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Learning Apart Together: Student Profiles in Adult Literacy Classes in the Netherlands

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Abstract

Until recently, the Dutch adult education policy distinguished between L1 and L2 adult education. Times have been changing, however, and the traditional L1 classes have evolved into increasingly multilingual ones. This paper presents the results of a study aimed at investigating the different student profiles in these adult education classes. Participants in the study were 237 students from eight different adult education centers and their teachers. In addition to background data on the students (e.g., age, age upon entry to the Netherlands, education, L1), we collected data on five different skill areas: Dutch language proficiency (vocabulary and syntax), word reading/fluency, text comprehension, spelling, and text writing. The teachers and the centers provided data on intake, instructional practices, and teaching materials for reading, writing, and oral Dutch proficiency. The analysis yielded five different student profiles. The two most frequently occurring student profiles were the more advanced low-literates (both L1 and L2 students), who were focused on improving their reading and particularly writing skills. Additional profiles represented the beginning second-language learner, the adult learner with specific reading problems, and students who never had been to school as children or exhibited general learning problems. Some educational implications of the different profiles are discussed.

Introduction

In the Netherlands, adult basic education traditionally has been serving two different groups with two different programs: L1 reading and writing classes for low-literate, native speakers of Dutch, and adult literacy and second-language classes for low-educated immigrants in integration programs. For some decades, this two-pronged approach made sense programmatically. The first learner group included learners who had attended regular education for quite some time but who (for several reasons) lacked the literacy levels needed in their daily lives or at work; the L2 classes consisted of migrants who had less formal schooling or had not been to school at all and who had to learn to read and write Dutch from scratch. However, times have changed in the Netherlands and other European countries: over the last few years, adult education centers have observed a growing cultural and linguistic diversity in their traditional L1 classes (Simpson, Cooke, & Baynham, 2008). Not much is known about the variation in literacy and language abilities among the students in these Dutch L1 classes, compared to Dutch as a second language (DL2) classes (Kurvers & van der Zouw, 1990; Kurvers & Stockmann, 2009). For these reasons, a research project was started, funded by the Dutch Ministry of Education (OCW), to investigate the backgrounds of the students, the instructional practices in the classes, and the different literacy and language ability “profiles” of the students. A secondary aim of the study was to inform adult educators about how the different student profiles could be used to improve instruction.

The term *profile* will be used to capture the pattern of underlying component abilities in language and literacy. Kruidenier’s (2002) review of research on basic reading indicates that phonics and fluency, vocabulary, and comprehension all contribute to building a reliable profile of adult literacy learners (see also Chall, 1994). The studies of Sabatini (2002) and Eme (2011) revealed that low-ability adult readers had problems mainly with speed and accuracy in (phonological) decoding, but fewer problems with comprehension and vocabulary. Davidson and Strucker (2002) compared 135 native and 77 nonnative,

low-literate English speakers. The two groups did not differ significantly in decoding skills, but the native speakers scored significantly higher on vocabulary- and comprehension-related measures. Mellard, Fall, and Mark (2009) investigated the reading abilities of 295 adult basic-education students selected from six different level groups. Although the cluster analysis they used revealed seven ability groups, they distinguished three instructional groups: 48% of the sample needed basic reading instruction, 48% needed to work on fluency, and 4% needed to work on comprehension. Although six level groups were included in the study, a remarkably high percentage of the whole group lacked even basic reading skills in English.

The studies on student profiles mentioned so far mainly looked at reading ability. Because writing is often considered even more problematic for low-literates than reading, we also wanted to include writing ability. On the other hand, oral language skills often do not get much attention in L1 adult literacy classes because L1 students mainly attend(ed) these classes because they have problems with reading and writing, not with oral skills. That, however, can be less taken for granted now that nonnative students are attending these classes, even if they already have attended Dutch education before. For that reason, we also wanted to include some oral skills in Dutch.

The main *research questions* for our study were as follows:

- What are the main features of the instructional practices in the Dutch L1 literacy classes?
- What range of student profiles can be distinguished in these adult literacy classes?
- In what ways do students differ in their language and literacy skills and therefore in their learning needs?

This paper concludes with a discussion of the educational implications of our analysis of instructional practices and different student profiles.

Method

Description of Student Sample

We collected data from 237 students who were attending Dutch L1 adult literacy classes during the first months of 2013. The students were selected from nine different educational centers geographically spread over the country. We drew a stratified random sample of about 25 students from each of the centers, taking care that different literacy levels, native and nonnative Dutch students, and students working in subsidized workforce development programs were included in the sample. The students were attending classes taught by 20 different teachers.

The mean age of the 237 participants in the sample was 46, with ages ranging from 20 to 77. Slightly more than half of the students (52%) were born in the Netherlands, while 48% were born in 44 different countries, such as Morocco, Turkey, Surinam, Indonesia, Somalia, or Afghanistan. The mean length of stay of the foreign-born group was 20 years (ranging from 1 to 55 years). Of the native Dutch students, 40% spoke only a regional dialect at home. For about 12% of the learners (nearly all of them Dutch), the teachers reported that the students experienced personal or health problems that likely hindered learning, including (supposed) dyslexia. Nearly two-thirds of the students (63%) were employed in 51 different occupations, and 23% worked in subsidized workplaces for handicapped or long-term jobless adults. The majority of the students had 7–10 years (range: 0–16 years) of prior schooling, while 33% of the students (mainly Dutch natives) had attended special education.

All students consented and agreed to participate in the study. Afterward, all teachers were given the results of their own students so as to discuss them with their students and offer feedback on the difficulties experienced during the assessments.

Description of Teacher Sample

Through a teacher background questionnaire, data on the teacher demographics were collected. All 20 teachers were highly educated and experienced. Most were women (85%), and half of them had attended second-language training courses.

Assessment Instruments

A variety of assessment instruments were used to investigate the language and literacy skills of the students, the backgrounds of the students, and the characteristics of the teachers and their teaching.

Oral language skills. The oral language skills assessment consisted of a vocabulary test and a sentence comprehension test. The vocabulary test consisted of five subsets of the Dutch version of the Peabody Picture Vocabulary set (Schlichting, 2004), from subset 6 (some high-frequency words) to subset 10 (several very infrequent words). The selection of subsets was based on a comparison of the test words with the 2,000 high-frequency words in Dutch that are required to reach level A2 of the Common European Framework of Reference (CEFR) for Languages (Council of Europe, 2001). This level is used as an entrance level in most adult literacy courses. The test consisted of 60 words, which were presented orally. The students were given four pictures and had to pick out the one that corresponded to the word.

The sentence comprehension test was a subtest of a language test battery used in primary education (Verhoeven & Vermeer, 2001) and consisted of 10 sentences, testing more subtle knowledge of Dutch such as function words and grammatical constructions. The assessor would, for instance, say, "If I only had an umbrella," and the student would then have to pick out one of three pictures, indicating a man walking in the sunshine, a man walking in the rain without an umbrella, and a man walking in the rain under an umbrella.

Literacy skills. The literacy assessment consisted of four tests: word reading (decoding and fluency), reading comprehension, spelling, and writing. The word reading fluency subtest was part of the frequently used intake test battery for second-language courses (Bureau ICE, 2009) and consisted of 80 words ranging from simple monosyllabic words like *jas* (coat) to multisyllabic words with consonant clusters like *sneeuwstorm* (snowstorm). Students were asked to read the words aloud and fast. The score indicated the number of words read correctly in one minute, according to the guidelines.

The reading comprehension subtest consisted of five texts with three to four comprehension questions each, ranging from a text at literacy level B to level B1 of the CEFR.⁷ Literacy level B indicates the ability to read a very short and simple text of about 50 words with monosyllabic or simple disyllabic words and short sentences; a text at CEFR level B1 is roughly comparable to a text at grade 10 level. The texts were taken from different sources (Cito, 2008; Borgesius, Dalderop, & Stockmann, 2012; State exams, Dutch L2), and were calibrated at the levels for which they were intended (Language Policy Division, 2009). All students started with the text at literacy level B. The comprehension score was the number of correctly answered multiple-choice questions. For the students who could not answer the questions on this text correctly, two more simple texts were used. These students had to read the text silently, but the questions were presented orally and the student could answer the questions orally.

The spelling test was a dictation task with 30 words ranging from simple monosyllabic words like *mes* (knife) without consonant clusters to longer words with consonant clusters, like *gebracht* (brought). Thirty sentences were read aloud, and the student had to fill in the word

⁷ In adult education in the Netherlands, a separate literacy framework is added to the levels indicated by the Common European Framework of Reference for Languages (Stockmann & Dalderop, 2007). This yields literacy levels A, B, and C, where C equals A1 from the CEFR (beginner level). The CEFR levels continue with A2 (elementary), B1 (intermediate), B2 (upper intermediate), C1 (advanced), and C2 (upper advanced).

that was repeated after the whole sentence had been presented orally, e.g., “The man is looking for his book. Write *book*.” The spelling score indicated the number of correctly spelled words.

Text writing was based on a picture story consisting of eight pictures. The students were asked to look carefully at the pictures and then write the story. The pictures showed a man who throws away a banana peel and a little girl who slips on it and drops her ice cream. The man returns and buys her a new ice cream. The writing task was judged on nine different aspects: legibility (readability), adequacy (i.e., if it had any relation with the pictures), comprehensibility, syntax, morphology, spelling, punctuation, wording (choice of words in the text), and coherence (connecting the pictures in a story line). Assessors (the researchers) scaled all aspects of the students’ writing on a three-point judgment scale, ranging from 0 (poor) to 2 (good). If a student scored 0 on the first two aspects, then the scoring stopped. Each student was assessed twice by two different assessors. When the assessors disagreed (which happened only incidentally and virtually only on wording and coherence), the score was discussed (including with a third assessor) to reach agreement. The total score served as the writing score.

Questionnaire. The questionnaire consisted of several parts: students’ backgrounds, teachers’ backgrounds, intake procedures, and instructional practices. The questions about the students’ background (filled in by the teacher) asked them about their age, gender, employment, country of origin, first language, and age of entry into and length of stay in the Netherlands.

The questions about intake asked about the procedure and the diagnostic instruments that the center used for assessing language and literacy skills. The questions about instructional practices were about levels and literacy goals of the groups, main activities, time spent on different language and literacy skills, and organization of lessons. An assessment administration guideline was developed, which consisted of

the order of the assessments, the instructions for each of the tests, and the criteria for scoring.

All instruments were presented, explained, and discussed thoroughly in a meeting with the centers' coordinators and assessors, wherein the guidelines were explained thoroughly. All assessments were carried out by experienced assessors, one for each of the adult education centers. A detailed guideline was provided showing the order of the tasks, the instructions, and the criteria for scoring the answers. Teachers and assessors were paid for the hours they spent collecting the data.

Analysis

To check the validity (are we measuring what we wanted to measure?) and reliability (consistency) of our research instruments, we first carried out a factor analysis to be sure that our tests really covered a literacy and a language dimension and a reliability analysis (Cronbach's alpha). To answer the first research question, we mainly used descriptive statistics. To answer the second research question, we conducted a cluster analysis (see below for further information).

Assessment Quality

Factor analysis is a statistical technique used for investigating relationships among variables for complex concepts, such as, in our study, in the language and literacy skill sets. Factor analysis enabled us to look at patterns in skill performance across multiple assessments—in this case, to see whether the smaller number of underlying factors could indeed be interpreted as a literacy and a language factor. Our factor analysis revealed two clearly distinguishable dimensions: a literacy dimension with high factor loadings on all written language tasks, and a language dimension consisting of the two oral language tasks (Table 1). Text writing, the only productive literacy task, also had a relatively high loading on the language factor.

	Factors and loadings	
	Literacy	Language
Vocabulary	.01	.88
Reading fluency	.94	-.12
Sentence comprehension	-.01	.86
Reading comprehension	.85	.02
Spelling	.89	.02
Writing	.62	.37

Table 1: Factor loadings of the assessments ($n=237$)

To check the reliability of the tests, we conducted a reliability analysis. That is, we included a measure to indicate that the several items in a test consistently measured the same skill. A Cronbach’s alpha of .75 or higher is considered to be good. Table 2 presents descriptive data of the various measurements, the p -value and the internal consistency (Cronbach’s alpha). The p -value indicates the general difficulty of the task; a p -value of .60, for example, indicates that, on average, 60% of the items were answered correctly, with the range indicating the lowest and the highest score on the test. Vocabulary and sentence comprehension were combined into one oral language measure indicating oral language skills with a main focus on receptive vocabulary.

	Max score	Range	p-value	Cronbach’s alpha
(Oral) Language	70	9-69	.79	.94
Reading fluency	80	1-79	.72	.98
Reading comprehension	19	0-19	.75	.86
Spelling	30	0-30	.59	.93
Writing	18	0-18	.60	.80

Table 2: Maximal score, range of scores, p-value and Cronbach’s alpha

The range indicates that on nearly all assessments, the range of scores was maximal. Thus, some students did not answer any of the questions correctly, while others achieved the maximum score. The reliability (internal consistency) of the assessment instruments was good to excellent for all assessments (Cronbach’s alpha > .80). For these students, spelling

and writing, on average, were more difficult than reading fluency, reading comprehension, and vocabulary.

Results

Teaching Practices

Our first research question sought to describe the main features of the instructional practices in the Dutch L1 literacy classes. From the teacher questionnaires, we learned that all centers started the intake process by interviewing the students about their aims and needs, their educational history, and their perceived obstacles. It also tested their reading ability. Six of the nine centers also tested the students' writing ability, and one of the centers assessed oral language skills, as well.

The participants in this study attended 30 different classes in nine different adult education centers. Most of the students (53%) were enrolled in classes/programs together based on literacy level; others, because they were living in the same neighborhood or shared the same workplace. The average group size was 15, ranging from five to 25; the average attendance rate was estimated at around 60%. For about 20% of the students, the teacher reported improving the students' general literacy abilities as an aim; for another 20% of students, improving their functioning in the workplace; for the other 60% of students, a combination of targets. Nineteen of the groups attended day courses, and 11 groups attended evening courses. Most of the groups attended the courses once a week (about three hours); five groups, twice a week; and one group, three times a week. More than half of the students (59%) were attending mixed groups with DL1 students and DL2 students; 41% attended DL1 or DL2 classes. Table 3 presents an overview of the average (reported) time spent on the different skills and the variety of classroom organization.

Skills Focus	% of time (range)	Classroom organization	% of time (range)
Reading:	27% (5-45)	Whole group work	40% (20-80)
Writing	42% (20-85)	Small group work	12% (0-50)
Oral skills	17% (0-35)	Individual computer work	19% (0-50)
Digital skills	15% (0-50)	Other individual	28% (0-75)

Table 3: Average time spent on different skills and grouping activities in 30 Dutch L1 classes

Writing received, relatively speaking, the most attention in the classes: on average, 42% of the lesson time was spent on writing, ranging from 20% to 85% across the 30 classes. Reading was the second most frequently addressed skill, with an average of 27% of lesson time and a range of 5% to 45%. On average, 17% of the lesson time was spent on oral skills, ranging from no time spent at all (six classes) to 35% of the time, while 15% of the time was spent on digital skills, ranging from no time at all (six classes) to 50%. In most of the groups, numeracy, or math, was not part of the learning goals.

All groups showed a mixture of group work and individual work. On average, about 40% of the time was spent on whole-group work, ranging from 20% to 80%. Students, on average, worked 47% of the time individually, either at the computer or doing paperwork, together ranging from 19% to 75%. On average, students worked together in small groups for 12% of the time—although this never happened in about half of the classes—while in the other classes, half of the time was spent on small-group work.

Instructional materials. The teachers reported using a large variety of teaching materials, which were mostly focused on reading, spelling, writing, and, to a lesser extent, grammar; nearly all teachers mentioned the use of an easy-to-read newspaper. For example, sample materials included, for reading, leaflets, books, and a newspaper written in easy-to-read Dutch; for spelling, worksheets focused on specific spelling problems; and for writing exercises, filling in a form or writing a letter to the children’s primary school. All teachers also reported using authentic materials to contextualize

teaching, such as local magazines, insurance forms, and communications with housing corporations. Also utilized were story-writing exercises.

Student Profiles

For the second research question, we sought to determine the range of language/literacy profiles for the students enrolled in Dutch L1 classes. A cluster analysis technique was applied (Morris et al., 1998; Mellard et al., 2009) to identify subtypes of low-literacy students. A cluster analysis is a technique used to group students based on their skills so that students within a cluster are more similar to each other than to students in all other clusters. We used a hierarchical cluster analysis based on the raw scores in three steps, with one restriction: since the second step already differentiated three rather small groups (of 13 to 25 students), we used the results of the third step only to further distinguish the large cluster of about 180 students. We also compared the students' abilities in each of the profiles with the levels in the literacy and language frameworks used in adult education, and we analyzed each subtype's ability patterns to identify the instructional emphasis for each profile group. The cluster analysis revealed five different student profiles, based on the assessments of the five assessment variables (see Figure 1).

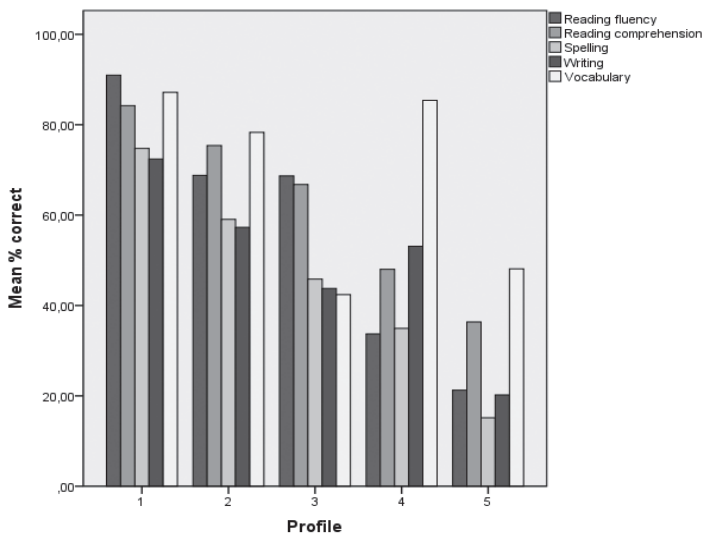


Figure 1. Mean percentage correct, per profile group

The bars in Figure 1 present the percentages of correct scores on each of the assessment tasks: (word) reading fluency, reading comprehension, oral skills, spelling, and text writing. Profile 1 scores high on all tasks. Profile 2 scores a bit lower on all tasks, but particularly on spelling and writing. Profile 3 is more or less similar to profile 2 in reading, but relatively weaker in relation to writing and oral language skills. Profile 4 is more or less the opposite of profile 3: students in profile 4 are good at oral language skills, but they score low on reading and writing. Profile 5 only scores a reasonable average on oral language skills. We will come back to each of the profiles later on.

Table 4 presents the distribution of the profiles, and Table 5 describes the seven skill areas by the mean scores and standard deviations for each of the measures, also indicating the outcomes of the analysis of variance.

Profile	N	DL1	DL2
1	92	58%	42%
2	86	49%	51%
3	18	0%	100%
4	25	88%	12%
5	13	39%	61%

Table 4. Number of students in each of the profiles, and percentages of DL1 and LD2 students

The cluster analysis revealed two fairly large clusters (profile 1 and profile 2) with more than 85 students, and three smaller clusters of 13–25 students. Three profiles are rather mixed (profiles 1, 2, and 5) with respect to students’ linguistic backgrounds. In profile 1, 58% of the students are native Dutch; in profile 2, about half of the students are native Dutch. In profile 5, about 40% of the students are native Dutch, and about 60% are DL2-speakers. Profile 3 (100% DL2 students) is an L2 profile, while profile 4 consists virtually exclusively of native speakers of Dutch.

	Profile	Mean	SD	F-value
Reading fluency	1	72.66	5.25	316.21**
	2	55.13	7.06	
	3	53.67	12.57	
	4	26.96	6.64	
	5	18.33	9.37	
Reading comprehension	1	16.01	2.32	44.74**
	2	14.24	3.09	
	3	12.69	2.94	
	4	9.12	4.06	
	5	6.67	4.68	
Spelling	1	22.46	4.09	46.11**
	2	17.52	6.33	
	3	13.11	7.22	
	4	10.48	6.61	
	5	5.08	3.70	
Text writing	1	13.01	2.42	41.28**
	2	10.33	3.02	
	3	7.76	2.51	
	4	9.56	3.20	
	5	3.69	3.50	
(Oral) Language	1	59.85	6.59	85.45**
	2	54.34	8.81	
	3	29.11	6.94	
	4	58.92	6.57	
	5	34.69	8.34	

** p<.01

Table 5: Summary of means, standard deviations for language/literacy assessments for each of the profiles, and F-value to indicate whether the profile differed on the assessment ($n=237$)

Table 5 shows that on all literacy assessments, the average scores of the profile groups decrease from profile 1 through profile 5 (the only exception is text writing in profiles 3 and 4). The table also shows that this is different for the average oral language scores: profile groups 3 and 5 score far below the other three profile groups. The *F*-values indicate significant differences between the profile groups on all measures. This indicates that the different profile groups do differ, but it does not yet indicate which groups differ from each other. Post hoc pair-wise comparison indicates, first of all, that profile 1 and profile 5 differ significantly from all other profiles on all measures (p

< .05). On the two reading tasks, profiles 2 and 3 differ significantly from profile 4, but not from each other. On the spelling task, profiles 2, 3, and 4 do not differ significantly. On text writing, only profile 4 does not differ significantly from profiles 2 and 3. For oral language skills, the pair-wise comparison reveals different results: profile 4 does not differ significantly from profiles 1 and 2, and profile 3 does not differ significantly from profile 5. All other differences between the profile groups are significant.

A further analysis of the different aspects of text writing completes the pattern of strengths and weaknesses of the different profiles (see Figure 2).

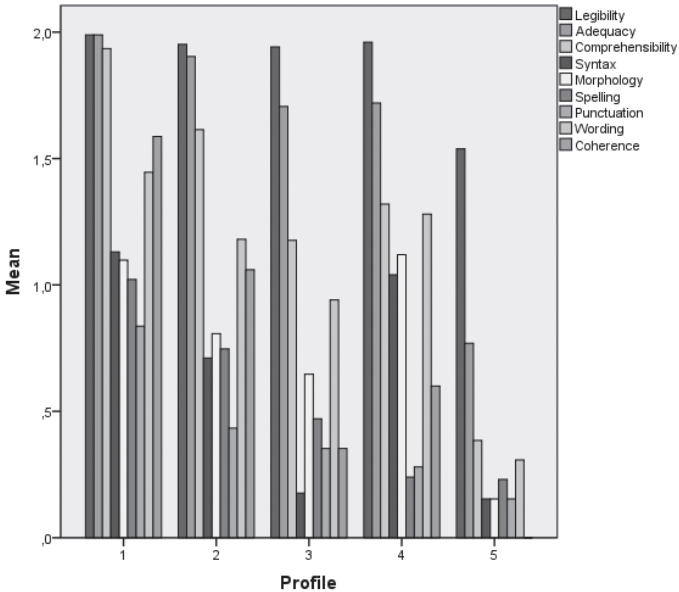


Figure 2. Mean scores for aspects of writing per profile group

On average, the students in profile 1 do not have any serious problems with comprehensibility and coherence, but they do have problems with punctuation and spelling. The pattern of profile 2 is comparable, although all scores are slightly lower. Profile 3 deviates from these profiles in those aspects that are most clearly related to

language ability: syntax, morphology, and coherence. Profile 4 scores high on wording, but very low on spelling and punctuation. For profile 5 students, writing a text is clearly a challenge. On average, only readability has a reasonable score here.

When the ability scores of all students are included, all correlations between the task scores are positive, high, and significant ($p < .001$); the highest correlations are those between the two writing tasks ($r = .72$), between the two reading tasks ($r = .70$), and between the two decoding tasks of reading fluency and spelling ($r = .71$). The correlations between literacy and oral language skills are lower, the highest being the correlation between text writing and oral language skills ($r = .55$). The correlations between literacy skills and oral language skills are higher if correlations are calculated separately for DL1 and DL2 students. This is caused by the fact that some of the DL1 students score high on oral language skills but (very) low on literacy skills, whereas for some of the DL2 students, this is the other way around: fairly high on literacy skills, but low on oral language skills.

The different judgment aspects of the writing task also correlate significantly, except for the correlation between punctuation and wording. The highest correlations are those between comprehensibility and adequacy ($r = .69$), comprehensibility and coherence ($r = .59$), and comprehensibility and spelling ($r = .47$).

If we compare all DL1 students with all DL2 students (see Figure 3), then our analysis reveals that the DL2 students, on average, are significantly better at reading comprehension ($t = -.207$, $p < .05$) than the native Dutch students, but they are significantly worse at oral language skills and text writing ($t = 10.33$ and $t = 3.72$, respectively; $p < .01$). On reading fluency and spelling, the two groups do not differ significantly. A closer look at the different aspects of text writing reveals that the DL1 students are significantly better at syntax, morphology, and wording ($p < .01$); on the other aspects of writing, the groups do not differ significantly.

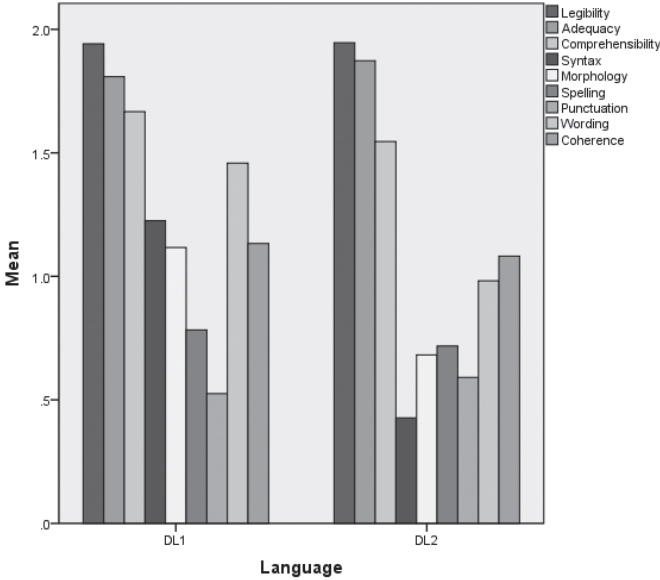


Figure 3. Mean scores, aspects of writing for first (DL1) and second (DL2) students

A closer look at the profiles. Profile 1 can be characterized as the “advanced” low-literate students. It consists of 92 students who scored above average on all assessment tasks. This profile consists of 58% DL1-speakers and 42% DL2-speakers. The majority of the students in this profile group are at levels A2 and B1 (CEFR) on reading and below or around level A2 on writing; most of them are at or above level B1 on oral language skills.

Profile 2 can be characterized as the “average” low-literate students. It consists of 86 students who scored average on all assessments. Half of the students in this profile are DL1; the other half DL2 students. Most of these students are at CEFR level A2 on reading, below A2 (A1) on writing, and more or less similar to the profile 1 group on oral language skills: at or above level B1.

Profile 3 can be characterized as the L2 students in the adult low-literacy classes. In this sample, this profile consists of 18 nonnative students who scored relatively high on reading skills, but low on oral language skills. It should be remembered, however, that beginners in

Dutch as a second language are not in these classes. In adult education, there are a lot more low-educated second-language and literacy (i.e., LESLLA) students to be found (Kurvers, Stockmann, & van de Craats, 2010). On reading comprehension, this profile group is similar to profile groups 1 or 2; most of them are at level A2. On writing, however, the abilities of this group are below level A1: mainly at (rudimentary) literacy levels A and B. On oral Dutch, the majority of this profile group scored below level A2, with the rest scoring between A2 and B1.

Profile 4 students are the students with reading and writing difficulties. These students scored relatively high on oral language skills, but low on reading and writing. Unlike with all the other profiles, the scores of the students in this profile are lower on the decoding-related skills (reading fluency and spelling) than on the comprehension-related skills. This profile mainly consists of DL1 students (88%); the majority in this group (68%) has a background in special education, and nearly half of them are judged by their teachers as being dyslexic. Unlike profile 3 students, this group is at level B1 or above on oral language skills, but partly below or at level A1 on reading. On writing, the majority of this profile group clearly perform at the beginning literacy levels A and B.

Profile 5 is more difficult to characterize in general. For the native Dutch students in this subtype, it seems safe to conclude that these are students with general learning disabilities who score (very) low on all assessments. This is about 40% of the group. The second-language learners in this profile (60%) are the only ones in the whole sample who did not attend primary education as children. The low scores of this group might also be caused by the fact that progress in general is very slow for adult learners who have to learn a second language and also learn to read for the first time in their lives. As far as reading is concerned, the students in profile 5 are somewhat similar to the students in profile 4 (beginning literacy level A and B), but for writing, most of them score even lower than literacy level A. As for oral language skills in Dutch, the students in this profile group are similar to the second-language learners in profile 3: below A2 or between A2 and B1.

Conclusions and Discussion

A cluster analysis of the assessment scores on reading, writing, and oral language skills of 237 learners attending adult literacy classes revealed five clearly distinguished learner profiles. There were two profiles of more advanced or average low-literates who had some problems with reading and particularly with writing. Another profile of second-language learners mainly showed weaknesses in oral language skills and text writing, and two additional profiles of students lacked basic literacy skills in decoding, speed, and accuracy, probably caused by reading and writing problems, cognitive learning disorders, or limited experience in schools. The outcomes confirm the instructional value of looking at the different literacy components of decoding and fluency, vocabulary, and comprehension-related skills, as indicated by Kruidenier (2002), Sabatini (2002), and Mellard et al. (2009). The group of adult learners investigated in this study was similar to the group in the Mellard et al. study, although the percentage of nonnatives in our study was much higher (49% versus 18%). What was different from the Mellard et al. study, however, was the distribution of students over the profiles. The two groups of learners who lacked basic literacy skills were rather small in our study, while the two profile groups who lacked more advanced reading and writing skills were large in size.

The group of second-language learners in our study was also small, due to the fact that in most of these classes an entrance level of oral language skills in Dutch was required. The second-language learners, on average, had more problems with Dutch syntax, morphology, and vocabulary than did the native Dutch students in the same profile groups.

Implications for Education

Adult literacy education is intended to be meaningful for a wide variety of learners in the courses, and teachers are expected to tailor their teaching to the specific needs of each learner. Although the adults in this study

were all low-literate adults, the patterns of strengths and weaknesses in the five profiles imply that the most important instructional needs varied considerably.

These results suggest that major attention in the profile 1 group should go to writing. For L2 students in this group, syntax, morphology, and the nuances of word meanings in particular require special attention.

The students in profile 2 would seem to benefit from attention to both reading and writing; again, L2 students need additional instruction in the specifics of Dutch syntax and vocabulary. The second-language learners in profile 3 seem to need attention to their oral language skills and vocabulary, next to a great deal of attention for reading comprehension and writing. Their technical decoding skills do not seem to require special attention.

The students in profile 4 exhibited specific difficulties with reading and writing, even if they already attended previous education for quite some time. These students attended adult literacy education for a long time, but, because progress in general is slow, it is more important to look at the specific needs of the individual students.

For the native Dutch students in profile 5, teachers should look carefully at the feasibility of attaining certain reading and writing standards. It does not seem to be realistic to strive for these standards for most of these students. The picture might be different for L2 students, since the overall low scores might also be caused by the lack of any previous education in their home country. Teachers should be aware of the “potentials” in these groups, i.e., those who haven’t had any education in their home country and simply need more time to learn.

For all profiles, it should be remembered that the second-language learners require more attention paid to the peculiarities of (oral) Dutch in relation to vocabulary and syntax. The profiles indicate that teachers need to be confident in teaching literacy skills *and* oral language skills. A teacher friendly assessment instrument might be helpful here. But as a caveat, note that these implications for education are based on the average assessment scores of the profile groups.

If teachers want to tailor their teaching to their students, then it is worthwhile to carry out comparable assessments for each individual student beforehand, in order to optimize teaching, to keep the students engaged, and to monitor a learner's progress adequately. A teacher friendly assessment instrument might be worthwhile in this respect. And although we stress the importance of carefully looking at the profile of component skills of students, we do not suggest using only these assessments for creating level-groups. Teachers need to address the dynamics of within-group heterogeneity, including other features like the students' needs in daily life, their motivation, and their interests, in designing and tailoring education.

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