Literacy development of low-achieving adolescents: The role of engagement in academic reading and writing

de Milliano, I.I.C.M.

Citation for published version (APA):
Chapter 3

Literacy development and engagement in instructional practices in language arts and social studies

In search of factors that contribute to effective literacy development in adolescence, this longitudinal study explored the behavioral engagement of low-achieving adolescents (N=63) in a variety of literacy instruction contexts in relation to their literacy development. Using insights from prominent approaches on language and literacy development, six literacy instruction contexts were distinguished using the focus (explicit skills instruction or content-oriented instruction) and setting of literacy activities (whole-class, group or individual seat work). We observed the time students were engaged (on-task) in these contexts during language arts lessons and social studies lessons for the first three years of their secondary education (grades 7-9). In addition, students’ development in reading and writing proficiency was measured. Associations between engagement in instructional practices and literacy development were analyzed. Results show that literacy instruction was dominated by individual work consisting of explicit skills instruction in the language arts and content-oriented activities in social studies. More importantly however, results show that progression in reading and writing proficiency of low-achieving adolescents is hardly associated with engagement in instructional literacy practices in the observed period. Theoretical and practical implications for literacy development of low-achieving adolescents are discussed.

This chapter is based on:
3.1 Introduction

Learning to read and write well is a necessity for all young people. Literacy is an important contributor to academic and professional success and a basic requirement for participation in modern society. Yet, studies in several countries demonstrate that many adolescents perform at a low level of literacy (Alliance for Excellent Education, 2006; OECD, 2003; 2006; Inspectie van het Onderwijs, 2008). Most of them can read words accurately, but have problems with text comprehension as a result of knowledge deficits (vocabulary, grammar, metacognitive knowledge and conceptual knowledge) and difficulties with self-regulation (Alvermann, 2001; Biancarosa & Snow, 2006; Kucan & Palincsar, 2011). In regard to writing, they face difficulties in formulating ideas, organizing these ideas in an understandable way and producing a text correctly using conventions of spelling and grammar (Graham & Perin, 2007). Such problems with reading and writing will surely lead to problems in civil society and work in which literacy demands are much higher than in school contexts. At the same time, a general decline in engagement in academic reading and writing is observed through the school years (Archambault, Eccles & Vida, 2010; Bruning & Horn, 2000; Durik, Eccles & Vida, 2006; Eccles & Wigfield, 2002; Eccles, Wigfield & Schiefele, 1998; Harter, Whitesell & Kowalski, 1992; Jacobs, Lanza, Osgood, Eccles & Wigfield, 2002). This decline calls into question what role literacy education plays in the literacy development of low-achieving adolescents and whether it facilitates this development.

As education has a primary concern in the development of reading and writing proficiency, it is important to identify instructional factors that play a role. In searching for ways to increase academic success, the concept of engagement has emerged in recent years. Engagement is a multidimensional construct incorporating affective, cognitive and behavioral elements reflecting students’ feelings, thoughts and behaviors concerning certain objectives, such as learning in general, reading or writing (Appleton, Christenson & Furlong, 2008; Fredricks, Blumenfeld & Paris, 2004; Guthrie, Wigfield & You, 2012; Linnenbrink & Pintrich, 2003). Although behavioral engagement in instruction activities in the classroom is considered a basic condition to benefit from instruction and to improve in literacy (Pressley et al., 2001; Greenwood, Horton & Utley, 2002), the studies reported in Part I of this dissertation showed that the extent to which low-achieving adolescents improved in literacy proficiency was independent of their observed behavioral engagement in reading and writing in grades 7-9. However, it is possible that the measures used for behavioral engagement were not sufficiently specific to find associations with literacy development of low-achieving adolescents. Although literacy practices in language arts and social studies were
distinguished, no distinction was made in student engagement in instructional activities within these domains. Considering that engagement is responsive to variation in learning contexts (Finn & Rock, 1997), more attention needs to be given to the different types of instructional activities within subject domains.

Therefore, this study analyzes the nature of instruction contexts in which low-achieving adolescents are engaged in a detailed manner. Students’ behavioral engagement in specific literacy activities in language arts (Dutch) and social studies was observed from grades 7 to 9 and related to students’ development in reading and writing proficiency. The study provides in-depth insights in literacy education for low-achieving adolescents in The Netherlands. In addition, it reveals to what extent engagement in specific instructional practices contributes to students’ literacy development. For this detailed analysis focal points were drawn from several theoretical approaches of effective literacy education.

3.2 Theoretical background

3.2.1 Effective literacy development
Several studies deal with the challenge of improving low-achieving adolescents’ reading and writing proficiency in engaging ways (Alvermann, 2001; 2002; Biancarosa & Snow, 2006; Graham and Perin, 2007; Kamil, 2003; Kamil, et al., 2008; Phelps, 2005; Torgeson et al, 2007). In addition, insights yielded by research on Content-Based Language Learning (Brinton, Snow & Wesche, 1989; Bygate, Skehan & Swain, 2001; Hajer & Meestringa, 2004), Concept-Oriented Reading Instruction (Guthrie & Wigfield, 2000; Guthrie et al., 2004; Wigfield et al., 2008), Self-Regulated Strategy Development (Graham & Harris, 2012), and Balanced Literacy Instruction (Langer, 2001; Pressley, 2006) are of importance. Although these approaches stem from different research traditions – second language acquisition, reading engagement, cognitive models of writing, and comparisons of successful teacher practices respectively – the instructional practices emphasized in these studies to establish successful literacy education, have much in common.

Development of literacy does not only take place in the language curriculum (first and foreign languages), but also in other school subjects (Britton, Burgess, Martin, McLeod & Rosen, 1975). Literacy practices involve different purposes, forms and processes across varying academic disciplines (Applebee & Langer, 2006; Russell, 1997; Van Gelderen, 1994). They are the main target of instruction in language arts and a crucial instrument for content learning in content areas (Shanahan, 2004). Without specific attention to the jargon and other language difficulties that can impede understanding and remembering subject content, curriculum goals in the content
areas will be difficult to attain (Cummins, 1984; Hajer & Meestringa, 2004). Reading and writing are complex skills and learning to read and write skillfully in different academic domains requires a concerted effort across disciplines and throughout education (Graham, 2006). To achieve this, content area teachers do not have to become literacy teachers, but they have to facilitate literacy practices specific to their subject so that students read and write the type of texts that are necessary to learn history, science or any other subject-area (Biancarosa & Snow, 2006). Ideally, coordination between subject domains takes place to provide sufficient support for students’ cross-disciplinary literacy development.

A second feature of effective literacy instruction is interactive learning, such as whole-class discussion and group seat work (Guthrie et al., 2004; Pressley, 2006). These types of settings provide opportunities for natural interaction and language production which are important for improvement in writing and speaking skills. Bygate, Skehan and Swain (2001) showed, for example, that second language learners need to be challenged to produce language and receive feedback for producing correct language. In addition, interactive learning allows for good and bad practices to be modeled and discussed by teachers and peers. Modeling and collaborative knowledge construction are both found to be very important for the improvement of reading (Palinscar & Herrenkohl, 2002; Vaughn, Klinger & Bryant, 2001; Klinger, Vaughn, Arguelles, Hughes & Leftwich, 2004) and writing proficiency (Rijlaarsdam et al., 2008; Yarrow & Topping, 2001). Moreover, interactive learning may increase engagement, as students are found to work more effectively and enjoy participating in group activities in which they share ideas and collaboratively construct knowledge (Guthrie, McRae & Klauda, 2007; Johnson & Johnson, 2009).

A third feature of effective literacy instruction is the embedding into interesting contents. The idea is to make contents of reading and writing tasks of prime importance and to approach technical facets of language as instrumental for understanding and transmitting interesting contents. This idea is central in Content-Based Language Learning focusing primarily on second language learners (Brinton et al., 1989; Bygate et al., 2001). Meanwhile it is also promoted for instruction of low-achieving adolescents and incorporated in Concept-Oriented Reading Instruction (Guthrie et al., 2004), Language Directed Subject Learning (Hajer & Meestringa, 2004) and Balanced Literacy Instruction (Pressley, 2006). The main premise of these content-oriented approaches is that literacy instruction should involve communication about meaningful contents instead of teaching it as a set of isolated sub skills (such as grammar, vocabulary, spelling and fixed strategies). This premise goes back to the comprehensible-input hypothesis of Krashen (1985) for second-language acquisition. This hypothesis stated that language acquisition is best served by frequent exposure to
diverse and meaningful language allowing learners to gradually acquire a rich vocabulary and grammar. It is argued that reading and writing about contents that connect to students’ academic curriculum and personal interests facilitates their engagement in literacy tasks and thereby also their proficiency in dealing with them (Biancarosa & Snow, 2006; Guthrie et al., 2012; Pressley, 2006). Studies evaluating the effects of such content-oriented language learning show positive but modest effects on literacy achievement (August, Branum-Martin, Cardenas-Hagan & Francis, 2011; Echevarria, Short & Powers, 2006; Elbers, 2011; Guthrie, Hoa et al., 2007; Kasper, 1997; Lee; Maerten-Rivera, Penfield, Leroy & Secada, 2008; Raaphorst, 2007; Short, Echevarria & Richards-Tutor, 2011; Song, 2006; Vaughn et al, 2009).

Finally, some authors emphasize that students should also receive explicit instruction in specific skills needed for reading and writing, such as how to use vocabulary, grammar, spelling and metacognitive knowledge (Graham & Harris, 2012; Langer, 2001; Pressley, 2006; Wong, Butler, Ficzere & Kuperis, 1996). Low-achieving adolescents rarely need help with the decoding of words. Their most common problems are related to text comprehension and producing comprehensible texts (Biancarosa & Snow, 2006; Graham & Perin, 2007). Therefore, a focus on meaning-making activities (such as use of flexible strategies and knowledge of characteristics of text genres) is more in place than isolated exercises in for example decoding of words or reading fluency. The role of decoding efficiency in adolescents’ reading comprehension has been demonstrated to be negligible in several empirical studies (Kintsch & Kintsch, 2005; Pressley et al., 2009; Van Gelderen, Schoonen, Stoel, De Glopper & Hulstijn, 2007). A meta-analysis into interventions directed at reading comprehension skills of adolescent struggling readers showed that effects are larger when interventions are aimed at increasing comprehension skill and reading strategies instead of when they are aimed at increasing decoding and reading fluency (Edmonds et al., 2009). For writing, there is ample evidence that a focus on strategic approaches accompanied by frequent and diverse writing practice is preferable in comparison to isolated grammar exercise (particularly naming word classes and parsing). Meta-analyses of writing intervention programs revealed large effects of strategy instruction, instruction in making summaries and peer assistance. The smallest and even negative effects were found for traditional grammar instruction (Ellis, 2002; Graham & Harris, 1993; Graham & Perin, 2007; Hillocks, 1984).
3.3 The present study

Summarizing, the insights from the literature point at the importance of cross-disciplinary, interactive, content-oriented and explicit (but not isolated) literacy instruction. To explore to what degree the actual instructional practices in language arts and content areas conform to these ideals, literacy contexts were distinguished using two dimensions representing the focal points of effective literacy development discussed above. The first dimension pertains to the focus of literacy activities (explicit skills or content-oriented instruction), the second dimension concerns the classroom setting of literacy activities (whole-class, group or individual seat work). By combining these dimensions, six instruction contexts emerge in which students participate in language arts and content area classrooms: 1) Whole-class x Explicit skills instruction (WE), 2) Group x Explicit skills instruction (GE), 3) Individual x Explicit skills instruction (IE), 4) Whole class x Content-oriented instruction (WC), 5) Group x Content-oriented instruction (GC), and 6) Individual x Content-oriented instruction (IC). Examples of literacy activities within these six contexts are shown in Table 3.1.

<table>
<thead>
<tr>
<th>Whole Class (W)</th>
<th>Explicit skills instruction (E)</th>
<th>Content-oriented instruction (C)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(WE) Teacher is lecturing on grammar rules, while the students take notes.</td>
<td>(WC) Teacher is reading a novel/content area text aloud while students read along.</td>
</tr>
<tr>
<td>Group (G)</td>
<td>(GE) Students play in groups of four a word game to exercise with school language.</td>
<td>(GC) Students work in teams on a report on the Golden Age using multiple written sources.</td>
</tr>
<tr>
<td>Individual (I)</td>
<td>(IE) Students exercise individually with spelling assignments in their textbooks.</td>
<td>(IC) Students explore individually the Internet collecting information in preparation of a presentation.</td>
</tr>
</tbody>
</table>

The specific questions addressed in this study are as follows:

1) What types of literacy instruction are offered to low-achieving adolescents in regular language arts and content area lessons across grades 7 to 9 and how engaged are students in each of them?

2) Does degree of engagement in each of the discerned types of literacy instruction contribute to explaining development in reading and writing proficiency?
3.4 Method

3.4.1 Participants

Low-achieving adolescents are defined in this study as students in the lowest 30-percentile of academic skills as measured by an aptitude test measuring language, reading and mathematics skills prior to admission of Dutch secondary education. In the Netherlands, these low-achieving students are enrolled in the two lowest tracks of prevocational secondary education. The sample in grade 7 involved 63 students (36 boys and 27 girls) whom were recruited out of 10 classes from 9 different ethnically mixed schools in the lowest tracks of secondary prevocational education. In grade 7 the students were between 12 and 14 years old ($M=14.7$). Of the sample in grade 7, 32 students were native speakers of Dutch; the other 31 students were non-native speakers of Dutch with various ethnic-linguistic backgrounds. Students diagnosed with a learning or behavioral disorder (e.g. dyslexia, ADHD), were excluded from our sample in order to ascertain that differences in literacy development were not related to specific learning or behavioral disorders. From each class 6 to 7 students were selected. During the period of 3 school years in total 11 students dropped out of the study for several reasons. Of these students one became chronically ill, one changed school without possibility for following him and 9 dropped out because they felt too burdened by the requirements of research participation. Ultimately, the sample for which we had complete data consisted of 52 students distributed over 28 classes and 11 schools in grade 9. Table 3.2 reports some descriptive characteristics of our sample.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of schools</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Number of classes</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>Number of students</td>
<td>63</td>
<td>55</td>
</tr>
<tr>
<td>Gender (boys : girls)</td>
<td>36:27</td>
<td>31:23</td>
</tr>
<tr>
<td>Number of language arts teachers</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Gender (men : women)</td>
<td>2:7</td>
<td>2:8</td>
</tr>
<tr>
<td>Years of teaching experience</td>
<td>$M=9.7; SD=10.2$</td>
<td>$M=7.7; SD=4.9$</td>
</tr>
<tr>
<td>Number of social studies teachers</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Gender (men : women)</td>
<td>6:3</td>
<td>6:4</td>
</tr>
<tr>
<td>Years of teaching experience</td>
<td>$M=6.1; SD=9.9$</td>
<td>$M=4.3; SD=3.1$</td>
</tr>
</tbody>
</table>
Chapter 3

3.4.2 Measures
The following measures were used in this study. First, a reading and writing proficiency test was developed to examine students’ literacy development. Second, an observational scheme was developed to register detailed information about the instructional practices and the level of students’ engagement. Supplementary to the classroom observations, the textbooks used were inspected in terms of focus and setting as they are important tools for learning and teaching. Also, a teacher interview guideline was composed to acquire information about the schools’ language policies and coordination between subject domains. As insights from the textbook analyses and teacher interviews are only used for interpreting the results from the classroom observations, information and results from the textbook analyses and teacher interview are reported in Appendix A and B.

3.4.2.1 Reading comprehension proficiency
The SALT reading comprehension proficiency test (Van Steensel, Oostdam, & Van Gelderen, 2012.) was specifically designed for Dutch students in the lowest tracks of secondary education. It consists of nine tasks comprising one or two texts and comprehension questions about those texts (multiple choice and short-answer formats). The texts cover four different genres: narrative, argumentative, expository, and instructive. They were selected from four media types which students are likely to come across in their daily lives: (school) books, newspapers and magazines, official documents, and the internet. With respect to text format, a distinction was made between continuous texts and discontinuous texts (containing also graphs, pictures and figures). The topics of the texts were selected on the basis of their relevance for students’ socio-cultural and educational reality. They cover personal issues (negative stereotyping, self-confidence), school subjects (history), human interest, social issues (crime, the environment), rules and regulations, and leisure time activities. The test items were based on the distinction between lower, intermediate and higher levels of understanding, labeled as ‘retrieving’, ‘interpreting’, and ‘reflecting’, respectively (Van Steensel et al., 2012; OECD, 2003). The test consisted of 65 items and the Cronbach’s alpha was .79 in grade 7, .85 in Grade 8 and .82 in grade 9. Next, sum scores representing reading comprehension proficiency across grades 7 to 9 were computed. The measurement of reading comprehension proficiency across grades shows good reliability (Cronbach’s alpha is .90).

3.4.2.2 Writing proficiency
The writing proficiency test consisted of three writing assignments in which students were asked to write a text. Each assignment specified a realistic communicative task
connected to young people’s daily lives. The selection of assignments was based upon a pretest among a group of students from the same population, containing more diverse writing assignments. Students commented on these assignments and the assignments that were received most positively were selected for the final test. The three assignments covered a range of text types (instructive, argumentative and narrative). In Assignment 1, students were asked to write a letter to two students from Belgium who were going to visit the Netherlands as part of an exchange program. Their task was to provide instructions on where to meet, what to bring, etcetera. In Assignment 2, students were asked to imagine they were taking part in a competition for which they were saving coupons on candy bar wrappers in order to receive two free cinema tickets. However, they were unable to find wrappers with coupons, even though the deadline had not passed. The assignment was to write a letter to the candy bar factory, arguing that it was not their fault they were not able to send the required number of coupons and convincing the recipient to send them the cinema tickets. In Assignment 3, students were asked to write a short sequel to a story they had read, with a given start end closing sentence.

Each assignment was rated by two independent raters using a primary trait scoring procedure (Lloyd-Jones, 1977). For each assignment, the central communicative objective – or primary trait – was formulated. On the basis of this primary trait, a set of rating criteria were specified (e.g. ‘letter conventions’, ‘line of reasoning’, and ‘consistency with original story’). The raters had to use these criteria to assign each student a single score. To arrive at this score, raters were provided with a scale of five benchmark texts. This scale was developed in a separate session in which a sample of forty texts was rated by two independent raters, following a procedure based on Blok (1986) and adopted in Schoonen et al., 2011. The five scale points represented the 10th, 25th, 50th, 75th and 90th percentiles of these forty texts. The final interrater reliability of the scores was satisfactory: For Assignment 1, \( r = .89, .82, \) and \( .77 \) in grade 7, 8 and 9 respectively; for Assignment 2, \( r = .88, .83 \) and \( .75 \) in grade 7, 8 and 9 respectively; and for Assignment 3, \( r = .88, .86 \) and \( .75 \) in grade 7, 8 and 9, respectively. Across all three years, one rater remained the same in order to avoid differences in severity of rating and to make the ratings comparable over years. Writing proficiency in every grade was represented by a sum score of the scores for assignment 1, 2 and 3 (grade 7 Cronbach \( \alpha = .69 \), grade 8 Cronbach \( \alpha = .71 \), grade 9 Cronbach \( \alpha = .52 \)). Next, a sum score representing writing proficiency across grades 7 to 9 was computed. The reliability of this score was good (Cronbach \( \alpha = .83 \)).
### 3.4.2.3 Engagement in literacy contexts

In each grade, 2 language arts lessons and 2 social studies lessons were selected for observation. We consulted with the teachers giving the lessons for this selection to make sure that literacy activities would take place in a regular way (as opposed to special activities such as tests or out-of-class activities).

To examine students’ exposure to and behavioral engagement in literacy activities in language arts and content area classrooms, real-time classroom observations were conducted in language arts and social studies lessons. Based on a review of the relevant literature, an observational coding system and accompanying manual to document students’ exposure to and behavioral engagement in literacy learning contexts was developed for the present study (Connor, Morrison & Petrella, 2004). Observations were conducted at the student level in 1.5-min blocks (time-sampling) in which five aspects for every target student present (ranging from 1 to 7 students per class) were coded in a stepwise way. Researchers identified: (1) the occurrence of literacy activities (reading, writing or other academic or non-academic activities), (2) the setting of the activities (whole-group, small groups or individual seat work), (3) the focus (explicit literacy instruction or content-oriented literacy practices) and specific contents of the activity (spelling and grammar, vocabulary, metacognitive knowledge, text reading, text writing, integrated practices, and finally (4) students’ behavioral engagement (on-task or off-task). A description of the codes from the coding manual is included in Table 3.3.

By summing the number of episodes (of 1.5 minute) in which instructional activities were provided by the teacher and in which students were engaged (on-task), it was possible to compute how often the six literacy contexts occurred and how much time students were engaged in each of them. Episodes for which it was not clear whether students were engaged or were not engaged were excluded from the analyses. Since the duration of lessons varied over schools, the observation times differed for individual students. Therefore, the engagement scores were corrected for observation time. First, time spend on a particular literacy activity was divided by the total observation time. Next, the time that students were engaged in the particular literacy activities was multiplied with the quotient of the time for the activity and total observation time\(^ {12}\).

---

\(^ {12}\) An example of how the scores were corrected for observation time: Student 1’s time-on task in literacy activity = time observed: 50 minutes; time allotted to literacy activity: 30 minutes; time engaged in literacy activity: 15 minutes = \((30/50)\times 15 = 9\) minutes. Student Y’s time engaged in literacy activity = time observed: 100 minutes; time allotted to literacy activity: 30 minutes; time engaged in literacy activity: 15 minutes = \((30/100)\times 15 = 4.5\) minutes.
### Table 3.3 Codes and explanations from the observation manual

**1) Activities.** Activities students need to be engaged in. Typically, these reflect the instructional demands given by the teacher.

- **Nonacademic activities.** Activities that have no academic focus or value. E.g. activities concerning order or organization, such as paperwork or transition.
- **Other academic activities.** Activities having an academic focus or value, but are not concerned with the improvement or acquisition of literacy-related skills and knowledge.
- **Literacy academic activities.** Activities directed at reading comprehension, writing or skills such as spelling, grammar, vocabulary, genre knowledge, and strategies in reading and writing.

**2) Setting.** Setting of activities which typically reflect the instructional demands given by the teacher.

- **Whole-class.** Situations in which the teacher is the primary director of students’ attention.
- **Group.** Refers to situations in which students are working towards common goals independently. The teacher is supervising and coaching the students. E.g. students work in pairs on a project or textbook assignment.
- **Individual.** Refers to situations in which students are working alone independently. The teacher is supervising and coaching the students. E.g. students complete worksheets individually.

**3) Focus.** Embedding and the types of content of the literacy activities.

- **Explicit skills instruction.** Explicit instruction and exercise of spelling, grammar, vocabulary, dictionary use, text characteristics, strategies, text analysis and writing.
  - Spelling, grammar and punctuation.
  - Vocabulary (vocabulary, idiom, and dictionary use).
  - Metacognitive knowledge (knowledge of strategies for reading and writing and of text characteristics).
  - Isolated training of reading and writing skills (reading and writing exercises without connection to the understanding of contents of texts or composition goals).
- **Content-oriented literacy activities.** Reading and writing with a focus on comprehension or communicating contents. E.g. reading a novel or writing a summary in preparation of a test.
  - Content area textbook reading and writing. Activities exclusively concerned with reading and writing short passages in content area textbooks to acquire and demonstrate content knowledge.
  - Instrumental reading (reading for understanding contents; reading is instrumental instead of the object of instruction).
  - Instrumental writing (writing for producing comprehensible texts; writing is instrumental instead of the object of instruction).
  - Instrumental reading and writing (combined reading and writing with a focus on contents).

**4) Behavioral engagement.** Participation level of the student.

- **On-task.** The student is participating. E.g. the student is working on a task, continuing an activity, answering a question, listening to the teacher or a classmate making an on-task contribution.
- **Off-task.** The student is not participating. E.g. the student is disrupting a classmate or interrupting the teacher with nonacademic issues, participating in a classmate’s off-task behavior or visiting the toilet.
- **Doubtful.** It is not clear whether the student is participating or not. E.g. the student is staring aimlessly.
Observations of lessons were conducted by the researcher and trained research assistants during regular lessons throughout the school day depending on students’ timetable. Across a total of 167 hours of real-time observation, 8 hours were coded simultaneously by two independent observers. This means that 267 1.5-min segments were coded twice (5% of a total of 6,680 1.5-min segments). The inter-observer reliabilities were high (Cohen’s Kappa was .89 for literacy activities, .87 for content, .93 for learning structure, and .80 for behavioral engagement). There were no indications of systematic observer differences or decay in observers’ reliability over time. On average, each student was observed for a total of 12 hours across grades 7 to 9.

3.4.3 Procedure

The SALT reading comprehension test and the 3 writing assignments were administered three times: in Grade 7 (spring 2008), in Grade 8 (spring 2009) and in Grade 9 (spring 2010). They were administered to whole classes. The reading comprehension test took three sessions of 45 minutes; the writing assignments were administered in two sessions of 45 minutes. Administration time was calculated to assure that all students were able to complete the test and writing assignments within the allotted time. All sessions were introduced by a researcher or a trained test assistant and were also attended by a teacher to assist in maintaining order.

Furthermore, in each grade (7-9), one regular lesson in the fall semester and one regular lesson in the spring semester of both subjects were observed. Subsequently, the teachers were yearly interviewed. At the end of the three-year data collection, the textbooks for language arts and social studies were analyzed.

3.4.4 Missing data

Of the dataset 8.7 percent was missing due to students being absent at one or more points of measurement as a result of illness, problems at school or at home and moving. EM estimation was used to estimate and impute the missing data on the dependent variables: reading and writing proficiency. For the independent variables (engagement in literacy instruction), the scores were averaged over grades. Students, who participated only in grade 7, received the score of grade 7 as their average. As a check, all analyses were conducted both with and without imputed missings (N=52 versus N=63). In all the analyses the patterns were similar.
3.4.5 Statistical analyses

Because the 63 students taking part in this study come from 10 different classes from 9 different schools\textsuperscript{13}, it was first checked whether multi-level analyses were necessary (Rasbash et al., 2000). Results showed that adding a class level to the student level does not result in a significant improvement of the model fit. Therefore, analyses were carried out with only the student level.

Associations of engagement with development in reading and writing proficiency were tested for each instruction variable separately using linear regression. In all analyses, proficiency in reading (or writing) in grade 7 was entered as the first variable in explaining proficiency in grade 9. Change scores were not used to analyze development, since several studies have shown the regression approach to be superior (Allison, 1990; Pike, 2004; Senn, 2006; Tu, Gunnell & Gilthorpe, 2008). Effects of engagement on development were tested for three time spans: grade 7 to 8, grade 8 to 9, and grade 7 to 9. The dependent variables in each analysis were the proficiency posttest scores (grade 8 or 9).

3.5 Results

3.5.1 Literacy instruction

Table 3.4 gives an overview of the time spend on the six literacy contexts in language arts and social studies lessons and the time that students were engaged (on-task) in these contexts.

In regard to setting, the results in Table 3.4 show that in the language arts lessons most time was spend on individual activities (64\% of total observed time) followed by whole class activities (30\%). Little time was spent on group activities (6\%). Similarly, in the social studies lessons the largest proportion of the time was reserved for individual activities (78\%). Contrary to the language arts lessons, however, in the social studies lessons less time was spent on whole class activities (9\%) and more time was assigned to group activities (13\%). Concerning the focus of the activities, the results in Table 3.4 show that in the language arts lessons about three quarter of the time was spend on explicit skills instruction (76\%). A quarter of the time (24\%), activities were content-oriented. In the social studies, these proportions were quite different. The instructional practices were nearly exclusively content-oriented (92\%). About 8\% percent of the time was spent on explicit skills instruction. When the setting and focus are combined into literacy contexts, the results in Table 3.4 show that the instructional practices in language arts lessons consisted mainly of individual and whole class

\textsuperscript{13} School and class level practically coincide in this study, since 10 classes come from 9 different schools, so testing for a school level next to a class level is not feasible.
explicit skills instruction (44% and 28% respectively) next to individual content-oriented instruction (20%). The instructional practices in social studies lessons consisted predominantly of individual content-oriented instruction (75%) combined with some group content-oriented instruction (12%).

Table 3.4 Average time in two lessons in each of the grades (in minutes) spend on the six literacy contexts in language arts and social studies lessons in grades 7 to 9 and average time in which students were engaged (on-task).

<table>
<thead>
<tr>
<th>Literacy Contexts (Setting x Focus)</th>
<th>Language arts (N=60)</th>
<th>Social studies (N=63)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% of total time</td>
<td>% of total time</td>
</tr>
<tr>
<td>(WE) Whole class x Explicit skills</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Time spent</td>
<td>7.5 (6.1)</td>
<td>1.0 (1.5)</td>
</tr>
<tr>
<td>Time engaged</td>
<td>7.0 (5.8)</td>
<td>0.8 (1.1)</td>
</tr>
<tr>
<td>% Time engaged</td>
<td>93</td>
<td>80</td>
</tr>
<tr>
<td>(GE) Group x Explicit skills</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Time spent</td>
<td>0.8 (2.4)</td>
<td>0.2 (0.8)</td>
</tr>
<tr>
<td>Time engaged</td>
<td>0.2 (0.7)</td>
<td>0.2 (0.7)</td>
</tr>
<tr>
<td>% Time engaged</td>
<td>25</td>
<td>100</td>
</tr>
<tr>
<td>(IE) Individual x Explicit skills</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Time spent</td>
<td>11.9 (9.5)</td>
<td>0.6 (1.5)</td>
</tr>
<tr>
<td>Time engaged</td>
<td>7.5 (6.0)</td>
<td>0.4 (1.1)</td>
</tr>
<tr>
<td>% Time engaged</td>
<td>63</td>
<td>67</td>
</tr>
<tr>
<td>(WC) Whole class x Content-oriented</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Time spent</td>
<td>0.4 (0.9)</td>
<td>1.1 (1.3)</td>
</tr>
<tr>
<td>Time engaged</td>
<td>0.4 (0.9)</td>
<td>1.0 (1.2)</td>
</tr>
<tr>
<td>% Time engaged</td>
<td>100</td>
<td>90</td>
</tr>
<tr>
<td>(GC) Group x Content-oriented</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Time spent</td>
<td>0.4 (1.9)</td>
<td>2.5 (6.2)</td>
</tr>
<tr>
<td>Time engaged</td>
<td>0.4 (7.7)</td>
<td>1.9 (4.6)</td>
</tr>
<tr>
<td>% Time engaged</td>
<td>100</td>
<td>76</td>
</tr>
<tr>
<td>(IC) Individual x Content-oriented</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Time spent</td>
<td>5.8 (6.5)</td>
<td>16.2 (12.0)</td>
</tr>
<tr>
<td>Time engaged</td>
<td>3.9 (4.6)</td>
<td>11.1 (9.0)</td>
</tr>
<tr>
<td>% Time engaged</td>
<td>67</td>
<td>69</td>
</tr>
</tbody>
</table>

a) For language arts the sample consists of 60 instead of 63 students because 3 students were absent during classroom observations in Grade 7 and ultimately dropped out of the study.

Concerning the level of engagement achieved (% time engaged), the results in Table 3.4 show that in both subjects the levels of engagement were highest in the whole class instruction settings. On average, students were engaged 90 percent of the time
spend on this setting. The lowest levels of engagement were obtained during individual seat work. In this setting, students were only two third of the time engaged (67%) on average. During group seat students were engaged for about three quarter of the time (75%). Furthermore, the results in Table 3.4 show that the level of engagement was somewhat higher in activities that were content-oriented (84%) than in activities involving explicit skills instruction (71%).

To obtain a better understanding of the types of literacy activities enacted within the contexts, in Figure 3.1, the scores underlying the focus dimension (see Table 3.3) are depicted. For language arts lessons, the figure shows that explicit skills instruction concerned mostly aspects of spelling and grammar (35%) followed by completing text book assignments for isolated training in reading and writing proficiency (23%), metacognitive knowledge (16%), and vocabulary (6%). These findings point to a substantial amount of explicit literacy instruction that is more focused on exercise in decoding, fluency, spelling and grammar than on meaning-making activities, such as the use of flexible strategies, knowledge about characteristics of text genres and the explanation of difficult vocabulary in context.

**Figure 3.1. Distribution of types of literacy activities to content in language arts and social studies lessons across grades 7 to 9.**

Furthermore, Figure 3.1 shows that content-oriented literacy activities in the language arts lessons consisted mostly of separate instrumental text reading and writing (16%). To a lesser extent instrumental reading and writing were combined (4%). For social

---

14 Average of time engaged in WE language arts, WE social studies, WC language arts and WC content areas = 93% + 80% + 100% + 90% = 90%.
studies, the results in Figure 3.1 show that the content-oriented activities consisted predominantly of content-area textbook reading and writing (52%). In addition, some time was spent on assignments in which student read or write more extensive texts to acquire or demonstrate their content knowledge such as writing reports or summaries using multiple written sources (39%). Some time was reserved for explicit skills instruction. If this was the case, time was spent on instruction about subject-specific vocabulary (5%) and metacognitive knowledge (3%). Little time was directed at instruction in spelling and grammar (1%).

3.5.2 Engagement in literacy instruction in relation to literacy development

To answer our second research question, it was first tested whether students progressed in reading and writing proficiency through the grades. Repeated measures ANOVA were conducted with the scores for reading comprehension proficiency and writing proficiency in grades 7-9 as dependent variable. The results show that students progressed in reading comprehension proficiency from grade 7 to grade 9 ($F_{(2,124)}=37.87, p=.000$, partial $\eta^2=.38$). Within subject contrasts show that also the difference between grade 7 and grade 8 is significant ($F_{(1,62)}=6.65, p=.012$, partial $\eta^2=.09$). In addition, the difference between grade 8 and grade is significant ($F_{(1,62)}=43.17, p=.000$, partial $\eta^2=.41$). The effect sizes indicate that growth in reading comprehension proficiency is quite strong, especially from grade 8 to 9. But students improved in reading comprehension proficiency in each grade. Also for writing, the results show that students progressed in writing proficiency from grade 7 to 9 ($F_{(2,124)}=16.123, p<.001$; partial $\eta^2=.206$). Within subject contrasts (repeated) show that also the differences between grades 7 and 8 is significant ($F_{(1,62)}=16.60, p<.001$; partial $\eta^2=.211$). In addition, the difference between grade 8 and 9 is significant ($F_{(1,62)}=4.552, p<.05$; partial $\eta^2=.037$). The effect sizes indicate that growth in writing proficiency is rather strong, especially from grade 7 to 8. But students improved in writing proficiency in each grade.

Following, the associations of the engagement variables in the six literacy contexts with growth in reading and writing proficiency were analyzed separately by means of linear regression for three time spans (7-8, 8-9, and 7-9). For reading comprehension proficiency in all analyses, results showed that the scores in the previous grade predicted later proficiency significantly and quite substantially (reading: growth 7-8 $r^2=.49, p<.001$, growth 8-9 $r^2=.69, p<.001$, growth 7-9 $r^2=.54, p<.001$). The residual variances in reading comprehension proficiency for all three time spans were not significantly explained by students’ engagement in any of the six literacy contexts. These results indicate that engagement in any of the literacy instruction contexts
neither in language arts lessons nor in social studies contributed to reading comprehension development.

For writing proficiency, in all analyses, results showed that the scores in the previous grade predicted later proficiency significantly and quite substantially (writing: growth 7-8 r²=.53, p<.001; growth 8-9 r²=.23, p<.001; growth 7-9 r²=.17, p<.001). Furthermore, the findings indicated that engagement in all but one instruction context did not add significantly to the regression equation. However, engagement in whole class isolated skills instruction (WI) in language arts predicted growth between grade 8 and 9 (Beta=.31, p=.003, and between grade 7 and 9 (Beta=.31, p=.005). In both cases 10% of the variance was explained. A closer investigation of the contents addressed during the language arts lessons revealed that engagement in instruction that was directed at metacognitive knowledge explained 6% of the variance in writing proficiency (Beta =.25, p=.022), while engagement in instruction activities directed at spelling and grammar, vocabulary, separate training of reading and writing, or content oriented text reading and text writing did not contribute to the explanation of differences in writing development. In Figure 3.2, the developmental patterns are visualized based upon a medium split. Figure 3.2 shows that students who were more frequently engaged in whole class isolated skills instruction, and who were more engaged in activities involving metacognitive knowledge in particular, showed more improvement in writing proficiency between grade 8 and 9, than peers who were less frequently involved in these types of literacy instruction.

Figure 3.2. Writing development of highly and poorly engaged students in whole class explicit skills instruction (left) and in instruction directed at metacognitive knowledge (right) in language arts lessons.
For social studies, it was found that engagement in one instruction context explained writing proficiency development. Engagement in whole class content-oriented instruction (WC) explained 5% of the variance in writing improvement between grade 7 and 9, ($\beta = -0.24, p = 0.05$). The standardized beta is negative, indicating that students who were more engaged in whole-class content-oriented instruction, showed smaller improvements in writing proficiency. Closer investigations of the specific contents addressed during the social studies lessons (e.g. vocabulary, metacognitive knowledge, content area reading etc.) did not show any specific contents having significant effects.

### 3.6 Conclusions and discussion

The main objective of this study was to examine the role of engagement in literacy instruction in development of reading and writing proficiency of low-achieving adolescents. In this study, special attention was given to specific types of instruction within language arts and social studies. Classroom practices were analyzed based on favorable features of literacy teaching to low achieving adolescents proposed in the literature. Although this literature is diverse and emphasizes different issues, such as Content-Based Language Learning, Concept-Oriented Reading Instruction, Self-Regulated Strategy Development and Balanced Literacy Instruction (Brinton et al., 1989; Bygate et al., 2001; Graham & Harris, 1993; Guthrie & Wigfield, 2000; Guthrie et al., 2004; Hajer & Meestringa, 2004; Langer, 2001; Pressley, 2006; Wigfield et al., 2008), the similarities are much larger than the differences. We identified several instructional features that are recommended such as coordination between language arts and content area lessons, interactive learning opportunities, content-oriented instruction of reading and writing and explicit skills instruction.

In line with other studies (Creese, 2005; Elbers, 2011; Raaphorst, 2007), the results of this study showed that the literacy practices observed did not manifest much of the abovementioned features. The language arts and social studies lessons remained quite separate domains in which literacy had a different role. Literacy instruction in language arts was characterized by a strong focus on explicit skills instruction, whereas the literacy practices in social studies were predominantly content-oriented and instrumental for learning subject matter. However, a quarter of the literacy activities in language arts lessons was content-oriented. Thus, literacy was not treated as a series of isolated skills only, but as something that needs to be practiced in a content oriented way too. Reversely, in social studies, students were sometimes engaged in language directed activities needed for understanding contents, such as difficulties with vocabulary or idiom. Furthermore, in both subjects literacy instruction was characterized by an emphasis on individual and whole class activities.
and very little group activities. These findings correspond to other studies who found that whole-class instruction and individual seat work are dominant in daily classrooms (Bean, 2000; Langer, 2001; Bolhuis & Voeten, 2001; Veenman, Kenter & Post, 2000; Wade & Moje, 2000).

Results of the study showed that although the adolescents in our study are low-achieving and perform below levels required in school and at the workplace, they still improve in reading and writing proficiency in the first three grades of prevocational secondary education. Contrary to pessimistic views about literacy development of low-achieving adolescents (cf. Alvermann, 2001, Biancarosa & Snow, 2006; Graham & Perin, 2007; Inspectie van het Onderwijs, 2008; Hofman et al., 2009; Kucan & Palincsar, 2011), these findings are encouraging in light of the importance of literacy skills for youngsters’ academic, professional and societal careers.

Because there was a marked growth in both reading and writing proficiency of the students’, we could pursue the goal of this study, which was to investigate to what degree their growth in literacy proficiency can be explained by degrees of engagement in the distinguished types of instructional practices in literacy in language arts and social studies. Degree of engagement is assumed to be an important predictor of academic achievement (Appleton et al., 2008; Baker & Wigfield, 1999; Fredricks et al., 2004; Guthrie & Wigfield, 2000; Guthrie et al., 2012; Linnenbrink & Pintrich, 2003). This study allowed testing this assumption while taking into account differences in literacy learning contexts at school. Results showed that although low-achieving adolescents do progress in reading comprehension proficiency, the degree of engagement in instructional practices in language arts and social studies did not contribute to explaining reading comprehension development among them. Instead, reading comprehension development was strongly dependent of students’ reading comprehension proficiency scores in the former grades ($r^2$ varied between .49 and .69), which means that the room for other factors to influence reading development was limited, however not too limited for engagement in instructional activities to make a difference. Apparently, these activities did not make that difference, suggesting that students who were more engaged in instructional practices do not profit from this engagement compared to students who were less engaged. This raises questions about the quality of the instructional contexts.

For writing proficiency, small amounts in students’ growth could be explained, especially between grade 8 and 9. Engagement in whole-class explicit skills instruction in language arts lessons explained writing development to a small degree. Students who were more engaged in this type of instruction showed larger improvements in writing proficiency. Exploration of the more specific activities underlying this relation showed that particularly engagement in explicit instruction directed at metacognitive
knowledge was associated with improvement in writing proficiency. It is possible that metacognitive knowledge for writing in our group of low achieving students initially is very low, giving room for some improvement, especially in the last two years. A study of Trapman, Van Gelderen, Van Steensel, Van Schooten and Hulstijn (2012) showed that the low achieving students participating in this study possess little metacognitive knowledge. They are therefore likely to profit from explicit knowledge of how to use self-regulatory strategies and text characteristics. This finding supports the value that is attached to explicit strategies instruction for improving writing proficiency (Graham & Harris, 1993; Graham & Perin, 2007; Hillocks, 1984).

A negative association with writing development from grade 7-9 was found for engagement in whole class content-oriented instruction in social studies. Inspection of the form of this association showed that it resulted from the students starting with the lowest writing proficiencies in grade 7 to catch up with the most proficient writers in grade 9. For that reason, the result can be explained by the initial extreme low levels of writing of the low engagement group, given that a causal relation between low engagement and writing growth is highly unlikely. The extremely low writing level at the start of the study made it possible for this group to grow more in proficiency than the average. Therefore, we attach little value to this finding.

Together, the findings suggest that there were only significant associations between students’ engagement in literacy instruction across the curriculum and their writing development, but not with their development in reading comprehension proficiency. That some variance in writing development could be explained does not alter the fact that overall little variance in literacy development could be explained by the students’ engagement in instructional activities. Although empirical studies showing associations between engagement in the context of school instructions and literacy development over a period of several years are absent, many theorists assume that positive associations do exist.

There are several possible explanations for these findings. First, in language arts, only a small part of the instructional practices students were engaged in, were content-oriented. Inspection of the textbooks (Appendix A) showed that texts and task in the language arts connected to the school (theory texts, literary stories), social (e-mails, postal cards, travel guides) and future professional lives (application forms, recipes, prescriptions, manuals) of youngsters, but that the topics students read and wrote about remained quite arbitrary. Examples are exploring travel guides for an imaginary holiday or writing a report on a traineeship that has never been executed. It is questionable whether students perceive such tasks as interesting and functional at the time they are presented in the classroom. Also, during whole-class instruction in language arts, the topics or value of texts were only occasionally discussed. Rather,
language arts teachers paid attention to the skills of text reading and analysis by asking students to read the texts aloud (aimed at enhancing decoding and fluency) and posing question, such as “What is the title of this text? or “How many paragraphs does this text have?” So, although we found that the textbooks contain texts and tasks connected to the real world of youngsters, many literacy practices in language arts eventually concern literacy knowledge and skills in which technical aspects of language are the main target of instruction while the contents of texts disappear from the students’ sight. Frequent engagement in such practices may not be facilitating low-achieving adolescents’ literacy proficiency.

A second explanation may be that explicit instruction in language arts was directed for a large part at decoding and fluency, spelling and grammar (58%) and to a much lesser degree at vocabulary and metacognitive knowledge (22%). This contrasts with a number of studies showing that especially explicit instruction in vocabulary and metacognitive knowledge is important for literacy proficiency of low-achieving adolescent (Alfassi, 2004; Chambers Cantrell, Almasi, Carter, Rintamaa & Maden, 2010; De La Paz & Graham, 2002; Edmonds et al., 2009; Gersten, Fuchs, Williams & Baker, 2001; National Reading Panel, 2000; Palinscar & Herrenkohl, 2002; Snow, Lawrence & White, 2009; Swanson, 1999; Taboada & Guthrie, 2006). Explicit training directed to basic aspects, such as decoding, reading fluency and handwriting is regarded as more relevant in earlier stages of literacy development and of minor importance for adolescent literacy development (Biancarosa & Snow, 2006; Graham & Perin, 2007; Langer, 2001; Pressley, 2006; Van Gelderen et al., 2007). In regard to explicit traditional grammar instruction, such as naming word classes and parsing, small and even negative effects on writing improvement are found (Ellis, 2002; Graham & Perin, 2007; Hillocks, 1984), especially with low-achieving writers (Saddler & Graham, 2005). Such findings raise serious questions about the utility of traditional grammar instruction that was observed in our study. Other types of grammar instruction, such as sentence combining, are reported to be more effective than traditional grammar instruction. Fearn and Farnan (2007) found, for example, that teaching students to focus on the function and practical application of grammar within the context of writing texts produced strong and positive effects on students’ writing. In summary, the types of explicit instruction in which the low-achieving adolescents in our study were observed to engage in had little relation with meaning-making activities and therefore are unlikely to make a difference in their literacy development.

A third explanation may be that when students were engaged in content-oriented instruction, which was the case in social studies lessons, the materials may not have elicited effective practices for improving literacy proficiency. Inspection of textbooks for social studies revealed that the tasks consisted of short texts accompanied by many
filling-out-assignments and cut and paste jobs (Appendix A). By reducing the amount of extensive reading and writing tasks, publishers aim to remove language difficulties that impede understanding and remembering subject content. By excluding writing tasks in which students are challenged to use writing as a tool for understanding and analyzing subject-matter information, opportunities to teach and practice writing in meaningful and functional ways are missed. Apart from the nature of the textbooks, it was observed that social studies teachers provided little additional support in helping students to tackle language difficulties (9%). If it was observed, instruction was mainly directed at discipline-related idiom or consisted of reading texts aloud to ensure that students read the texts at all. It is likely that low-achieving students need more effective support in reading and writing in the content areas to benefit from frequent engagement in literacy practices outside the language arts classroom.

Ideally, coordination between language arts and social studies teachers takes place to provide such support for students’ literacy development. From the interviews that were held with our teachers (Appendix B), it appears however that coordination between and even within subject domains is scarce. Although the majority of the language arts and social studies teachers stress the importance of coordination and shared responsibility for students’ literacy development, they admit that these conditions are not met. Despite that most of our participating schools had a history with a language policy to facilitate collaboration between subject domains, only on one single school a language policy was actually enforced and cross-disciplinary projects were a fixed part of the curriculum. Initiatives for the development of a language policy were often dependent on the efforts of individual teachers running down when priority is given to other issues. On some of the participating schools, language policy even dropped-off the agenda completely due to a loss of support. Thus, at most participating schools cross-disciplinary collaboration directed to students’ literacy was not systematically embedded in the school organization. Consequently, social studies teachers needed to rely on their own (limited) knowledge about literacy issues, and language arts teachers missed opportunities to use content-area materials to teach reading and writing. This may also explain why students who were more engaged in content-oriented instruction in social studies did not show improvements in literacy proficiency.

Fourth, the results may also be explained by the given that a substantial part of the instructional practices in both subjects were enacted in individual settings in which the lowest levels of engagement were achieved. Students were engaged in these settings two third of the time (67%). In comparison to whole-class settings (almost 100%) and in group settings (75%) this is clearly a poorer score. This suggests that students had most difficulties in focusing their attention to their work in individual
settings. While working individually, students are dependent on their own knowledge, skills and motivation. More interactive settings, such as whole-class and group settings, provide opportunities to produce language, to share ideas, for good and bad practices to be modeled, and to motivate each other (Guthrie, McRae & Klauda, 2007; Johnson & Johnson, 2009; Klinger et al., 2004; Palinscar & Herrenkohl, 2002; Rijlaarsdam et al., 2008; Swain, 2001; Vaughn et al., 2001; Yarrow & Topping, 2001). Furthermore, the frequency of individual settings, and especially the lack of group seat work, points to problems with realizing effective collaborative learning conditions apart from whole-class instruction. Such conditions include good classroom organization next to good regulative and communicative skills of both teachers and students (Goodwin, 1999). In addition, the textbooks may contribute to the limited amount of group work and the abundance of individual activities. Inspection of the textbooks in language arts and social studies (Appendix A) revealed that textbooks are designed in such a way that students are able to work autonomously. In most cases this means also individually. Only in some assignments, students are explicitly instructed to discuss their work with peers or to execute the task in collaboration with others.

A final explanation may be that literacy instruction to low-achieving adolescents is focused at raising students’ confidence. This focus may result in a lack of challenging literacy activities. Students need to have confidence in their abilities to persist in the face of difficulties, but at the same time they have to realize the need of additional effort to succeed. When students feel overconfident (because not that much is expected from them), they fail to allocate such additional effort (Salomon, 1984; Sawyer, Graham & Harris, 1992). Our analysis of affective engagement reported in Part I of this thesis showed that although the students are low-achieving, they expressed considerable confidence in their reading and writing skills (being close to 4 on the scale ranging from 1 (not at all) to 5 (very much). The high self-efficacy beliefs may signal that students are insufficiently challenged in literacy instruction, causing them to allocate insufficient additional effort. This may result in less growth in literacy than would have been possible in a more challenging educational context. The high self-efficacy beliefs are not unusual for low-achieving adolescents (Bandura, 1997; Klassen, 2002), and are likely to be fostered by their learning environment. As the participating students are enrolled in a tracked school system in secondary education, they are surrounded by classmates with comparable literacy abilities. Moreover, their literacy tasks are adapted to their abilities and their teachers are focused at fostering students’ confidence. In such learning environments students are likely to overestimate their competence in literacy, despite their deficient literacy abilities.
In relation to this, the moderate intrinsic values reported by the students in Part I of this thesis may signal that they do not experience much enjoyment in the activities they have to perform at school. This is a pity, as studies have shown that highly intrinsically motivated students pursue deeper levels of processing. Frequent practice with deeper processing is needed to improve (Schiefele, 1991; Schraw & Lehman, 2001; Wang & Guthrie, 2004; Wigfield & Guthrie, 1997). Regarding the moderate intrinsic values reported, it is questionable whether those deeper levels of processing are being elicited with this group of low-achieving students.

In sum, this study showed that our group of low-achieving adolescents progressed in literacy skills over the first three grades of secondary education. However, we could not establish empirically that this progress is explained by different degrees of engagement in specific literacy practices in language arts and social studies, although theorists assume that positive associations do exist. The findings suggest that different degrees of engagement in literacy instruction are hardly associated with low-achieving adolescents’ literacy development. This does not imply, however, that engagement in literacy instruction does not contribute in general to low-achieving adolescents’ literacy development. In fact, we found an indication that there is a positive contribution of instruction in metacognitive knowledge to students’ writing development.

Our exploration of the instructional practices using features of effective literacy development provides a list of points for improvement that seem promising. In a nutshell, the above explanations for not finding significant associations can serve as a first agenda. More attention to cross-disciplinary collaboration between language arts and content area teaching and more use of, interactive, content-oriented and explicit (but not isolated) literacy instruction, but also more challenging and relevant literacy tasks in the classrooms (for example by embedding such tasks in larger projects) are the most important recommendations that come across. Offering this type of literacy instruction, demands for a more flexible and creative use of existing textbooks. The key to success is dependent on how well curricula fit to the specific needs and attributes of students, and of the choices teachers make collectively within and across subject domains (see also the educational implications in the general Summary and Discussion of this thesis).

While we believe that this study makes a unique contribution to the field of literacy development and the role of engagement in instruction, we also acknowledge some limitations. First, the small sample size and the Dutch context call for caution in generalizing our conclusions to the whole group of low-achieving adolescents in the Netherlands and abroad. Replication of this study using other samples of low-achieving adolescents is needed to validate our findings. Second, the number of lessons
observed was limited to two observations per subject per grade. Therefore, the conclusions about how time is spend on activities and how much time students were engaged in particular contexts may not be representative for their whole curriculum. This means that replication of our findings in future studies in respect to time spend on literacy activities for low achieving adolescents (both in Dutch schools and abroad) is necessary to become more certain about the robustness of our findings. Third, this study did not examine the role of overall classroom quality and interpersonal relationships between teachers and students, which are also likely to influence students’ engagement and the impact of instruction offered (Appleton et al., 2008; Brekelmans, Sleegers & Fraser, 2000; Den Brok, 2001; Guthrie & Wigfield, 2000; Fredricks et al., 2004). The effect of these aspects needs to be addressed in future investigations. Apart from these remarks, we still believe that this longitudinal exploration of students’ engagement in a variety of literacy contexts has made an important contribution to increasing our understanding of instructional practices for improving low achieving adolescents’ literacy and the role of their engagement in instructional practices in language arts and social studies.