DEVELOPMENT OF WORD RECOGNITION SKILLS OF ADULT L2 BEGINNING READERS

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1 Introduction

While there exists an enormous number of studies on how children learn to read and write, both in their mother tongue and in a second language, studies on how adults who never attended school as children, get access to the meaning of written language are remarkable scarce (Van de Craats, Kurvers & Young-Scholten, 2006). Studies that focus on word recognition skills of adults are mostly about adults who take a second chance in adult literacy classes, not on truly illiterate adults who learn to read and write for the first time in their life. Moreover, studies on second language literacy acquisition of unschooled adults are even scarcer (Wagner, Venezky & Street, 1999; Wagner, 2004). This is the more remarkable, since for some decades Western countries have been dealing with many migrants who start their educational "career" and their application for citizenship in second language literacy classes.

Word recognition can be defined as determining the identification of a written word, i.e., the pronunciation (and meaning) of a word encountered in print or writing. Or, to put it in the words that teachers often use, word recognition is about getting to know the answer to the question, "What does it say here?" Word recognition is assumed to be one of the basic skills to be developed by beginning readers (Barron, 1986; Adams, 1990; Kurvers & Van der Zouw, 1990; Byrne, 1998; Ziegler & Goswami, 2006). Although the majority of researchers would agree with this definition of word recognition, they differ in their view on the learning processes behind this skill. Roughly speaking, two models are more or less defended: on the one side there are the stage models of beginning reading, on the other the non-stage models (Juel, 1991; Chall, 1999).

Many models of beginning reading development have argued strongly in favor of a sequence of rather uniform stages in reading development (Chall, 1983; Ehri, 1975, 1979, 1987; Gough & Hillinger, 1980; Mason, 1980; Frith, 1985; Ehri & Wilce, 1985; for reviews, see Juel, 1991; Chall, 1999). Although these models differ in details of description and in the use of labels and the precise identification of sub-stages, they all propose more or less a first stage of direct-word recognition on the basis of either visual or context-bound cues, a second stage of indirect mediated word-

[1] This research project was carried out together with Kim van der Zouw.

recognition through the use of graphic instead of visual cues (grapheme-phoneme correspondences), and a third stage of direct word-recognition again, now based on automatisation of the indirect way of word-recognition. Typical for this paradigm is the notion that, although both the first and the third stage demonstrate direct word recognition, there is a qualitative difference between both types of word reading, the third being alphabetical in root, while the first is not (Ehri, 1991).

Thus far, most of these stage-models of beginning reading are based on research with young children during the first year of formal reading instruction. Since the first studies on stages in reading appeared, subsequent studies revealed that the occurrence of the different stages and the speed in moving into a next stage is dependent on the shallowness of the specific orthography at hand and the consistency of the orthography (Seymour, Aro & Erskine, 2003; Wimmer & Goswami, 1994; Ziegler & Goswami, 2006).

An alternative approach, in general more debated in English speaking countries than in countries with a less opaque orthography than English, argues for a route directly from the visual symbol to meaning, instead of the indirect route through mediation of the spoken language, as proposed in the stage models (Juel, 1991; Chall, 1999). This model in fact was (and in some countries is) rather popular in adult education, probably because until recent decades most adults in adult literacy classes already went through a (problematic) history of phonics instruction, which did not bring them much success in learning to read fluently.

How do adult first time readers come to recognize written words? Does their learning process resemble that of children, both in terms of success and tempo? Do they make the same steps? Does it take them longer compared to children to learn to read? In short, what routes do illiterate adults take who learn to read an alphabetic script? The most appropriate group to answer those questions would be native speakers who learn to read and write for the first time in their life. But most native speakers who attend adult literacy classes in the industrialized countries differ in another important way from young children: most of them did attend school and had a long history of (sometimes bad) experiences with learning to read and reading (Greenberg, Ehri & Perin, 2002; Viise, 1996; Worthy & Viise, 1996). For some decades now, however, there has been one other group of adult attendants of literacy classes: unschooled adult migrants learning to read and write in a second language (Kurvers, 2002, Kurvers, Van Hout & Vallen, 2006).

With regard to the development of word recognition skills in a second language, the theoretical question of which model best fits the actual development of adult beginning readers becomes even more challenging, since all stage models are crucially based on the mediation of

spoken language, more specifically the sounds of the spoken language, in the route from written word to meaning. The graphic information is first turned into spoken words - for example by means of letter-phoneme correspondences - that call on for meaning. This, however, might create a serious problem for first time beginning readers in a second language, because neither the sounds (the inventory of phonemes) nor the meanings of the spoken words might be easily accessible or even known, nor do these learners possess the linguistic intuitions native speakers normally have about which sounds might go together in spoken words and which might not.

This paper is about illiterate adults who never went to school as children and who enter a literacy class in a second language when they are grown-up. Although they differ in many ways from young children (age, first language, time available to spend on learning, life experience), in one respect they are like young children: they never attended formal reading instruction before, neither in their mother tongue nor in any other language.

The main research question was: How do adults who learn to read and write in a second language develop word recognition skills and what model of beginning reading developments explains the findings best?
A secondary research question was related to specific educational features: Does it matter if phonics instruction is used, and do intensive courses reveal better results than non-intensive courses, instruction time held equal?

In two different multiple case studies, we followed adults during their first year in adult second language literacy classes in Dutch as a second language (DL2). The first case-study (referred to from now on as Study 1) was carried out in five different community centers in which small groups of adults followed a literacy course for about four hours a week. The second case study (Study 2) was carried out in a large adult education center, in which several level groups were followed.

In the next section, we first present study 1; in section 3 we present the outcomes of study 2 comparatively. In section 4 we adress the question of development of word recognition strategies.

2 Study 1: Learning to Read in Non-intensive Courses

2.1 Participants and Data Collection

In the first study, we started with 24 illiterate women who went to literacy classes in five different community centers. Ten of them left the literacy course during the first two to five months, and two had already been in adult literacy classes before. These participants are not included in this study. Twelve persisted for the whole year (although not all were present

at moments of data collection). Table 1 presents some background data of the students in Study 1.

Table 1 Background data of participants in Study 1

Community center	Name	Age	Country of origin	L1	Residence in years	Earlier education
Center A	Alma	35	Morocco	MA	12	None
	Khadizja	22	Morocco	Berber	7	None
	Tamara	51	Surinam	Javanese	5	None
Center B	Djamila	35	Morocco	Berber	2	None
	Fouzia	39	Morocco	Berber	8	None
	Zina	50	Morocco	MA	5	None
Center C	Houria	15	Morocco	Berber/ MA	0	None
	Rachida	39	Morocco	Berber/ MA	5	None
Center D	Aicha	18	Morocco	Berber	4	0.5 year
Center E	Karima	44	Morocco	Berber	4	None
Center F	Ayten	17	Turkey	Turkish	2	None
Center G	Halide	24	Turkey	Turkish	2	2 years

As can be seen from Table 1, there is a broad age range; the youngest is 15 years old, the oldest 51. Residence in the Netherlands varies from a few months to 12 years. Nine of the participants came from Morocco, two from Turkey and one from a Javanese-speaking community in Surinam, a formerly Dutch colony. Most of the participants did not have any experience with education in their home-country: Aicha went to a Koran school for some months and Halide went to primary school in Turkey for about two years with several interruptions. Seven of the Moroccan women were Berber-speaking.

These twelve women went to five different literacy courses in five different centers, which differed in many ways: hours a week, qualification of teachers, materials used, and circumstances under which the teacher had to teach. Center A, for example, was a women's center with good accommodations, qualified teachers and a child-care center, while Center B was a community center with changing teachers, changing group sizes and no special child-care supplies. Center D was a small community center in which the literacy course took place in the same large room in which other activities went on at the same time. The courses were comparable in the sense that they all were non-intensive (varying from three to five hours a week) and that they all used the same method, *Zeggen en Schrijven* (Van der Erve & Jansen, 1981). *Zeggen en Schrijven* (Say and Write) is a very simple phonics-based method that starts with about 30

sight words and some phonics training and after that switches to simple texts with short sentences.

Since this contribution will focus on the development of word recognition skills, we globally present all data we collected, and go into a more detailed description of the collection of word recognition skills and strategies.

We started the research in the first month of attendance with an interview in the women's mother tongue to gather data about their background, migration history, earlier experience with education, motivation and expectations about what learning to read and write would be like and about the reason they had for choosing literacy education in Dutch as a second language. At the time of data collection, DL2 courses were not compulsory yet and both the Moroccan and the Turkish women could have chosen literacy education in Standard Arabic or Turkish as well.

After that, we gathered some data about their second language abilities (vocabulary, basic instruction language, and auditory discrimination) and about what we would call now emergent literacy skills: environmental print recognition, grapheme knowledge, rhyme ability, and writing patterns (Sulzby & Teale, 1991).

During one year (ten months of lessons), we regularly observed lessons in which we joined the group at least once every two weeks and made notes of all that went on in the literacy classes, especially on reading and writing events by individual women.

Apart from the regular observations, we gathered information about reading strategies, word recognition skills, spelling, and reading extended discourse at regular intervals during the courses. In this contribution, we only discuss word recognition skills and strategies.

To investigate word recognition skills, we used a word reading (or decoding) test that consisted of 58 monosyllabic words, half of which were introduced in the lessons as sight-words, the other half of which were new words, comparable in word structure and mostly known from the lessons in spoken Dutch. *Jas* (coat) was an example of a written word that was introduced in the lessons, *gas* (gas) a word comparable in phonemic make-up, not intensively used in the lessons, but assumed to be known by most of the participants. The students were asked to read the words in the list, and the time they needed to read was registered.

As a spelling test, a random sample of twenty words from the word reading test was used. The researcher or the teacher read the words in the context of a sentence and then asked the students to write down the target word.

2.2 Results

All participants in Study 1 were, for different reasons, eager to learn to read and write and to learn Dutch as a second language. The most important reason they mentioned during the interview was being independent from others in using written information and speaking Dutch. Their ambitions were rather moderate, reserving high ambitions for their children. Or, in Ayten's words: "My son must not become like me, like a blind. I can look at the newspaper, but still do not know what it says." The results at the start of the course revealed a clear distinction between Alma, Khadizja and Ayten on the one hand and the other participants on the other hand. The first three already knew several letters, knew more Dutch words and were better at visual discrimination of letters, while the others, especially Djamila, Fouzia and Zina had low scores on all entrance tests.

The participants were asked to take the word-reading test after six months of lessons and again at the end of the year (roughly comparable to 25 weeks and 40 weeks of instruction). Figure 1 shows the scores on the word reading test after roughly 25 and 40 weeks of instruction. Tamara is not included, because she was ill during the last period of data collection. At the first moment, her reading score was 0.

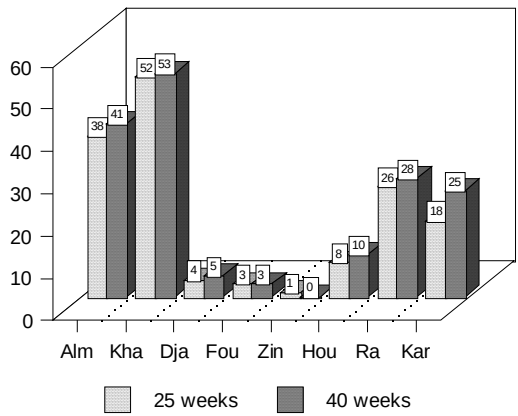


Figure 1: Number of correctly read words after 25 and 40 weeks

Figure 1 nicely summarizes the most striking outcomes. First, the outcomes reveal large differences in reading skills between individual students, both after six and ten months of lessons. These outcomes partly reflect individual differences of students who attended the same course. Compare, for example, on the one hand Alma, Khadizja, and Tamara

(scores after 25 weeks 38, 52, and 0, respectively) who all attended the same course at Center A or, on the other hand, Houria and Rachida who both attended the same class at Center D. Secondly, Figure 1 also demonstrates salient differences between courses. Alma and Khadizja, for example, were in the same course, while Djamila, Fouzia and Zina together attended another course.

Even more strikingly, these outcomes show remarkably small differences between the scores after six and ten months for nearly all students, only Karima showing some substantial growth in reading score in the last 4 months.[2] That seems very disappointing, as if the women did not learn anything at all between the sixth and tenth month of attendance. This, however, is not true. In the meantime, they learned something else. To get more insight into these learning processes, we took a closer look at the word recognition strategies these women used at different moments (See section 4).

3 Study 2: Intensive Courses

After we finished our observations in the non-intensive courses, some of which took place in not very optimal learning conditions, we investigated the development of beginning reading in DL2 in an intensive course in a more school-like context with professional teachers. It formed part of a wide range of adult second language courses offered to migrants in one of the big cities in the Netherlands. The literacy course lasted forty weeks and was divided into four level groups of ten weeks each with fifteen lessons a week; after every tenth week, a proficiency test was administered. Students that passed the test went to the next level group; students that failed had to repeat the level group or were, depending on the outcomes, sent to a lower level group. Teachers were experienced in literacy education; the method used was the same as in the non-intensive courses. This literacy course in Dutch as a second language (as most others are) was attended by illiterate adults who never went to school before and by adults who could read and write in their mother tongue in a different script (for example Tamil, Arabic or Farsi), but who did not know the Latin alphabet.

3.1 Participants and Data Collection

We started our data collection in November with 22 participants who attended one of the four level groups and added the new students that entered one of the level groups in February or April. In total, 37 adults

[2] Alma had been attending for some more time and Aicha had been in a previous course for half a year some years earlier.

from ten different countries, 22 men and 15 women, attended at least for one period. Most of them were between 20 and 35 years old; the youngest was 18, the oldest 51. The period of residence in the Netherlands varied from some months to 21 years, the majority of the students being in the Netherlands between one and five years. Twenty of the students had attended school in their home country (range 1-9 years), most of whom could read and write in their mother tongue (Chinese, Arabic, Tigrinya or Tamil), while seventeen had no previous education and could not read or write at all.

Table 2 presents background information of the participants who attended one of the four literacy level courses in September and of the groups that started ten or twenty weeks later.

*Table 2: Background data of participants: literacy level group, ethnicity, age, length of residence in the Netherlands, years of education and result literacy test**

Number of students in literacy level groups	Level 1	15
	Level 2	9
	Level 3	9
	Level 4	4
Countries of origin	Morocco	25
	China	3
	Eritrea	2
	Other countries	7
Age-range	18-25	20
	26-35	8
	36-51	9
Sexes	Female	15
	Male	22
Length of residence	< 1 year	9
	1-5 years	17
	6-10 years	3
	> 10 years	8
Previous education in years	0	17
	1-5	10
	7-9	9
	Unknown	1
L1-literate	Illiterate	19*
	L1 literate	17
	Unknown	1

* Two participants with some schooling could not read; therefore, they were assigned illiterate.

Originally, this study was designed to combine a longitudinal case study in which the students that started at level one were going to be followed through three level groups, with cross-sectional comparisons of the several level-groups that could add to the knowledge on the development of literacy skills. Data collection, however, became more complicated because students did not move smoothly from one level group to the next, disappeared from the course or could not be placed in the intended higher level group. Table 3 presents an overview of the placement of the students (by student number) in the different level groups in the three periods of ten weeks of teaching.

Table 3: Subjects in the different level groups during the three periods of data-collection, Study 2

	November-January Participant	February-April Informant	April-July Participant
Level 1	1,2,3,4,5	23,24,25,26,8,12	24,32,33,34,35,36,37
Level 2	6,7,8,9,10,11,12	1,2,3,4,27,28	23,25,8,9,12
Level 3	13,14,15,16,17,18	7,10,29,30,31	1,2,3,13,27,28
Level 4	19,20,21,22	13,14,15,16,18	6,7,10,30,31

As Table 3 shows, not all students went nicely from the first level group to the next in the research period. From the students that started at level 1, only three could be followed for three subsequent periods of three weeks (Students 1, 2, and 3) and three other students (Students 4, 23, and 25) for two subsequent periods. Some students left the course (for example, Students 5 and 17), some were sent back to a lower level group (Students 8 and 12), some disappeared for some time (Students 6 and 9), and a few were promoted to regular DL2 classes for literates, because they were fast in learning the Latin alphabet (Student 11). In the presentation of results, therefore, we only present group means for the word reading and spelling skills in comparison with the non-intensive course. For an analysis of the word recognition strategies, we only use those participants that could be followed for more than ten subsequent weeks.

The instruments we used for word reading, spelling and reading comprehension were the same as in Study 1; this allowed us to compare the development of word recognition skills in this study with what we found in the non-intensive courses. In addition, we also could compare the reading development in a second language of illiterates with those who could read and write but only had to learn either alphabetic writing or the Latin alphabet. To prevent reduplication, we present the outcomes of study 2 in direct comparison with study 1.

3.2 Results

Table 4 presents the word recognition and spelling abilities of two groups of illiterates (eight from study 1 and six from study 2) after their first year of attending a literacy course. The table includes only those illiterate students that attended the course for most of the time without interruptions.

Table 4: Means and standard deviation of decoding, spelling and reading time after ten months of instruction

		Non-intensive	Intensive	T
Word-reading	Mean	20.6	50.0	3.59**
	Sd	19.4	4.9	
Spelling	Mean	5.9	21.3	4.42**
	Sd	7.3	5.2	
Reading time (minutes)	Mean	10.28	2.26	-3.94**
	Sd	4.49	1.23	

** $p<.05$

It will not come as a surprise that on all measures the differences between these two groups are large and significant, because the students in the intensive course received many more hours of instruction. The reason, however, to present these data as well is that they clearly show that on average the first group (the students in the non-intensive course) did not learn to read, while the second did. Since the six illiterate adults who attended the intensive course had received many more hours of reading instruction, we compared ten months of non-intensive courses (about 130 to 170 hours of instruction) to ten weeks of the intensive course (150 hours of instruction). These results are presented in Table 5.[3]

Time of instruction held the same, the intensive course group achieves remarkably better results on all scores: the average word reading score is 30, compared to 20 in the non-intensive course; the average spelling

[3] In the first comparison, six illiterate students of the intensive course were involved of whom we had level four data (Students 13, 14, 15, 18, 21, and 22), in the second comparison, six illiterate students of whom we had reading scores at the end of level 1 (Students 3, 24, 25, 26, 36, and 37).

Table 5: Means and standard deviation of decoding task, spelling task and reading time after ten months of non-intensive and ten weeks of intensive courses

Task		Non-intensive	Intensive	T	Cohen's D
Word-reading	Mean	20.6	30.0	0.89	0.48
	Sd	19.4	19.6		
Spelling	Mean	5.9	13.5	1.88*	0.96
	Sd	7.3	8.5		
Time (minutes)	Mean	10.28	4.03	-2.57**	1.95
	Sd	4.49	1.07		

** p<.05 * p<.10

is 13 (6 in the non-intensive course), and word reading is much faster and more fluent (4 minutes compared to 10 in the non-intensive course). These results are significant for spelling and mean reading time, not for word reading (the effect sizes are medium for word reading and large for spelling and reading time). The conclusion seems to be that learning to read and write in a second language will be more effective if instruction time is not spread out over a too long period. Beginning readers seem to learn more if they attend an intensive course for about ten weeks than if they attend a whole year course for some hours a week. But it is fair to add to that conclusion that there were more differences between the two courses than frequency of lessons a week, such as level of teacher experience.

4 Development of Word Recognition Strategies

To return to the question of stages in reading development, we also analyzed every reaction on the word-reading tasks on the basis of reading strategy used by the beginning readers.

For the analysis of word recognition strategies, we only used the words in the test that were not introduced as sight words during the lessons and we categorized and analyzed the reading miscues. Variations in pronunciation that could be attributed to the mother tongues of the participants (i.e. saying *vi:s* instead of *vis* or *bus* instead of *bcs*) were not registered as reading mistakes. We categorized the reactions as followed:

- Visual recognition: word recognition is based on visual or context cues, such as responding with an already known sight word that visually is similar to the word that has to be read;

- Letter naming: responding with the names of the sounds of individual letters, without any blending;
- Decoding: sounding out letters (either by name or by sound) and blending (s-i-t, sit);
- Partial decoding: a word recognition strategy in which words are not decoded letter by letter, but by groups of letters, for example onset and rhyme (str-eet, street);
- Direct word-recognition: a word is read without any spelling out, mistakes show orthographic instead of visual confusion, and many reactions now are no real words (f.e. saying **breif* instead of *brief*).

Although the first (visual recognition) and the last strategy both illustrate direct word recognition, they are different in nature, the first being visually based, the latter orthographic. Figure 2 presents an overview of the frequencies of word-reading strategies of the three different groups (illiterates in the non-intensive courses, illiterates in the intensive course and L1-literates in the intensive course) after about 150 hours of instruction time.

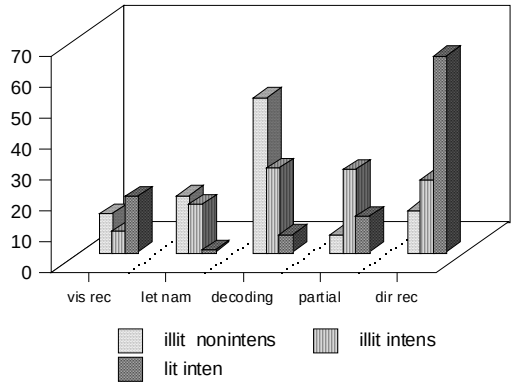


Figure 2: Percentages of word-recognition strategies after 10 months of the non-intensive and 10 weeks of the intensive literacy course

Figure 2 clearly illustrates the three different stages in development (remember that Zina, Fouzia and Djamila from the non-intensive course who read hardly any words at all would have been in the first bar of visual recognition): the illiterate students from the non-intensive course are mostly sounding out simple words, the literates from the intensive course are mostly directly recognizing written words (with a few exceptions) and the illiterates from the intensive course are somewhere in between: some

are still sounding out, others are partially analyzing written words and still others are directly recognizing words. Or, to explain it slightly differently: they recognize the simplest words directly and sound out the most difficult ones. Thus far, this is a nice illustration of stages, but not a clear prove, because strategies are aggregated over groups. Therefore, the changes in word-recognition strategies of those individuals of both courses of whom we could collect longitudinal data are presented in Tables 6 and 7 (graphically presented in Figures 3 and 4).

Table 6: Percentages of word recognition strategies and reading scores after 25 and 40 weeks in the non-intensive course

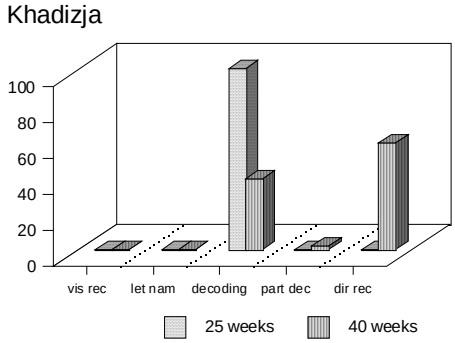
Participant	Instruction time	Visual recognition	Letter-naming	Decoding	Partial decoding	Direct recognition	Reading score
Houria	25	39	40	20	0	0	8
	40	25	36	39	0	0	10
Rachida	25	22	20	44	8	6	26
	40	32	11	37	14	7	28
Khadizja	25	0	0	100	0	0	52
	40	0	0	39	2	59	53
Alma	25	3	6	83	8	0	38
	40	2	2	82	14	0	41
Karima	25	18	63	20	0	0	18
	40	0	39	55	2	5	25

Do adult illiterates who learn to read and write an alphabetic writing system in a second language go through the same stages as children do who learn to read and write in their mother tongue? Table 6 and 7 (see also Figure 3 and 4) seem to illustrate they do: the frequencies of the left-sided columns decrease from the first moment of measurement to the second and third, while the strategies in the right half of the table become more frequent. This holds true for each individual student, whether they "move" from the left to the middle or from the middle to the right.

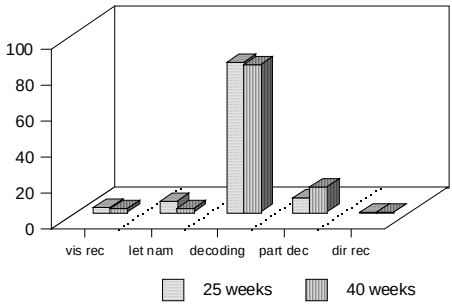
One could argue that that is self-evident, since these stages are partly dependent on instruction. But it is less self-evident than it might seem. Firstly, nearly all research on beginning reading was done with children who learn to read and write in their mother tongue, not with adults. Secondly, the cognitive abilities of adults, also of illiterate adults, might be ahead of those of young children and therefore they do not necessarily demonstrate the cognitive confusion that many children demonstrate in the first stage of learning to read and write (Downing, 1984). Illiterate

Table 7: Percentages of word recognition strategies after 10, 20 and 30 weeks in the intensive course (= L1-illiterates)*

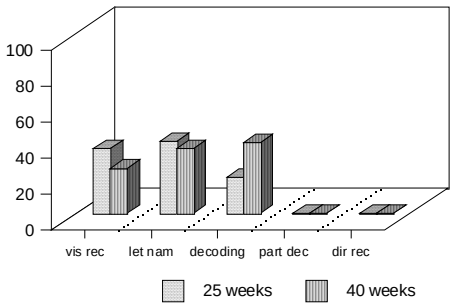
Participant	Instruction time (weeks)	Visual recognition	Letter naming	Decoding	Partial decoding	Direct recognition	Reading score
Nam K (1)	10	32	5	18	7	39	33
	20	12	0	2	30	57	43
	30	14	2	2	32	50	42
Senna (2)	10	45	0	16	7	32	22
	20	7	0	18	25	50	52
	30	2	0	0	7	91	49
Fatima (3)*							
	10	0	7	93	0	0	19
	20	5	0	45	37	14	53
	30	5	0	0	48	48	50
Amina (4)	10	16	0	0	14	70	40
	20	2	0	0	23	75	54
Wa Lin (23)	10	5	0	0	14	82	46
	20	9	0	0	14	77	46
Mohammed (25)*	10	2	0	2	41	55	58
	20	0	0	2	23	75	62



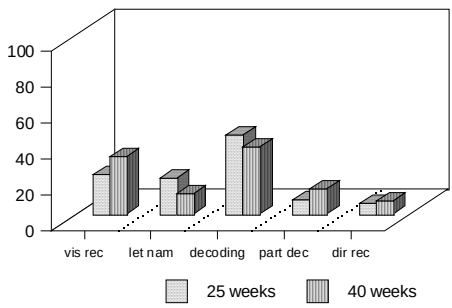
Alma



Houria



Rachida



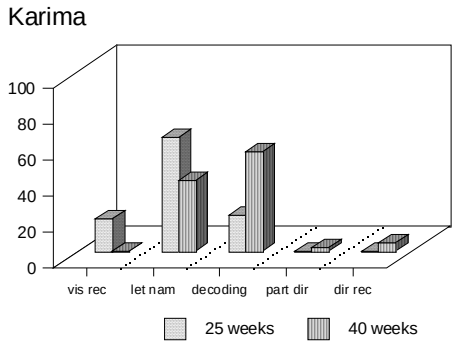
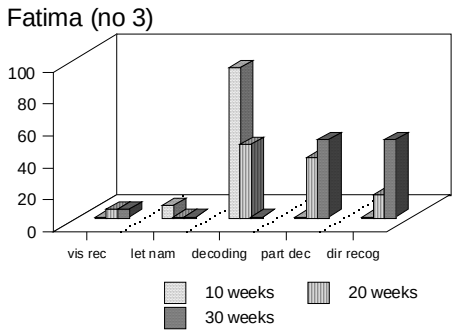


Figure 3: Frequencies of word-recognition strategies after 25 and 40 weeks of instruction in the non-intensive course



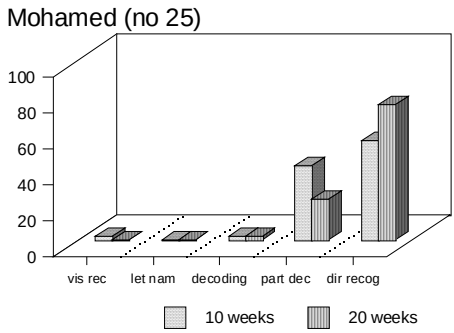


Figure 4: Percentages of word-recognition strategies in intensive course after 10, 20 and 30 weeks (Illiterates)

adults, for example, might have developed other strong visual and aural strategies in gathering and storing information. And finally, adults who start learning to read and write in a second language with quite another phonological system than their mother tongue might not be able to use the phoneme-grapheme correspondences easily.

The results that were presented here demonstrate that adult beginning readers (like young children) start their learning process with a non-systematic visual strategy in which they try to seek correspondences directly between visual or contextual clues and meaning and gradually learn to use the strategy of sequential decoding. Only those students that used this latter strategy of relying on graphical instead of visual resources demonstrated substantial progress and they also were the only ones (those data are not presented here) who were able to give some reliable interpretation of and reaction to written discourse. Put in another way, all illiterates start with a kind of logographic way of recognizing written words, looking for either visual or contextual clues in answering the question, "What does it say?" After that, they start paying attention to graphic cues in the alphabetic stage in which they learn to use letter-sound correspondences, first extensively and gradually shortening this process by directly recognizing frequently used letter clusters. Those beginning readers that showed the most progress succeeded in reaching what is called the orthographic stage in which they recognize written words directly. During the first hundred of lessons in non-intensive courses, we could observe a change from logographic to alphabetic word-recognition skills, from guessing to sequential decoding. The only students who did not demonstrate that change were the three students who did not receive any phonics instruction at all. The illiterates in the intensive course demonstrated a much faster change from logographic to alphabetic word recognition skills - within ten weeks of instruction - and later on a change from alphabetic to orthographic strategies in word recognition.

Phonics instruction seems to be one of the major determinants of reading development in Dutch as a second language, as in Dutch L1. But just as important seems to be vocabulary in a second language, referring to what Share (1995) has called the self-teaching strategy of beginning reading and what we have called the importance of the feedback of the student's own lexicon. Many times we observed how important this feedback is (b-a-l oh, yes, bal) to move from the alphabetic stage to the orthographic stage. This is important because the necessary, but not very inspiring and motivating sounding out of words is slowed down very much if the words are unfamiliar to the learners. From the very beginning, learning to read is using language. Learning the code is only part of it.

5 Discussion

Some questions have been raised about the stages in beginning word recognition, including questions about the very existence of qualitative changes, about how critical the spelling-to-sound stage is, and about how important early word recognition skill is (Juel, 1991; Ziegler & Goswami, 2006).

The outcomes of this study seem to confirm the claim of qualitatively different stages in the development of word recognition skills in learning to read as well as write in Dutch as a second language. In the first stage, the illiterates learned to recognize words by selecting visual or contextual cues that are not used systematically. The mistakes adults make in reading are very different from the mistakes they make in the later alphabetic stage: reactions are only complete words, only existing words (not pseudo-words), and, in most of the cases, they are selected from the words they have formerly learned as sight words. In the alphabetic stage, these reactions disappear and are replaced by mistakes that have letters in common with the target word, and many of the mistakes are not real words. Once the students have learned to see a written word as internally structured, they cannot see it any more - as they did before - as only a visual configuration. The observations revealed that it was very difficult for students in the alphabetic stage, who needed all their energy for sounding out and blending, to pay attention to the meaning of connected discourse; only the students in the orthographic stage could.

Paying explicit attention to spelling-sound relationships seems to be critical, at least for everyone who learns to read and write an alphabetic writing system for the first time, whether adult or child, whether learning to read in a first or in a second language (Juel, 1991; Byrne, 1998; Ziegler & Goswami, 2006). This, however, does not mean that the alphabetical code is the only thing that needs attention in literacy courses for L2 learners. Quite the contrary, learning spelling-sound correspondences is a necessary but not at all sufficient part of learning to read and write well. Preferably, it is a short, but systematically worked out and intensively exercised part of the literacy course, deliberately related to a familiar vocabulary (good software could take over a great deal of this in an even more efficient way), while the student should spend most of the time getting a grip on all other aspects that make written language different from spoken language and that are needed to participate in a literacy-rich environment. Early word recognition skills seem to be very important because they are a major predictor of later reading comprehension. All data we gathered about reading comprehension of the participants in both non-intensive and intensive courses did suggest that only those learners who got into the orthographic stage of reading were able to attend to the meanings and implications of written discourse. Using the context only

helps, as we found out, if their word recognition skills were rather well developed, not if they had to count on context alone (Goodman, 1986; Smith, 1992, 1996). But for word recognition skills to develop in a second language, a learner needs at least two things: the first is exercising and automatisizing the alphabetic way of word recognition, the other is vocabulary development in the second language. Otherwise, reading is like sounding out nonsense words. And it doesn't bring you much in your second language environment if you are very good at sounding out nonsense words.

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