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Grappling with the Oral Skills: The learning processes of the low-educated adult second language and literacy learner

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This paper focuses on the learning processes in L2 literacy classes in the Netherlands, discussing specifically possible influences of the learning processes during the practice of the oral skills. To achieve a better understanding of the students' spoken language development, classroom processes of six adult L2 literacy classes were observed during a period of eight months and students were pre- and post-assessed. In comparing the classes, notable differences in gain scores in morphosyntactic features as well as aspects of relevance and coherence in discourse surfaced. In order to explain these differences certain factors were examined in relation to learner characteristics, classroom hours and attendance, and classroom practices. The study initially looked at ten learner and classroom characteristics. Of these, only age of arrival proved to be of any significance. In the area of classroom practices the use of the computer as a support in (vocabulary) learning showed to be of essential significance, particularly in the area of morphosyntax.

Keywords: oral skills, low-educated, learning processes

1 Introduction

The research described in this paper is part of an on-going investigation focusing on the development of the oral skills during classroom practice of the low-educated L2 and literacy adult learner in centres for adult education in the Netherlands. Studying the learning processes of the non- or low-literate L2 adult learner is complex. These learners are not only handicapped by their illiteracy, as the written word is not sufficiently developed to function as a support in learning, their competence in the L2 oral skills is also limited. This means that the intrinsic knowledge of sounds, words and sentences is inadequately developed to be put to use in the process of learning to read. The low-educated learner has a double handicap: learning to read and write while at the same time working on the oral skills, the latter being the building blocks on which the former materializes. For many learners formal education in school is their major

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source for developing these skills. If, for whatever reason, their access to the L2 is restricted, the classroom is their only source. For this reason knowing what goes on in the L2 classroom in terms of teaching and learning is of special importance. There are two major premises concerning a study of the LESLLA learners: (1) understanding the oral skills development of LESLLA learners, and the relationships to their literacy skills; and (2) understanding the relationship between instructional conditions and skill development in these areas. This study stands to make a contribution to the understanding of the oral skills trajectory of the LESLLA learner as seen through their development in an institutional situation.

This paper centres on two main questions: What happens during the practice of the oral skills in the L2 literacy classroom? And, do certain learner and/or teaching characteristics have an influence on the learning process? In order to answer these two questions, two steps had to be undertaken. First, the initial and end L2 level in oral skills during the observation period had to be assessed. For this an assessment was developed. Secondly, learner and teaching characteristics had to be determined. Section 2 of this paper opens with a short discussion of relevant L2 classroom research having bearing on the non-literate learner. The research method is described in section 3. In section 5 the results are presented. In section 6 the findings are discussed in relation to other research concerning the L2 literacy classroom, followed in section 7 by recommendations for the classroom.

2 Background

In general, very little research has been done concerning low- or non-literate learners of a second language, and even less concerning their learning in the classroom. Many studies in the past have focused on adult L2 classrooms (e.g., Chaudron 1988; Johnson 1995; Van Lier 1988), but only a few have studied the low- or non-literate adult L2 learner. One of the few classroom studies that had been done was by Kurvers & Van der Zouw (1990). This study was the first study in the Netherlands that, to our knowledge, took a closer look at L2 literacy classrooms. In that study the literacy processes of intensive (15 hours per week) and non-intensive classes (between one and a half to six hours per week) were followed. Concerning the oral skills practice in the adult literacy classroom no such studies have been executed before this one, as far as we know. Consequently, SLA theory is largely based on the performance demonstrated by literate, and often highly educated L2 learners. Bigelow & Tarone (2004: 690), who have undertaken one of the few experimental studies on the effect of literacy on L2 oral production state that, "The failure to investigate illiterate learners has resulted in SLA theory that may not account for the full range of contexts in which human beings learn L2". They continue by stating, "If accepted findings describe only literate and educated language learners, then theory has limited applicability and little value in guiding teachers who work with illiterate learners". Fortunately, in the field of linguistic acquisition more research has taken up the challenge to focus on this specific group of learners, as is testified by the yearly symposia (since 2005) and ensuing publications of the LESLLA forum (Low Educated Second Language and Literacy Acquisition).

In the last few years, three major projects focused on the L2 literacy classroom.

The first was the extensive *What Works* project in the United States by Condelli, Wrigley, Yoon, Cronen & Seburn (2003). The objective of this project was to identify instructional activities that help to develop and improve literacy and communicative skills in English. Three instructional practices emerged as being most influential for positive language development: bringing the outside world into the classroom, use of the L1 for clarification, and varied practice with focus on communication. The most outstanding student factors were regular attendance, prior education, and age (older students seemed to acquire language skills more slowly).

In line with this project was *ESOL effective teaching and learning* project executed in Great Britain by Baynham, Roberts, Cooke, Simpson, Ananiadou, Callaghan, McGoldrick & Wallace (2007). While the *What Works* project concerned literacy students, the *ESOL* project encompassed all students within the ESOL field (English for Speakers of Other Languages), those literate as well as non-literate. The main findings of this project indicated the teaching strategies that promote "balance and variety" as well as "planning and explicitness" were more significant than "a collaborative learning environment" and "connecting the classroom with learners' outside lives."

The third study was carried out in the Netherlands by Kurvers & Stockmann (2009), *Alfabetisering NT2 in beeld: Leerlast en succesfactoren* [Focus on L2 literacy: Study load and success factors]. This study focused on how long it takes to become literate in the L2 for non-literate adult learners and which success factors play a role in this process. The study showed that becoming literate takes a lot of time, between 400 and more than 2000 hours. Because the learner population is so diverse, a benchmark is difficult to set, and perhaps even inadvisable. Three success factors stand out: contact with native speakers, the use of the L1 as a support in the classroom, and an L2 literacy language portfolio, the latter containing attestations of learning achievements in literacy. The discussion in section 6 refers again to these three studies.

3 Method

3.1 Design

This paper investigates possible factors of influence on the development of the oral skills during normal classroom practice in adult L2 literacy classes. Not wanting to disturb the processes in the classroom as they occur, a non-experimental design was chosen. The study, based on qualitative as well as quantitative data, was longitudinal. Six adult L2 literacy classes at a beginners' level in centres for adult education in the Netherlands were observed from November 2006 to 2007. In order to determine the change in language development of the students a pre- post-assessment design was administered. An explanation for the differences that arose from the assessments was then sought in learner and classroom characteristics.

3.2 Data collection

Three main sources formed the basis of the data collection: teacher and school records, results from the pre- and post-assessments, and results from classroom observation. The information noted in the school records varied from centre to centre, and was often incomplete. For example, there was no data on the level of L1 literacy nor on the level of attained DSL (Dutch as a second language) schooling. Each class was, on average, observed eight times and the students were pre- and post-assessed. The assessment and the observation schemes were developed for this purpose. Of the initial 68 learners, 41 were both pre- and post-assessed. Audio-recordings were made during classroom observation and the assessments. Both were later transcribed in order to be analysed. The classrooms were later analysed using three different observation schemes: classroom content, participant interaction, and corrective feedback, all based on the COLT format (see Spada & Fröhlich 1995). This paper centres on the observation scheme concerning 'classroom content'. It is explained further in section 5.2.

3.3 Participants

3.3.1 Students

The main learner characteristics of the six classes are summarised in Table 1. From the figures in Table 1, observable differences between the classes are evident. Class 4 has students with the youngest mean age, shortest mean length of residence (LOR), and the youngest mean age of arrival (AOA). The students in Classes 1, 2, and 3 were slightly older and had a longer LOR than the students in Class 4. The students in Classes 5 and 6, were on average older than those in the other classes and, because of their much longer LOR, their AOA did not differ greatly from the other classes.

Table 1. Learner characteristics for each of the six observed classes based on school records (LOR = length of residence; AOA = age of arrival; DSL = Dutch as a second language).

Class (N)	Mean age	Mean LOR	Mean AOA	Mean years L1 schooling	% learners L1 literate	% learners DSL schooling	% students w. children	% students w. work
1 (7)	38.1	7.1	31.0	0.7	42.9	42.9	100.0	14.3
2 (8)	35.6	7.9	27.7	2.5	37.5	75.0	50.0	12.5
3 (5)	35.2	2.2	33.0	0.8	40.0	100.0	60.0	40.0
4 (6)	26.8	2.0	24.8	3.5	33.3	50.0	50.0	16.7
5 (9)	44.9	14.1	30.8	0.9	11.1	44.4	100.0	0.0
6 (6)	42.7	13.8	28.9	0.0	0.0	100.0	100.0	0.0
Means	37.2	7.9	29.4	1.4	27.6	68.7	76.7	13.9

The information given in the school records for L1 schooling and L1 literacy was most inconsistent. Schooling was usually given in number of years attended and/or in type of school, for example, three years elementary school. Such information gives an indication of having had some schooling, but because

school systems differ greatly from country to country, no conclusions could be drawn as to the actual learning level of the student. In addition information concerning L1 literacy was frequently obscure. Sometimes the script in which the student was literate was noted, but other times only a mere "yes" or "no" was registered without indicating the script. Consequently, the information in Table 1 is an approximation. Nevertheless, it is clear that Classes 2 and 4 had the most number of years of schooling in comparison to the other classes. For L1 literacy another picture emerges. Although Classes 2 and 4 had had the most L1 schooling, there were fewer students L1 literate. In Class 4 only two out of the six students (33.3%) were noted to be L1 literate, one in Latin script and one in Arabic. One student was noted to be non-literate, even though she was noted to have had six years of elementary schooling. This student, from Somalia, most probably had had a fragmented educational past due to internal instabilities in the country of origin. In Class 2, three students had had on average eight years of L1 schooling and were noted to be literate in the Arabic script, although the ability to use this skill in learning was not evidenced. The L1 schooling and literacy in Classes 5 and 6 was very low.

Again the school records gave an incomplete picture for DSL schooling. The school records might give start and end dates (no hours) or total number of hours or a vague indication as "some" or no data at all. The percentages in Table 1 only pertain to the number of students having followed some type of DSL course. In total 68.7 % of the students have had some sort of DSL schooling. Regardless of these uncertainties, the students that have had some DSL schooling, make them false and not absolute beginners in the classroom. As seen by the low LOR of Classes 3 and 4 (2.2 and 2.0 years respectively) the students were probably placed in the present course shortly after arrival. In contrast, the students in Classes 5 and 6 with a high LOR (14.1 and 13.8 years respectively) were placed in the present course many years after arrival. Four students in Class 5 and all the students in Class 6 have had some previous DSL training. The fact that they were placed in a beginners course points to very fragmented previous DSL training.

Most of the learners were noted to have children, 76.7%. Only five learners in total (13.9%) were noted to have had some type of work outside the home. Work and children are factors which can enhance the L2 contact and, consequently, can be important factors of influence for language learning.

3.3.2 Classrooms

The six observed classes were selected on the basis of a questionnaire survey mailed to all 35 centres of education in the Netherlands with literacy programs, with a 77.14% response rate. Demographical features (geographical location, size of centre of education, and L2 literacy learner population in size and type - newcomer or long-term resident) as well as classroom organisational aspects were examined. From this survey the six classes with different demographical and organisational features were selected. Concerning classroom organisation, three types surfaced in terms of time spent on oral and literacy skills. Since the amount time and frequency of oral skills practice could have an influence on its development, it was essential to include each type in the research. Two classes from each type were selected, each differing in its demographical features. Table 2 gives an overview of the selected schools.

Table 2. Selected classes in terms of program organisation, geographical location, school size, and category and number of students (2006).

Selected classes	Classroom organisation type	Geographical location	School size	Category of students	Number of students at start
1	1	Northwest	Large	Primarily newcomers	11
2	1	West	Medium	Primarily newcomers	15
3	2	South	Medium	Mixed	7
4	2	East	Small	Mixed	11
5	3	Northwest	Medium	Long term residents	13
6	3	Centre	Large	Long term residents	11

These differences are also reflected in the scheduled classroom hours. Table 3 gives an overview of the classroom hours. As Table 3 illustrates, there is a difference between Classes 1, 2, 3, and 4 on the one hand and Classes 5 and 6 on the other. In Classes 1, 2, 3, and 4 a fixed amount of time was allotted for each skill and the skills were practiced separately, often before and after the break. In Classes 5 and 6 the teacher determined when and how much time a particular skill was to be practiced. Another difference between these classes is the total number of hours given per week to orals skills practice. Classes 1, 2, and 3, with a similar organisation, allocated an equal number of hours to each skill. Class 4 had one classroom period per week for the oral skills practice, but two for literacy practice. Class 5 had the least total number of weekly classroom hours and Class 4 had the least number of oral skills practice hours.

Table 3. Scheduled classroom hours per week for the six observed classes.

Class	Lessons per week		Hours per week		Total hours per week
	Oral skills	Literacy skills	Oral skills	Literacy skills	
1	3	3	4.50	4.50	9.00
2	4	4	6.00	6.00	12.00
3	4	4	5.00	5.00	10.00
4	1	2	2.75	5.50	8.25
5		2		5.00	5.00
6		4		11.00	11.00

Table 4 shows the number of scheduled and attended oral skills classroom hours during the observation period. The number of scheduled hours was calculated from the number of lessons that took place during that period and the duration of each lesson. All the classes had a relatively high rate of attendance, with Classes 2 and 3 the lowest.

Table 4. Scheduled and attended oral skills classroom hours during the observation period for the six observed classes.

Class	Duration per lesson (in hours)	Number of lessons	Scheduled oral skills classroom hours	Mean rate of attendance	Mean number of attended classroom hours
1	1.50	90	135.00	0.86	116.10
2	1.50	120	180.00	0.66	118.80
3	1.25	120	150.00	0.75	112.50
4	2.75	30	82.50	0.85	70.13
5	2.50	60	150.00	0.82	123.00
6	2.75	120	330.00	0.80	264.00

4 Procedure

4.1 Assessments

The assessment focused only on the speaking skills, through oral descriptions of pictures, not oral interaction and communicative skills. In order to exclude influence from the written skills the assessment was solely based on pictures. The assessment tool was piloted by three literacy teachers and ten of their students. A period of eight months intervened between the two assessments. The pre-assessment was administered at the start of the observation period and the post-assessment at the close. The post-assessment was a repetition of the pre-assessment. The students were assessed in a separate classroom during normal classroom time. Both assessments were audio-recorded and were later transcribed orthographically. There was no time limit placed on the assessment. It took approximately 20 minutes per learner to administer. The researcher administered all the assessments and explained to the testee how each task was to be performed.

The assessment tasks focused on discrete vocabulary knowledge, picture description, and storytelling. The vocabulary tasks checked productive and receptive vocabulary knowledge of 50 words represented by pictures. There were two types of picture tasks: (1) describing single pictures and (2) telling stories based on a series of pictures. All the pictures depicted familiar actions and episodes, each requiring its own vocabulary to tap as much language as possible and to allow for variation in vocabulary and in utterance complexity for the less and more capable students. The first picture description task had four pictures with simple line drawings, each showing one person performing one action. In the next description task (six pictures) the protagonist performed an activity with an object or person. The final description task contained four coloured photographs of common daily affairs. These photographs contained a lot of detail and were the most complex of the description tasks, allowing the possibility to produce utterances with greater complexity. The picture descriptions were operationalised in terms of entities and activities/properties for each picture. The entities were the objects or persons (nouns) about which something was said and concerned the main figures in the pictures, often the agent. The activities/properties (verbs, adjectives, adverbs and nouns)

expressed the actions or described the entities. These entities and activities/properties collectively formed the minimal distinctive elements on which the performance of an utterance was assessed (for details see Strube, Van de Craats & Van Hout 2010).

In the analysis of the assessments eleven variables were examined in the areas of vocabulary, morphosyntax, and discourse. These were: general vocabulary knowledge, the tokens, the types, number of constituents, the presence of a verb, the position of a verb, the presence of an agent, verb inflection, utterance relevance of the picture descriptions and the picture stories (in relation to the entities and activities/properties used), and coherence in the picture stories. In order to identify more clearly patterns of similarity and difference as seen in the pre- and post-assessments results, Principal Component Analysis (PCA) was applied. By applying PCA the number of variables was reduced forming interrelated groups, which were in turn easier to compare.

4.2 Classroom observation

Classroom observation was carried out with the least possible amount of interference. During the research period the teachers prepared their lessons as usual. The only intrusion on the lesson program was the intermittent presence of the researcher and the MP3 recording device pinned to the teacher's garment. The teachers and the students were made aware of the researcher's interest in teacher-student interactions during lesson time. No further details were given. No video recordings were made, because the students in two classes objected.

5 Results

5.1 Pre- and post-assessments

There were eleven variables (test results) for both pre- and post-assessments, which were intended to measure different competences, but the analysis shows that several variables seem to measure similar underlying competences, such as, for instance, lexical proficiency. The variables can be assigned to different underlying competences or components by applying Principal Component Analysis (PCA, also known as factor analysis). The variables, the test results in this study, are ordered on the basis of correlation patterns. That means that we get interrelated groups of test results, defined in terms of components. Table 5 presents the PCA factor matrices for the eleven variables for the pre-assessment and post-assessment. The PCA returned three underlying components in both assessments. The loadings reflect the correlation between a specific test result and the component in question. The three components appear to reflect three types of competences. The first component represents lexical competence having high loadings for vocabulary knowledge of specific words and word count. The second component contains three variables: constituents, verb presence, and picture story coherence. These were subsumed under the heading of syntagmatic competence covering relationships between linguistic units. The third component is morphosyntactic competence, stipulated by the three relevant variables verb position, agent presence and verb inflection. The two relevance

variables, relevance for picture descriptions (pd) and relevance for picture stories (ps) did not have consistent high loadings on the dimensions and were excluded from further analysis. It is obvious that the analysis for the pre-assessment and the post-assessment are strikingly similar, indicating that the competences we distinguish represent robust findings.

Table 5. PCA factor matrices for eleven variables for pre- and post-assessments. (pd=picture description, ps=picture story); loadings > .60 in bold face.

	Pre-assessment			Post-assessment		
Factors	Lexical competence	Syntagmatic competence	Morpho-syntactic competence	Lexical competence	Syntagmatic competence	Morpho-syntactic competence
Specific vocabulary	**.738**	.159	-.126	**.819**	.112	-.103
Tokens	**.865**	.171	.316	**.638**	.303	.422
Types	**.883**	.202	.176	**.808**	.136	.272
Constituents	.265	**.875**	.239	.171	**.894**	.263
Verb present	.239	**.888**	-.101	.194	**.902**	.000
Verb position	.146	-.067	**.909**	.062	.117	**.795**
Agent present	.370	.266	**.738**	.270	.439	**.617**
Verb inflection	.059	.165	**.805**	.150	.119	**.884**
Relevance pd	**.765**	.292	.381	**.772**	.315	.198
Relevance ps	**.748**	.413	.335	.523	.498	.457
Coherence ps	.221	**.842**	.212	.272	**.779**	.298

In order to investigate the development over time and the differences between classes, z-scores were calculated for each of the three components (see Strube, Van de Craats & Van Hout 2012). These z-scores give an indication of the initial state of each class as a whole (the pre-assessment) and the final stage (the post-assessment). The difference between the z-scores gives the gain scores. From the gain scores it can be discerned whether a class had improved, stayed constant, or even regressed during a certain amount of time. In the following sections, the discussion focuses on Class 2 with the lowest mean gain scores and Class 4 with the highest mean gain scores. Table 6 presents an overview of the z-scores and gain scores for the three competences.

Table 6. The pre- and post-assessment z-scores and gain scores for lexical, syntagmatic, and morphosyntactic competences for all six classes.

Class	Lexical competence			Syntagmatic competence			Morphosyntactic competence			Total mean gain
	z-score		Gain	z-score		Gain	z-score		Gain	
	Pre	Post		Pre	Post		Pre	Post		
1	-0.68	-0.17	0.51	-0.70	0.22	0.92	-0.05	0.23	0.28	0.57
2	0.13	0.35	0.22	0.24	0.36	0.12	0.12	0.07	-0.05	0.10
3	-0.69	0.26	0.95	-0.52	0.10	0.62	-0.43	-0.29	0.14	0.57
4	-0.12	0.64	0.76	0.04	0.90	0.86	-0.05	1.37	1.42	1.01
5	-0.76	-0.44	0.32	-0.87	-0.65	0.22	-1.00	-0.27	0.73	0.42
6	0.87	1.13	0.26	0.44	1.00	0.56	0.12	0.61	0.49	0.44
Means	-0.21	0.30	0.50	-0.23	0.32	0.55	-0.22	1.72	0.50	0.52

Table 6 reveals some interesting differences between the six classes. As seen from the total mean gains Classes 2 and 4, in particular, stand out. Class 2 had high z-scores in the pre-assessment for all three competences, but in view of the gain scores it had consistently the lowest of all the classes. Class 4 had the most overall gain in comparison to the other classes. For lexical competence Class 4 was superseded by Class 3, but for the other competences Class 4 superseded Class 3. For syntagmatic competence, Class 4 was superseded by Class 1, but for the other two competences Class 4 superseded Class 1. For morphosyntactic competence Class 4 superseded all the other classes. The total mean gain score for Classes 1 and 3 was the same. Class 1 made remarkable gain for syntagmatic competence and Class 3 for lexical competence, both classes showed little gain for morphosyntactic competence. Class 5 had consistently the lowest or near lowest z-scores for all the competences, but when considering gain scores, improvement is indicated, particularly in the area of morphosyntactic competence. This suggests that schooling can still have a positive effect on low-achieving learners. In contrast stands Class 6, although it had the highest z-scores in both the pre- and post-assessments for all three competences, it made little improvement as shown by the gain scores. For lexical competence this is probably due to a ceiling effect.

5.2 Factors of influence

Many factors influence development in L2 learning. Some apply to the individual learner such as age, aptitude, social-psychological factors, personality, cognitive style, and literacy level. Other factors are connected with the organisation of the classroom such as the number of scheduled hours and rate of attendance or involve aspects of teaching such as content focus, participant interaction, and task grouping. In an effort to explain the differences in attainment between the classes as expressed in Table 6, certain learner and classroom characteristics were studied more closely. An earlier paper also reported on the influence of certain learner characteristics on learning (see Strube, Van de Craats & Van Hout 2012).

5.2.1 Learner characteristics

For eight learner characteristics (age, length of residence, age of arrival, L1 schooling, L1 literacy, previous DSL schooling, children, and work) the Pearson product-moment correlations were computed to determine the relationship between these variables and the three competences. The correlations revealed that only the factor of age of arrival was significant (at the pre-assessment) for lexical competence and had a negative relationship. This is an indication that the older the learner was at entrance, the lower the score for lexical competence. The reverse also applies: the younger the learner was at entrance, the higher the lexical competence score. Table 7 presents these correlations.

Table 7. Pearson product-moment correlations for the factor of age of arrival for lexical, syntagmatic, and morphosyntactic competences at the pre-assessment (N=41).

	Lexical competence	Syntagmatic competence	Morphosyntactic competence
Age of arrival	-.567**	-.194	-.057

** significant (2-tailed) at p<.01

5.2.2 Classroom characteristics

The next step was to look at factors of possible influence in the classroom. The following discussion focuses on classroom content in which the amount of time spent on various factors within four main categories are examined more closely. The four main categories are: content focus, participant interaction, task grouping, and classroom materials. The results for each category are summarised in Tables 8, 9, 10, and 11. The time for each factor is expressed in hours and percentages. The time given in hours shows the actual time spent on a particular factor, while the time in percentages shows the distribution of time spent in relation to the total number of available classroom hours. These percentages are an indication of how the teacher had organised her lessons.

In each table the first three factors are the same: scheduled computer time, scheduled classroom time, and non-practice time. Classroom time and computer time together form the total scheduled classroom hours. Only Class 4 made systematic use of computer practice during classroom hours. In dealing with a mixed-level class the teacher divided the class into two relatively homogeneous groups. While one group practiced vocabulary with various computer programs under the guidance of an assistant, the other practiced the oral skills with the teacher. At break time the two groups exchanged positions. The third factor, non-practice time, is composed of lost time and procedural time. Lost time, for which the teacher is responsible, is a consequence of late starts, early conclusions of the lesson, and/or extended breaks. Procedural time involves classroom management and occurs during the lesson. This includes roll call, interruption by late arrivals, the teacher calling the class to order, and the

handing out of lesson material. Non-practice time, although sometimes unavoidable, if extensive, takes valuable time away from practice time.

Content focus. The category content focus covers the factors: vocabulary, grammar, restricted discourse, unrestricted discourse, and life skills knowledge. Restricted (or planned) discourse includes fixed dialog practice – often memorization of short exchanges. Unrestricted discourse includes free and spontaneous speech – conversations, discussions, explanations – often as responses to subject matter at hand. The factor life skills knowledge connects inside classroom practice with the outside real world. It concerns building on general knowledge and awareness of the social environment, often necessary for language use. For example, talking about the health system provides life skills knowledge that is essential when practicing 'making an appointment with the family doctor'. Table 8 presents the time spent on these five factors.

Table 8. Classroom time for content focus over the 30-week observation period for the six observed classes, in hours and percentages.

Class	Classroom time	Scheduled computer time	Scheduled classroom time	Non-practice time	Vocabulary focus	Grammar focus	Restricted discourse	Unrestricted discourse	Life skills	Totals
1	Hours	0	135	26.81	19.25	22.41	10.54	11.35	44.64	135
	(%)	(0)	(100)	(19.86)	(14.26)	(16.60)	(7.81)	(8.41)	(33.07)	(100)
2	Hours	0	180	29.53	39.97	11.60	32.80	42.31	23.79	180
	(%)	(0)	(100)	(16.41)	(22.21)	(6.44)	(18.22)	(23.51)	(13.22)	(100)
3	Hours	0	150	26.33	52.70	3.38	12.61	7.43	47.56	150
	(%)	(0)	(100)	(17.55)	(35.13)	(2.25)	(8.41)	(4.96)	(31.70)	(100)
4	Hours	37.5	45	4.58	11.84	2.41	5.74	9.08	11.35	45
	(%)	(45)	(55)	(10.17)	(26.31)	(5.36)	(12.76)	(20.19)	(25.22)	(100)
5	Hours	0	150	72.36	19.24	6.10	0	17.42	34.88	150
	(%)	(0)	(100)	(48.24)	(12.83)	(4.07)	(0)	(11.61)	(23.25)	(100)
6	Hours	0	330	134.33	6.42	20.40	5.03	56.31	107.51	330
	(%)	(0)	(100)	(40.70)	(1.95)	(6.18)	(1.53)	(17.06)	(32.58)	(100)

The most remarkable difference between the classes is the systematic application of CALL (computer assisted language learning) activities for the individual training of lexical and basic grammar skills during classroom time by Class 4. Inserting CALL activities in a lesson reduced the total number of classroom hours available for oral skills practice from 82.5 to 45 hours, much less than all the other classes. Nevertheless, as seen in Table 8, the actual number of hours practiced in Class 4 for three of the five factors (vocabulary, restricted discourse, and unrestricted discourse) is not consistently the lowest. For example, Class 4 spent almost twice as much time on vocabulary practice than Class 6. Classes 5 and 6 stand out in their high percentage of non-practice time, 48.24% and 40.71%, leaving less than 60% for classroom practice. Overall, the classes can be characterised as focusing primarily on vocabulary learning and life skills

knowledge with ample unrestricted discourse. There is also a noticeable infrequent focus on grammar and little practice on restricted discourse. In Class 5 no restricted discourse practice was observed.

Participant Interaction. In the category participant interaction the speakers of an interaction are identified. Four factors were covered: teacher talking, teacher interacting with the class or a student (teacher takes the initiative), a student interacting with the class or another student (student takes the initiative), and choral repetition. Under the latter, other student modalities than speaking were subsumed such as watching a video, listening to a CD, or doing a simple written exercise. Table 9 characterizes the classes in hours and percentages.

Table 9. Classroom time for participant interaction over the 30-week observation period for the six observed classes during oral skills practice, in hours and percentages.

Class	Classroom time	Scheduled computer time	Scheduled classroom time	Non-practice time	Teacher talking	Teacher student/class	Student student/class	Choral + other	Totals
1	Hours	0	135	26.81	20.76	55.11	29.78	2.54	135
	(%)	(0)	(100)	(19.86)	(15.38)	(40.82)	(22.06)	(1.88)	(100)
2	Hours	0	180	29.53	23.22	50.09	68.32	8.83	180
	(%)	(0)	(100)	(16.41)	(12.90)	(27.83)	(37.96)	(4.91)	(100)
3	Hours	0	150	26.33	32.31	83.40	0	7.97	150
	(%)	(0)	(100)	(17.55)	(21.54)	(55.60)	0	(5.31)	(100)
4	Hours	37.5	45	4.58	14.79	18.59	2.77	4.27	45
	(%)	(45)	(55)	(10.17)	(32.88)	(41.30)	(6.16)	(9.49)	(100)
5	Hours	0	150	72.36	26.49	34.88	11.31	4.95	150
	(%)	(0)	(100)	(48.24)	(17.66)	(23.25)	(7.54)	(3.30)	(100)
6	Hours	0	330	134.33	61.30	98.39	10.87	25.12	330
	(%)	(0)	(100)	(40.70)	(18.58)	(29.81)	(3.29)	(7.61)	(100)

Characteristic of all the classes was the strong teacher-centred learning. In such a classroom the teacher controls classroom processes, determines what is to be done, and generally how it is to be performed. This is reflected by the high percentages and number of hours for the factors teacher talking and teacher-class/student interactions, between 40% and 78%. Exercises such as question-answer type were abundant. In five classes, except Class 3, there was an activity where the student had some control over the interaction. In Class 3 no such activity was observed. Class 3 primarily focused on vocabulary learning characterised by abundant question-answer type exercises.

Task Grouping. The category task grouping examined the organisation of the students during a particular task. Three types of task grouping were identified:

whole class, small groups or pairs, and individual. Table 10 shows in number of hours and percentages how the classes were organised during the various parts of the lesson.

Table 10. Classroom time for task grouping over the 30-week observation period for the six observed classes, in hours.

Class	Classroom time	Scheduled computer time	Scheduled classroom time	Non-practice time	Whole class	Small groups/pairs	Individual	Totals
1	Hours	0	135	26.81	71.71	26.12	10.36	135
	(%)	(0)	(100)	(19.86)	(53.12)	(19.35)	(7.67)	(100)
2	Hours	0	180	29.53	120.90	27.51	2.06	180
	(%)	(0)	(100)	(16.41)	(67.17)	(15.28)	(1.14)	(100)
3	Hours	0	150	26.33	113.02	0	10.66	150
	(%)	(0)	(100)	(17.55)	(75.35)	0	(7.10)	(100)
4	Hours	37.5	45	4.58	33.56	2.63	4.23	45
	(%)	(45)	(55)	(10.17)	(74.59)	(5.84)	(9.41)	(100)
5	Hours	0	150	72.36	74.58	0	3.06	150
	(%)	(0)	(100)	(48.24)	(49.72)	0	(2.04)	(100)
6	Hours	0	330	134.33	125.41	0	70.27	330
	(%)	(0)	(100)	(40.70)	(38.00)	0	(21.29)	(100)

As can be seen in Table 10, activities and tasks predominantly involved the whole class with percentages between 38% and 76%. Striking is the low figure for group work. In Classes 3, 5, and 6 no activities organised in small groups or pairs were observed. In contrast, Classes 1 and 2 have a relatively high percentage for small group activities. This concurs with the percentages in Table 9 for student-student/class interactions.

Classroom Material. The final category investigated which materials were used during a particular activity or task. This involved four main factors: text, extra materials, audio/visual, and none. Table 11 compares the six classes on use of these materials.

Table 11. Classroom time for material use over the 30-week observation period for the six observed classes, in hours and percentages.

Class	Classroom time	Scheduled computer time	Scheduled classroom time	Non-practice time	Textbook	Extra materials	Audio/visual	None	Totals
1	Hours	0	135	26.81	36.14	16.69	4.67	50.69	135
	(%)	(0)	(100)	(19.86)	(26.77)	(12.36)	(3.46)	(37.55)	(100)
2	Hours	0	180	29.53	39.52	35.84	21.11	53.99	180
	(%)	(0)	(100)	(16.41)	(21.96)	(19.91)	(11.73)	(29.99)	(100)
3	Hours	0	150	26.33	0	67.11	0	56.57	150
	(%)	(0)	(100)	(17.55)	0	(44.74)	0	(37.71)	(100)
4	Hours	37.5	45	4.58	10.76	13.96	5.83	9.88	45
	(%)	(45)	(55)	(10.17)	(23.91)	(31.02)	(12.95)	(21.95)	(100)
5	Hours	0	150	72.36	0	16.34	3.34	57.96	150
	(%)	(0)	(100)	(48.24)	0	(10.89)	(2.23)	(38.64)	(100)
6	Hours	0	330	134.33	1.52	107.49	0	86.67	330
	(%)	(0)	(100)	(40.70)	(0.46)	(32.57)	0	(26.26)	(100)

Three classes, Classes 1, 2, and 4, based their learning program on a textbook. These classes, in following the instructions in the textbook, also made occasional use of audio and/or visual materials. Classes 1 and 2 both based their programs on the same textbook. Classes 3, 5, and 6 did not use a textbook. All the classes made ample use of extra materials, such as real objects, hand-outs, and materials made for educational purposes, such as practice clocks and colour cards. Between 21% and 39% of classroom time no materials were used during an activity. As noted under Content focus, only Class 4 made use of CALL activities (45% of the time) during classroom time in an open learning centre.

5.3 Classroom characteristics and assessment gain scores

In this discussion two classes are highlighted, one with the lowest mean gain scores in the assessments (Class 2) and the other with the highest gain scores (Class 4). Each of the classroom practices summarised in Tables 8, 9, 10, and 11 could be a factor of influence in language learning. The practice of vocabulary could be advantageous for lexical development. The practice of grammar could improve the morphosyntaxis. The practice of restricted and unrestricted discourse could influence syntagmatic development. Although no absolute conclusions can be drawn, a comparison of the differences in Tables 8, 9, 10, and 11, in particular between Classes 2 and 4, with the results on the assessments as expressed in Table 6, certain observations are of interest in view of language learning of L2 literacy students.

In Table 8 on content focus, the differences between Classes 2 and 4 as seen in percentages is minimal, except for CALL activities. Class 2 did not do CALL activities during classroom time whereas Class 4 spent almost half of the

classroom time at the computer, 45%. Aside of this, it is still surprising how little time Class 4 had spent on the other factors of content focus and produced such high scores on the assessment. Class 3 had, in contrast to all the other classes, spent the most time (in hours and percentage) on vocabulary practice and had the highest gain score for the assessments. This indicates that the focus on vocabulary had a positive effect, but, as seen by the z-scores, Class 3 did not attain high scores for the other two competences. Therefore, vocabulary practice alone does not seem to be sufficient for language learning. Class 2 had spent notably more time on grammar and restricted as well as unrestricted discourse than Class 4. The assessment results show another picture. Class 4 had far higher gain scores for syntagmatic and morphosyntactic competence. It is evident that the factor of time spent on grammar practice and restricted discourse practice cannot explain this discrepancy, but that of CALL training could definitely have been an important influence.

As pointed in section 5.2, the classes are characterised by strong teacher-fronted teaching. In comparing Class 2 and 4 the results in Table 9 on participant interaction show that, in percentages, the teacher in Class 2 had spent much less time in talking (teacher talking and teacher-student/class interaction), 40.73% than the teacher in Class 4, which was 74.18%. In looking at student-student/class interaction time the opposite is evident. Class 2 spent almost 25 times more classroom hours on activities with student-student/class interactions than Class 4 (in percentages 37.96% and 6.16% respectively). Again the gain scores show that Class 4 outranked Class 2. The question arises if student-student/class interactions are constructive for this target group. Apparently, as seen by these results, this does not seem to be the case. CALL activities seem more challenging and effective.

Table 10 on task grouping shows that whole class activities were overwhelmingly frequent, while practice in small groups or pairs was much rarer. Group practice was observed in only three of the six classes. The relatively high percentage for student-student/class interactions for Class 2 as seen in Table 9 points to the presence of activities performed in small groups. This is indeed the case; only the percentage is lower than that for the interactions, 15.28% and 37.96 respectively. It was observed that student-student interactions also took place during whole class activities. For Class 4, practice in groups was just as minimal as the student-student interactions (6.16% and 5.84% respectively). In L2 research small group or pair interactions (be it teacher-student or student-student) have been shown to facilitate language learning (e.g. Ellis & Barkhuizen 2005), but the observed classroom practices do not reflect this. More research is necessary.

Table 11 summarizes the classroom materials that were used during the observed lessons. Clearly there is a lot of talk in the lessons which is not supported by learning materials. When looking at the distribution of the classroom materials, it appears that Classes 2 and 4 have a relatively balanced focus in the sense that there is no great difference in the time spent on practice using a textbook, extra materials, audio/visual materials, or no materials as is seen in the other classes. This could be the result of textbook use, as the book guides the teacher through the program. Both textbooks were also accompanied with a CD. One feature did show a great difference – the use of CALL materials. Such an activity induces working on your own, thinking on your own, and making choices about what might be right and wrong.

6 Discussion and conclusions

In the above, an explanation was sought to account for the differences that arose from the pre- and post-assessments. Class 2 and Class 4 emerged as classes with the lowest and the highest mean gain scores in the assessments. Observable differences between these two classes were also noted in their learner characteristics, classroom factors, and teaching processes. The question arises as to whether the results that surfaced are only relevant for the present study or whether they reveal dimensions characteristic of the target group as a whole. No broad generalisations can be made from data based on a small sample of students as was the case in this study. Nevertheless, by comparing the results from this study with studies based on comparable target groups, general characterisations can be made. The three recent studies discussed in section 2 are taken as sources for comparison. In these three studies various factors of influence on learning surfaced as well. The following discussion, focusing on Classes 2 and 4, centres on age, classroom hours, rate of attendance, and task grouping, the latter including computer time.

The factor of age on L2 learning has often been investigated (Muñoz & Singleton 2011), but the factor of literacy together with age was not taken into account in the Muñoz and Singleton review. In the current study the classes were compared in terms of age at the start of the research and age of arrival in The Netherlands. The mean age of the students for Class 4 was 26.8 years, the youngest of all six classes. Class 2 had a mean age of 35.6 years, a difference of almost ten years with Class 4. Taking the length of residence (LOR) into consideration, the mean difference of age of arrival (AOA) for the two classes was minimal, only 1.9 years (see Table 1). In the present study only AOA, not age at start of the language program, was found to be significant and only for lexical competence (see Table 7), meaning that the older the learner was at entrance, the lower the score for lexical competence; and in reverse, the younger the learner was at entrance, the higher the score. In the three studies cited above only age at the start of the research was examined and a significant negative correlation surfaced as well. In the Condelli et al. (2003) study age was significant for the factors reading, writing and the oral skills. Kurvers & Stockmann (2009), focusing only on the reading and writing processes, produced similar results. In the Baynham et al. (2007) study results were expressed in terms of progress on a speaking test in which grammar, vocabulary pronunciation, and interactive communication were globally assessed. Age had, likewise, a significant negative correlation with learning progress. These results indicate that the younger learner has an advantage over the older learner, which is not compensated by a longer LOR.

The factor of time can be investigated on two levels: that of total classroom hours and hours per week. Class 6 emerges as the class with the highest assessment scores. This class also has the most classroom hours (see Tables 3 and 4). One could then assume that the more hours a class was scheduled, the higher the competence score. In looking at Classes 2 and 4 this conclusion seems contradictory. Class 2, with six weekly hours for the oral skills, did perform better than Class 4, with 2.75 weekly hours, on the pre-assessment. For the post-assessment Class 4 consistently outranks Class 2 (see Table 6). However, we found no correlations for the gain scores with classroom hours, nor with

attendance measures. Using the statistical technique of mixed modeling did not result in any significant results implying that we did not find classroom or learner characteristics that would explain the size of progress between the pre- and post-assessment. In the Condelli et al. (2003) and the Kurvers & Stockmann (2009) studies reading skills and number of classroom hours had a negative significant correlation, in other words, the more the classroom hours, the lower the reading scores. In the Baynham et al. (2007) study a moderate positive correlation was found between number of classroom hours per week and mean gain on the assessment. This same study reported that the correlation between lesson length and gain scores was negative. Here we see that students with longer scheduled classroom hours showed less growth than students with fewer hours. Consequently, it is not only a matter of total number of scheduled hours a program has, but also of the intensity of those hours. In another study by Kurvers (Kurvers 2007; Kurvers & Van der Zouw 1990) it was found that intensive courses of 15 hours per week showed more growth for reading than non-intensive courses of three to five hours per week – even when tested after both had completed an equal amount of classroom hours. This suggests that there is not only a maximum limit to the number of classroom hours and learning achievement, but also a minimum. Apparently, as the Baynham et al. (2007) study shows, concentration and thus also performance is bound by a time limit. At the same time, as seen in the Kurvers study, practice must be on a regular and relatively frequent basis. The aspect of optimal classroom time for learning is still not fully answered.

Concerning the factor of attendance, in the present study no correlations were found for gain scores with attendance. All the classes in this study had a relatively high rate of attendance, between 0.66 and 0.86. All the other studies showed significant correlations for attendance. Kurvers & Stockmann (2009) found attendance significant for reading and writing, Condelli et al. (2003) for reading and the oral skills, and Baynham et al. (2007) for general progress. These findings indicate that attendance is a crucial factor for learning. This sounds rather obvious; nevertheless it is of essential importance – even more important than number of scheduled classroom hours – the more hours a class was attended, the higher the competence score. As Condelli (personal communication) suggested, attendance is probably an indirect measure of motivation (either intrinsic or extrinsic). One attends class on a regular basis if one is motivated. This seems to result in positive learning, a finding other researchers also have noted (Vispoel & Austin 1995; Williams, Burden & Al-Baharna 2001).

The fourth area of influence concerned grouping during language practices. The statistics of the current study show that between 38% and 76% (mean 59.67%) of classroom time was focused on activities involving the whole class – indicating strong teacher-centred tuition. Activities performed in small groups or pairs were only sparingly organised in the classes of the current study. From SLA research, with Long as one of the first advocates (Long & Porter 1985), group work is seen to be an important tool facilitating language use – learners participate more actively and the communication is more realistic in that negotiation devices such as clarification requests, confirmation checks, and comprehension checks are more readily applied. From the results of the current study this does not seem to be the case. Only three of the six classes worked in small groups or pairs, including Classes 2 and 4 (see Table 10), but the

percentages were low, 13.82% and 5.84% respectively. The use of negotiation by the students occurred only very incidentally. In support of whole class work, the Baynham et al. (2007: 55) study observed that it has an important cohesive function within the class, "Talk is work in the ESOL classroom, but talk is also the means of creating social solidarity: '*The whole class activities are to keep the atmosphere going as much as anything*.'" For the literacy skills, the Kurvers & Stockmann (2009) study showed that whole class activities for reading and writing have a significant negative correlation – the more time that was spent in whole class activities, the lower the reading and writing scores. Individual focus is necessary for the practice of these skills, as the significant correlations in this same study show for the factors individual work with writing and computer work (also individual) with reading.

In the present study, Class 4 was the only class that made systematic use of the computer during classroom hours. Class 2 had access to a multi-media student learning centre, but not during classroom hours and the students could make use of the learning centre on a voluntary basis. The teacher of Class 4 implemented the use of CALL activities to promote vocabulary learning and she organised her classroom time to accommodate this practice. The students, under guidance of an assistant, were allowed to choose between several programs. The words in these programs were usually presented in three ways: visually with a picture, written, and orally. Often a context was incorporated by also presenting the word in a sentence or a situation. Even though these programs had not been included in the analysis, their implementation most probably facilitated the learning of grammar and discourse, as seen by the high scores Class 4 made for the morphosyntactic competence. Next to the Kurvers & Stockmann (2009) study showing the significant influence of computer work for reading, the Condelli et al. (2003) and Baynham et al. (2007) studies showed no significant correlations. In the Baynham et al. (2007) study the amount of time spent on ICT (computer skills and language learning support) was noted to be less than 5%.

The present study focused its investigation on the practice of the oral skills only; consequently its effect on the literacy skills was not measured. The Kurvers & Stockmann (2009) study as well as the Condelli et al. (2003) study focused on the effect of the oral skills on literacy development. Both studies found significant correlations for oral skills and reading: the more developed the oral skills were, the higher the reading scores. This is all the more reason to focus on the oral skills during classroom time.

7 Recommendations for the classroom

What can be learned from the present study for classroom practices? Given the complexity of learning and teaching, as shown above, there are no ready-to-use packages which, as it were, can be purchased in the language store. It is essential that teachers are aware of learning processes of their students. In closing, here are a few pointers to take seriously. It is essential that there is focus on the oral skills during classroom time, not only in combination with the literacy skills, but also as a separate skill. It promotes literacy learning and facilitates social and economic integration. Secondly, as Class 4 illustrates, same-level classes seem to be an advantage for learning as instruction can focus on the class as a whole and

ensure the participation of all the students. Thirdly, it is advised to use specially developed computer programs (CALL) as a support for language learning. Such materials can not only enhance the learning of the oral skills through interaction with the computer, but at the same time the listening skills, grammar, and dialog knowledge. Finally, take heed of the number of classroom hours. More is not always better.

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