literate adults could and can easily participate in the literate community without being able to use the written medium themselves (Koch, 1997; Wagner, 1999) and, in addition, where the possibilities of earning a living are much less dependent on literacy skills.

1.1 *Low Educated, Low Literate or Non-Literate Second Language Learners*

In many post-industrialized countries, the educational level of many adult immigrants and refugees lags behind the average of the host country. In European countries for example, while only 10-15% of native-born adult residents have an educational level of at most primary school, more than half of the adult immigrants from for example countries such as Turkey, Morocco, Afghanistan and Somalia have an educational level of primary school or less (around 50-60% for men and 70-80% for women). Illustrative of this bias is the fact that 'at most primary education' is the lowest level demographic statistics include. For many immigrants from Morocco, especially for women, this educational level in the statistics can easily be interpreted as 'no education at all' or 'just a few years'. Teachers in adult education do know, however, about the striking differences between not only high- and low-educated second language learners, but also between those who attended school for about four years and those who have never been to school (Kurvers & van der Zouw, 1990; Kurvers, 2002; Tarone & Bigelow, 2005).

In this volume we use the following denominators and descriptions:

Non-literate (or: illiterate): an adult who never went to school and cannot read and write, neither in his/her first language, the standard language of the country of origin or the second language.

Low-literate: an adult who has attended school, but who has a reading level below the average primary school level.

Low-educated: an adult who has at most ten years of education in the country of origin. For many adult immigrants and refugees, this means at most primary education.

Scrolling through scientific journals about the acquisition, learning and teaching of second language skills, such as *Second Language Research*, *Studies in Second Language Acquisition*, *Tesol Quarterly*, it is easy to conclude that much more research has been carried out on highly-educated (more than ten years, by the definition above) second language learners than on low-educated or non-literate adults, as noted above. A substantial body of work on adult second language acquisition (SLA) does indeed exist, but most studies either involve adults with at least ten years of education in their country of origin or do not isolate level of native language education as a variable. Only a fraction of current research concerns the literacy development of these vulnerable adult L2 learners. Since initial interest in the 1980s there has been silence in this research domain, apart from a few studies in European countries, in the Netherlands (Kurvers & Van der Zouw, 1990; Kurvers, 2002), in the USA (Young-Scholten, 2004; Condelli *et al.*, 2003; Tarone & Bigelow, 2005) and in Sweden (Lindberg, 2002; 2003). Studies of adults' development of basic reading skills have either focused on educational practices or have involved adults who failed to learn to read and write in their native language despite schooling.

Previous studies of immigrants, such as the European Science Foundation's 1980s study of adults from six different language backgrounds in five European countries (see Perdue, 1993), have left unaddressed educational context and variation in cognitive skills. We do not know whether when we isolate literacy as a factor, we will find that literacy has a greater impact on the development of linguistic competence than generative linguists assume.

What, for example, does it mean for a second language learner, if he or she is not aware of the architecture of language? We do not know if the stages L2 learners go through are similar to how educated adults learn a second language. Based on studies of adults dating back to Bailey, Madden & Krashen (1974) and as recent as Vainikka & Young-Scholten (1994; 1996), Hawkins (2001) concludes that L2 learners follow a predictable route of grammatical development largely independent of age at initial exposure, native language, type of exposure or educational background. But until literacy is examined as a variable, we cannot be absolutely sure of this.

Nor do we know much about the reading development of these second language learners. This gap in knowledge and empirical research is unfortunate, since post-industrialized societies have to deal with immigrant adults who are trying to gain literacy for the first time in their lives in order to participate fully in life and work in their new communities.

In addition to a bias towards the higher-educated, there also seems to be an English language bias. Many models of second language acquisition and reading development have been more or less developed with the English language in mind and many studies on adult literacy focus on the roman alphabet and on English (Wagner *et al.*, 1999). As the growing body on cross-linguistic research on monolingual children learning to read already shows (Nunes *et al.*, 2004), research on low-literate adults learning to read in a range of second languages is urgently needed to paint a complete picture.

1.2 Linguistics and Second Language Acquisition

As noted above, the learning processes of adult second language (L2) learners with a low level of education are usually not explicitly distinguished from those of higher-

educated L2 learners. Most L2 acquisition research has been carried out on university students or learners with at least an intermediate or high level of compulsory education who are learning or have learned a new language. It is starting to become apparent that there is a gap in the research since there are increasing signs pointing to important differences between these two groups of learners. Low-educated learners have, for instance, more troubles in attaining a reasonable level of oral proficiency in L2 classes, their learning process is much slower and they seem to run the risk of fossilizing at an earlier stage of development. This may, however, be true of low socio-economic immigrants in general; see e.g. Klein & Perdue (1997), who conclude that many of the learners studied in the ESF project (see below) remained at the earliest attested stage of development. Slow progress can be inferred from articles in newspapers, reports on the results of standardized exams, proficiency tests and assessments by teachers (e.g., for the Netherlands, Emmelot *et al.*, (2002)). Thus not only for theoretical and educational reasons but also for political reasons is research specifically directed to the low-educated learner at issue. But – as we have pointed out above - it is certainly not the case that low-educated learners are unrepresented in the L2 research literature, as can be observed in a quick tour on the main linguistic determinants of L2 learning by low-schooled adults.

Since the 1970s when Chomsky's mentalist ideas on an innate language learning mechanism began to spread, the driving question for L2 acquisition researchers became whether adult L2 learners are using the same innate mechanisms as generative linguists assume to drive first (and second) language acquisition for children. This *Identity* or *Creative Construction Hypothesis* assumes that L2 learners actively organize the target language they hear, and make deductions about the structure of the language they are acquiring in the same way as children learning their mother tongue. The course of the acquisition process is determined by the structural properties of the target language and of the innate language learning system, not simply by the differences and similarities between the source and the target language, as was assumed when the *Contrastive Analysis Hypothesis* (Weinreich, 1953; Lado, 1957) was dominant. Evidence for the claim that L1 and L2 acquisition are fundamentally similar was initially based on large-scale cross-sectional studies, which pointed to a common route of development across learners from various L1 backgrounds. Studies of the acquisition of English by Brown (1973) and De Villiers & De Villiers (1973) on the L1 acquisition of grammatical morphemes such as plural *-s*, progressive *-ing*, and copular *be*, by Dulay & Burt (1974a, b) on child L2 acquisition, and by Bailey *et al.* (1974) on adult L2 acquisition showed a significant correspondence in the accuracy orders of these morphemes (controversy notwithstanding; see e.g. White (1996) on the status of inflectional morphology).

More or less by accident, low-educated language learners became involved in L2 research. In the well-known studies on immigrants from the 1970s and 1980s, a longitudinal methodology was used, as in the studies on L1 children (e.g. Brown, 1973), and naturalistic L2 learners - those who had received no instruction in the L2 - were used because the aim of the study was to observe to what extent adults were able to acquire language like children do, solely on the basis of aural input. For theoretical and practical reasons, adults with no other linguistic knowledge than that of their mother tongue were the best subjects for such research, so low-educated immigrants to countries in northern Europe, the USA and Australia were studied. Table 1 presents the details of three major longitudinal group studies.

Table 1: Longitudinal studies of immigrant adults

study	L1 and L2	subjects	type of study
Cancino <i>et al.</i> (1978)	L1 Spanish	2 children	10 months
	L2 English	2 adolescents	longitudinal
ZISA Clahsen <i>et al.</i> (1983)	L1 Spanish, Portuguese, Italian	2 adults	cross-sectional
	L2 German	45 adults	+
ESF Klein & Perdue (1992)	six L1s	12 adults	2 years
	five European L2s	40 adults	longitudinal
			2 ½ years
			longitudinal

In addition to the ZISA (Zweitspracherwerb Italienischer (Portugiesischer) und Spanischer Arbeiter) project in Germany, the ESF (European Science Foundation) project in Europe, and Cancino *et al.*'s study in the USA, there have been additional cross-sectional studies of immigrant adults, e.g., the Heidelberger Forschungsprojekt (Klein & Dittmar, 1979) and the Lexlern Project (Clahsen *et al.*, 1991), both in Germany. In these studies, Romance languages formed the L1 background except for the ESF project in which six different L1's were involved (also non-European L1's as Punjabi, Turkish and Moroccan Arabic) and five Western European L2's, and the Lexlern project with Korean and Turkish learners of German. In all these projects L2 acquisition was studied on the basis of oral production, as spoken language is seen as the essential manifestation of language.¹ The participants in these research projects were usually literate in their L1, though some of them had a very limited education of only several years primary school. Their level of literacy and their familiarity with script and a literate culture were never an issue in the studies (but see footnote), nor a factor considered in L2 learning. Besides, this focus on 'naturalistic' second language learners implicated a lack of research on deliberate second language learning and teaching in the context of adult education to this specific group of learners.

In the last two decades, there have been two main issues in (generative-oriented) L2 acquisition research. The first issue relates to the access to Universal Grammar (UG) or the question whether an adult learner can acquire new grammatical structure or categories or reset parameters in a second language. The observation that native-like attainment in an L2 is exceptional after a certain age (e.g. puberty) gave rise to the idea of a critical period for language learning (Lenneberg, 1967). This is understood by some researchers (e.g., Bley-Vroman, 1990) to mean that UG is no longer accessible to adults. In their view adults (must) learn a language by means of cognitive strategies and corrective feedback. Naturalistic L2 adults, especially those with a low education and few meta-cognitive strategies or metalinguistic skills are of great interest to advocates of

¹ With generative SLA researchers' aim being to determine the representation of the L2 learner's linguistic competence in his/her mind, tasks tapping implicit knowledge such as grammaticality judgment tasks or comprehension tasks are preferred over oral production data. Low-educated learners turn out to have difficulties in understanding the demands of such tasks, as Vainikka and Young-Scholten discovered when working on the Lexlern project (see, e.g., Vainikka & Young-Scholten, 1994)

both the access-to-UG and the no-access-to-UG approach: do learners show evidence of new categories and structure or parameter resettings? There are some examples of L2 learners' interlanguage systems which are neither that of the L1 nor the L2 (e.g., Schwartz & Sprouse (1996) for the distribution of full NP vs. pronominal subjects by a Turkish learner of German). Such interlanguage rules are interesting for acquisition researchers, and it is for this reason that low-educated learners have ended up being the target of acquisition studies. Similar research with non-literates does not exist, as far as we know.

The second issue, since the 1990s, relates to the L2-initial state or to the question what exactly is the linguistic knowledge of an L2 learner who starts the task of learning a new language. An L2 learner does not start as a *tabula rasa*. At the very start of L2 acquisition, at the so-called 'initial state' s/he has knowledge of a fully fledged language, used for many years and fully automated. Acquisition researchers differ in their views on the extent to which the learner makes use of this and other sources of knowledge. Roughly speaking, there are four positions. The non-UG position (e.g. Bley-Vroman, 1990; Clahsen & Muysken, 1986) states that the L2-initial state involves the learner's L1 and general cognitive mechanisms. Under this view, development is not directly driven by the same mechanisms children use. L2 learners use a canonical 'SVO' word order strategy (e.g., Clahsen & Muysken, 1986), and they are guided by general cognitive mechanisms (mainly semantic-pragmatic principles, see Perdue (1993) and Klein & Perdue (1997)). There are three access to UG positions. One assumes that an L2 learner builds up the L2 grammar like the L1 and that transfer plays no role (e.g., Epstein, Flynn & Martohardjono, 1998). The Full Transfer/Full Access position assumes that the learner's entire L1 grammar is available at the L2-initial state, and that development involves the acquisition of L2 morphology and syntactic adjustments within the constraints of UG (e.g., Schwartz & Sprouse, 1996; White, 1996). The Partial Transfer/Full Access to UG position holds that only a minimal grammar ('minimal tree') based on the properties of the L1 is available at the initial state as there is no inflectional morphology, no complex syntax, only syntactic elements in their 'base' position. Under this view, first and second language acquisition are similar in that learners build up structure after an initial transfer stage (e.g., Vainikka & Young-Scholten, 1996; see also Hawkins, 2001).

Besides the evidence of access to UG provided by the learner's production data in the large corpora mentioned above, additional evidence for UG access typically comes from educated, metalinguistically skilled L2 learners. These learners are asked to give grammaticality judgments about ungrammatical vs. grammatical sentences, the former which they would not have heard in the input. This technique tests whether adult learners are sensitive to constraints of UG which do not apply in their L1. However, low-educated learners normally lack the metalinguistic skills to make such judgments. They resemble the non-literates or illiterates in Kurvers' contribution to this volume, who have troubles distinguishing the real world (the referents) from the linguistic reality (the words themselves). Low-educated learners are not used (or rather: not trained) to reflect on grammatical features and therefore, they do not give judgments about the grammaticality of a sentence but, for instance, either about the semantic content of a sentence, e.g. its truth value, or about the social acceptability of that given sentence.

While studies of both educated learners and less educated, immigrant learners such as the ZISA study and the ESF study have investigated the development of morphosyntax and have inadvertently provided a wealth of findings about low-educated adult L2 learners, they have also left unaddressed a range of issues that tend not to be addressed in the wider SLA research community.

1.3 Literacy Acquisition in a Second Language

As we noted at the start of this chapter, learning to read and write is considered one of the most critical factors in success in school and later in life. It turns out to be one of the best predictors of competent functioning and active participation in literate societies. For more than half a century, a massive body of research has been addressing how young children gain access to the written code, revolving mainly around literacy acquisition in the roman alphabet, while hardly any research exists on adults who learn to read and write for the first time in their life. Many researchers have addressed the issue of stages in reading development starting from the stage of emergent literacy (before formal education starts) to the stage where the reader reads fluently and can apply his/her reading and writing abilities in a flexible way to meet the requirements of a literate society (Juel, 1991; Ehri, 1994; Chall, 1999).

Starting in the seventies, two branches of research have been very fruitful in gaining insight into the first, emergent literacy stage. These are studies on print awareness, i.e. the concepts young children construct about print and writing (Tolchinsky, 2004), and studies on the awareness of structural units of spoken language, such as words, syllables, phonemes (Morais & Kolinsky, 2004). The importance of these studies of pre-reading children in relation to processes of reading and writing cannot be overestimated (Adams, 1990; Tolchinsky, 2004). The emergent print awareness of young children can be summarized as a gradual development in thinking about writing as a pictographic system, in which signs share visual features with the referent, to writing as an ideographic system (in which signs are conventional, but represent an idea or concept) to, finally, writing as an grapho-phonological system, in which signs represent speech units. In other words, children gradually learn to understand that writing represents speech, and they then gradually become familiar with the specific features of the written register (Ferreiro, 1985; Masonheimer *et al.*, 1984; Ehri, 1987; Sulzby & Teale, 1991; Tolchinsky, 2004).

Learning to read and write can also be considered a metalinguistic activity in that it turns out to be nearly impossible to learn to read and write if the child does not become aware of “some aspects of the speech structure” (Morais & Kolinsky, 2004: 601). The term language awareness or metalinguistic awareness is used to cover a range of skills at the phonological, lexical, syntactic and textual level, such as segmenting words into syllables or phonemes, phoneme manipulation, segmenting sentences into words, separating words from their referents or judging syntactic properties of sentences (see Gombert 1992). Phonological awareness in the general sense refers to the ability to perceive and manipulate the sounds of spoken words (Byrne, 1998; Castles & Coltheart, 2004) and encompasses awareness of sub-lexical units such as onset-rhyme, syllables, or phonemes. Lexical/semantic awareness refers to the ability to separate language forms from their meanings and to segment sentences along word boundaries. Research on metalinguistic skills of adults is reviewed in Kurvers *et al.*, this volume.

Concerning learning to read in an alphabetic script, there is a long history of debate (more in English speaking countries than in continental Europe) on models of reading development, the main topic being the differences between the non-stage models (Goodman & Goodman, 1986; Artwergen *et al.*, 1987; Smith, 1996) and the stage-models (Ehri & Wilce, 1985; Juel, 1991; Chall, 1999). Non-stage models consider learning to read and write an alphabetic script as essentially the same process from the very beginning, while the stage models consider learning to read and write as a developmental process that consists of qualitatively different stages that children have to pass through to become fluent readers. The stage models describe the learning process as (roughly summarized) a three-stage process: from a direct word recognition stage, through a stage of indirect word recognition, to a third stage in which written words are recognized directly again, but now through automation of the slow indirect way. The first stage is called the logographic stage, in which children treat written words as whole units to be learned by heart, without being aware of their internal structure (direct word recognition); the second stage is called the alphabetic stage, in which written words are recognized by sounding out letter by letter and blending the sounds (indirect word recognition); the third stage is called the orthographic stage, in which children have learned to automatize the slow way of blending individual sounds: this is direct word recognition again, but now the readers have build up a repertoire of written word images and are able to apply the alphabetic rules without even noticing they do. This advanced stage of direct word recognition expands to longer and less frequent words and becomes more and more consolidated by practising reading (for reviews of models and debate, see Adams, 1990; Juel, 1991; Smith, 1996).

In research on young children, literacy acquisition in a second language has been a central issue from the time immigrant children began to enter education in greater numbers in post-industrialized societies. Many evaluations of reading development in a second language reveal that non-native children lag behind native children in their reading skills (Moss & Puma, 1995; Verhoeven, 2004). And although many children reach average scores on decoding skills, the reading comprehension scores of many immigrant children are on average one to two grades below those of native children (Verhoeven, 2004). Literacy acquisition in a second language, especially for all those who did not learn to read and write before immigration, turns out to be a very complicated process - although worldwide there may be even more people who learn to read and write in a second language than in their native language (Wagner *et al.*, 1999).

The experiences of children with different registers of spoken and written language in their home cultures are critical to the development of reading and writing (Snow, 1992). Cognitive development and academic development in the first language have been found to have positive effects on second-language literacy acquisition (Bialystok, 1991; Genesee, 1994). Although research supports the idea that native language use is advantageous in second-language literacy acquisition (e.g. August & Hakuta, 1997), in many countries bilingual literacy programs are not frequently implemented. Meta-phonological skills and letter knowledge turn out to be main determinants of decoding skills. In addition to these general skills that hold for every beginning reader, vocabulary is a primary determinant of decoding and reading comprehension for second-language readers (Verhoeven, 2004). From second or third grade on (seven and eight years of age), not only does vocabulary turn out to play a decisive role in reading comprehension, but so do syntax and discourse markers in the second language. So, in many studies of children learning to read in a second language,

the most important predictors for decoding turn out to be metaphonological skills, letter knowledge and vocabulary, while for the later stages of comprehension, vocabulary and syntactic knowledge become more important.

Compared to what is known about young children's acquisition of reading and writing in a second language, very little is known about non-literate adults who learn to read and write in a second language. Most studies on literacy acquisition of adults either focused on 'illiterate' adults in industrialized western societies who did attend school but for some reason did not learn to read properly (Hunter & Harman, 1979; Read, 1988; Scholes, 1993; Worthy & Viise, 1996; Greenberg et al. 2002; Viise, 2005) or the acquisition of literacy in developing countries (Wagner et al., 1999).

An early exception to this trend is Kurvers & Van der Zouw (1990), who investigated the reading development during the first year of two groups of adult migrants who had never attended school before and who had started their literacy acquisition in Dutch as a second language. One group attended non-intensive courses for about four to five hours a week, while the other group attended a semi-intensive course for fifteen hours a week. The 48 learners, most of whom were women, came from four different countries (Morocco, Turkey, Somalia and Surinam) and differed in length of stay in the Netherlands. The study revealed that attending an intensive course of about fifteen hours a week, led to much greater success in decoding skills than attending just for four hours a week (the groups were compared keeping the number of hours of instruction equal). In addition, learners in courses that primarily used a sight method of reading instruction did not learn to decode at all, while most learners in a phonics-based course did. One of the interesting findings was that in the process of learning word recognition skills in a second language the adults went more or less through the same stages that have been observed for young children (Chall, 1990; Juel, 1991): a logographic stage in which they learned some sight words, based on visual or contextual cues, an alphabetic stage, in which they learned to recognize words indirectly by using grapheme-phoneme conversion rules, and an orthographic stage in which they gradually managed to recognize frequently used words directly, by automating the slow blending of the alphabetic stage.

During the first year of the literacy course, more than half of the adult learners in the non-intensive course managed to decode orthographically simple and well-known words, while only one learner succeeded in reading and comprehending a longer passage of text. Phonological skills and vocabulary in the second language were the main influencing factors during the first stage. Except for a few individuals, the process seemed to be much slower than what appears to be the case for young children learning to read in a second language, although a comparison is difficult without taking into account many other factors such as input and teacher qualifications.

1.4 Overview

As we have pointed out above, the existing body of research on low-educated adults leaves unaddressed a range of issues whose resolution has the potential to directly impact educational policy in all those countries in which such second language learners exist. As a start, these include variation in source, amount and intensity of input (aural extra-classroom input, aural classroom input and written input), variation in instructional method/technique and variation in cognitive ability relating to aspects of language aptitude including working memory. In this volume of proceedings of the first

LESLLA workshop a modest number of contributions have been brought together which relate to two focal issues put forward in August 2005: literacy and second language acquisition by adults and the cognitive abilities involved.

Astrid Geudens gives an overview of research on beginning child L1 readers, Martha Young-Scholten, Nancy Strom and Jeanne Kurvers deal with adult beginning L2 readers, while Alan Juffs focuses on working memory and L2 learning. Two contributions from Larry Condelli, Heide Wrigley and Nancy Faux relate to teaching practices in the U.S.A, while the contributions from Anne-Mieke Jansen and Willemijn Stockmann provide the European perspective.

Astrid Geudens deals with phonological awareness and its importance for learning to read and write. In discussing various tasks developed for assessing phonological awareness at children, she addresses some of the problems and questions that arise in this research. One controversial issue relates to the developmental sequence of phonological awareness from large to small units or vice versa; another is the debate about which phonological units are most salient and important in children's reading development. A final intriguing question she asks is whether beginning readers use the same kind of phonological knowledge as skilled readers and whether late readers use different reading strategies than normal developing readers. She draws attention to developmental differences in children's early phoneme isolation skills in relation to early stages of reading. This research emphasizes the importance of informal print-related experiences, phonetic factors such as perception and articulation, and instruction-based experiences.

Martha Young-Scholten and *Nancy Strom* ask whether there is a critical period for learning to read, in other words, can adults without any native language schooling learn to read for the first time in a second language? While children develop literacy only after they have acquired much of their first language, non-literate adults often face the challenge of learning to read in a second language with little proficiency in that language and no familiarity with literacy. Young-Scholten and Strom report on a small-scale study of Vietnamese- and Somali-speaking adults with some or no native language schooling who were learning English in the USA. The study proceeded on the premise that awareness of various linguistic units - from word to phoneme - is connected to learning to read for the first time (e.g. for children Goswami & Bryant 1990, and for adults in their native language Morais *et al.* 1979). Their study reveals that, when compared to completely unschooled learners, some years of native language primary schooling makes a difference with regard to the learner's success. Two to four years of native-language schooling using the roman alphabet (for Somali and Vietnamese) gives low proficiency learners a foundation for reading in English. Any reading problems these learners had appeared to be connected with overall linguistic development. However, despite ample exposure to written English in their ESL classes, only one of the completely unschooled adults in the study was able to do more than read words from a very limited sight word repertoire or to write his name and address. The correlation of weak reading skills scores with low phonemic awareness scores provides further evidence for these learners' failure to grasp the alphabetic principle and to progress beyond sight-word-based reading. These unschooled non-readers, however, displayed the ability to isolate words and to recognize rhyme and alliteration in both their native language as well as in English. This parallels findings for pre-school children, suggesting that the readiness to read does not diminish for adults.

Jeanne Kurvers, Roeland van Hout and Ton Vallen focus on the language awareness of unschooled illiterate adults (immigrants from different language background as Turkish, Somali, Berber and Moroccan Arabic), which they compare with pre-reading children and low-educated adult readers. All groups were given the same set of tests on language awareness for both the phonological and the lexical/semantic levels. One of the outcomes was that the impact of literacy seems to be of crucial importance when it comes to explicit knowledge of structural features of language, more particularly of linguistic concepts like ‘word’ and smaller parts of words, such as phonemes, but also of what can be written down and what cannot. If, for example, function words are not signaled as writable units by non-literates, this may (or should) have a considerable impact on curricula and teaching, whether it is the teaching of either written or oral skills. *Kurvers et al.*’s study also reveals that non-literate adults have to learn how to distinguish between the information in a written text and real life experiences. In that literacy instruction is what leads to a focus on these within-text relations, such conclusions are highly relevant for classroom practices.

While the role of memory in language learning has been an issue for L2 researchers for about twenty years, it is almost unexplored with regard to non-literate and low-educated L2 learners. It is still an open question whether such learners memory systems are similarly organized as those of literate and higher-educated learners, and how their memory capacity can be measured. There are important indications pointing to a relationship between working memory capacity (in particular, in the working of the phonological loop operationalized by a non-word span) and the ease and rate of learning new vocabulary both in L1 (Gathercole & Baddeley, 1989; Baddeley, 2003) and L2 (Service, 1992; Miyake & Friedman, 1998). The same working memory capacity is assumed to play an important role in learning how to read and write, viz. to build up phonological representations (Bradley & Bryant, 1983; Goswami, 2000). So, for learning how to read and write for the first time in an L2, the role of working memory seems to be even still more important.

In his paper on working memory, L2 acquisition and low-educated L2 learners, *Alan Juffs* gives an overview of different models of working memory and the tests used for its measurement and he discusses the principal research results relating to L2 learning. Juffs concludes that, given research indicating that literacy may in fact change brain architecture, non-word tests may not be useful as a measure of working memory for non-literate populations (Petersson *et al.*, 2000). He therefore calls for extreme caution when making any predications or drawing conclusions about the potential for non-literate and low-educated learners to succeed in acquiring oral proficiency in the L2 on the basis of their non-word spans.

In the paper by *Larry Condelli and Heide Spruck Wrigley* instructional practices are the point of departure and the crucial question is: what works for adult ESOL (English speakers of Other Languages) literacy students? This large-scale study included 495 adult literacy students attending 38 ESOL classes in 13 schools and seven states in the U.S.A. Students were assessed at intake, three months and nine months after enrolling, with reading, writing and speaking tests and a literacy practices interview. Instructional practices, information about which was collected through classroom observations, included emphasis on literacy and language development activities and general instructional strategies. Using correlational growth modeling, the study found that instructional strategies that connected what is taught to real life, used a variety of modalities and activities to keep students engaged and used students’ native languages

to clarify and explain concepts were significantly related to literacy students' development of reading and oral communication skills.

Nancy Faux focuses on another classroom issue, but this time the perspective of the teacher trainer. Many adult teachers in the U.S.A. are untrained in working with the low-literate migrant population and unable to differentiate between literacy instruction for native speakers and that for non-native speakers. Using Virginia as an example, Faux explores some of the issues in the professional development of ESOL literacy teachers and discusses a solution that provides learning opportunities for such teachers to adopt effective research-based methodologies.

The papers by *Anne-Mieke Janssen-van Dieten* and *Willemijn Stockmann* also relate to the organization in and outside the classroom, but this time in the context of a European country, the Netherlands. Janssen-van Dieten first provides information on the European Framework of Reference for Languages, an instrument that aims to achieve more coherence and comparability of language qualifications within the European Community. She argues that this framework is not tailored to the needs of the groups of non-literate and low-educated learners, and then Stockmann in her contribution shows how the European framework has been adapted to and expanded for the LESLLA learners. Stockman describes how portfolio methodology was adopted as a tool of assessment for adult learners in the Netherlands. She tailored the portfolio - as one of the components of the 'European Framework of Reference for Languages' - to the level of LESLLA learners, making it suitable as an instrument of self evaluation and she illustrates in detail how it may also be used to shape the curriculum.

For researchers and practitioners from English-speaking and non-English-speaking settings a new research agenda represents a great opportunity. We need to know much more about the second language acquisition of non-literate and low-educated adults; specifically, we need to know more about the L2 acquisition of adults who learn to read and write for the first time in a second language. We also need to know more about the interactions between learning a second language and developing literacy. This research program can only be pursued cross-linguistically. Research on second language acquisition thus far has been carried out in the context of (applied) linguistics, while literacy research is much more embedded in the social science, e.g. education. Research should also be encouraged in order to address Comings *et al.*'s (2003) call for an evidence-based adult education system. Without more research on such learners' actual linguistic and literacy development, it is difficult to draw any conclusions on how best to teach them. Studies of the language acquisition of this population in relation to their level of and development of literacy will most definitely add to the body of research in second language acquisition. Studying adult immigrants with little education, taking social variables into account (see Bigelow & Tarone, 2004; Moyer, 2004; Pitt, 2005) creates the potential for shedding light on narrowly treated issues in the second language acquisition of syntax and of phonology. Including a different set of variables can lead to fresh perspectives on a range of issues such as the status of inflectional morphology in the development of L2 syntax (Prévost & White, 2000; Van de Craats, to appear) or the role of orthography in the development of L2 phonology (Bassetti, to appear).

An interdisciplinary approach is required to bring together linguists, psycholinguists, psychologists and educational researchers to establish a cross-disciplinary, multi-country and multi-target-language research agenda to address how adult learners

with little or no formal schooling acquire second languages and learn to read in them and how best to teach such learners. The present inaugural symposium proceedings represent the beginning of what we hope will be a fruitful journey as we further the LESLLA research agenda. We hope that the multiple Ls in Low-Educated Second Language Learning and Acquisition will develop into the future Ls of Literate, Empowered, Secure, Life-Long-Learning Adults.

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