Improving Reading Performance for Economically Disadvantaged Students: Combining Strategy Instruction and Motivational Support

Chi-Hung Clarence Ng, Brendan Bartlett, Ivan Chester & Susan Kersland

School of Education & Professional Studies, Griffith University, Brisbane, Australia

Published online: 11 Apr 2013.

To cite this article: Chi-Hung Clarence Ng, Brendan Bartlett, Ivan Chester & Susan Kersland (2013) Improving Reading Performance for Economically Disadvantaged Students: Combining Strategy Instruction and Motivational Support, Reading Psychology, 34:3, 257-300, DOI: 10.1080/02702711.2011.632071

To link to this article: http://dx.doi.org/10.1080/02702711.2011.632071
IMPROVING READING PERFORMANCE FOR ECONOMICALLY DISADVANTAGED STUDENTS: COMBINING STRATEGY INSTRUCTION AND MOTIVATIONAL SUPPORT

CHI-HUNG CLARENCE NG, BRENDAN BARTLETT, IVAN CHESTER, and SUSAN KERSLAND
School of Education & Professional Studies, Griffith University, Brisbane, Australia

Seventy-six fifth-year students from low-socioeconomic status backgrounds participated in three different instructional conditions in an intervention study. The first combined strategy training in top-level structuring and interrelated motivational support; the second implemented the strategy training only; and the third was a control condition where no specific training in top-level structuring or motivational support was provided. Both trained groups showed substantial improvement in their reading performance, as indicated by two different reading tests administered before and after the 6-week intervention. The control group did not show any significant improvement on these tests. Students in the combined instructional condition made most progress in reading, indicating additional value in combining both explicitly performance-linked motivational support and strategy instruction in promoting reading.

Introduction

There is a strong link between low socioeconomic status (SES) and students’ low level of literacy achievement (Greene & Anyon, 2010; Rothman & McMillan, 2003). In Australia, the 1996 National English Survey identified the significance of this link by showing the reading achievement gap between disadvantaged and nondisadvantaged students (Masters & Forster, 1997). Over a decade later, low-SES and other disadvantaged students remain disproportionally represented among those who fail to attain the minimum benchmark in reading and other literacy assessments in national literacy tests (The Ministerial Council for Education,
Early Childhood Development and Youth Affairs, MCEECDYA, 2008, 2009). This experimental study trialed a reading intervention design that focuses on both motivation and strategy instruction for promoting reading engagement and performance using three classes of Year 5 students from a school situated in a low-SES suburb in Brisbane, Australia.

Reading comprehension is an important skill, critical for students’ academic success, future employment, and personal well-being (Desjardines, 2004; DeWalt & Pignone, 2005). Designing effective intervention to motivate students to read and to improve their reading performance is an important educational challenge that always demands attention (Alexander, Entwisle, & Olsen, 2001; Schacter & Jo, 2005). Many intervention studies on reading comprehension have focused exclusively on the teaching of important cognitive and regulatory skills (e.g., Andreassen & Braten, 2010; Pressley et al., 1992; Paris, Cross, & Lipson, 1984) or specific comprehension strategies (e.g., Meyer et al., 2002; Palincsar & Brown, 1984). Relatively few (e.g., Chan, 1994) have addressed simultaneously both strategy instruction and motivation to read (Guthrie, Mcrae, & Klauda, 2007). In an experimental study, Souvignier and Mokhlesgerami (2006) found that combining motivational support with instruction on cognitive and self-regulatory strategies resulted in better reading comprehension levels than focusing on training students solely to develop either their cognitive or self-regulatory strategies.

The Concept-Oriented Reading Instruction (CORI) program is another example showing the importance of combining both strategy instruction and motivation support in the development of reading engagement within the domain of science learning. Empirical findings, as summarized in Guthrie and colleagues (2007), demonstrated that CORI promotes reading engagement and performance by creating a classroom context supporting the development of cognitive strategies, knowledge mastery, curiosity, and autonomy in science learning. Building on this empirical foundation, the current intervention design emphasizes supporting both learning motivation and strategy instruction.

Comprehending a passage is a demanding cognitive task that requires not just the effective use of relevant strategies but also motivation to learn and use these strategies. It is highly likely that instructing low-SES students on effective reading strategies and
simultaneously providing motivational support will be beneficial, as the current literature often discusses issues related to the lack of motivational support and slow reading development among students coming from low-SES backgrounds (e.g., Archambault, Eccles, & Vida, 2010; Dickinson, 1991; Guthrie et al., 2009; Pan, Rowe, Singer, & Snow, 2005). The current intervention, therefore, attempted to help low-SES students to master a core reading strategy known as top-level structuring (Bartlett, 1978, 2010), and to motivate them to learn and use this strategy. Our design differed somewhat from the CORI design. While CORI focuses on creating a motivational context nurturing students’ content interest, knowledge, and independence related to science learning, the current design aimed to build an explicit link between motivation and acquiring and using a learning strategy.

**Top-Level Structuring as a Reading Strategy**

To comprehend a passage, it is critically important for readers to understand how authors structure a text. Therefore, we have focused on helping them do so by modeling structure-finding and structure-using skills, termed “top-level structuring” (Bartlett, 1978, 2010), to cluster ideas into increasingly larger units of meaning. The children in our study adopted this model, using it in increasingly more complex reading and writing situations across the daily routines and content domains of their Year 5 experience.

Meyer’s prose analysis system (1975) has identified different major organization patterns in expository texts, which include description, sequence, compare/contrast, problem-solution, and causation. It was found that good readers are capable of finding and using these patterns to represent the structure of ideas at its greatest level of abstraction (“top-level”) to recall important information in a text (Bartlett, 1978, 1979, 2010; Meyer, Brandt, & Bluth, 1980; Meyer & Wijekumar, 2007; Meyer, Young, & Bartlett, 1989). A wealth of research has explored the benefits gained from understanding the top-level structure property of text and using this understanding to guide reading comprehension. In general, past studies provided convergent and conclusive evidence attesting to the positive effects of training for top-level structuring (TLS) on facilitating recall, memorizing main ideas, and writing effectively (e.g., Armbruster, Anderson, & Ostertag, 1987; Bartlett,
2010; Meyer & Poon, 2001; Meyer, Talbot, Stubblefield, & Poon, 1998; Meyer et al., 2002; Williams et al., 2005). In addition, Meyer and colleagues (2002) found that learning top-level structuring promotes the development of reading efficacy.

Teaching low-SES students to understand top-level structures and to use them in reading comprehension is strategically important. First, low-SES students may lack sufficient exposure to expository reading at home and in school (Duke & Pearson, 2002). Therefore, instructing them about the structure of text and on how to use this knowledge strategically as a reader is pedagogically designed to compensate for their limited reading experiences (Bartlett, 1978, 2010). Gaining strategic knowledge that authors structure a text in predictable ways will facilitate reading engagement and improve reading performance. Second, top-level structuring as an “effective mnemonic” (Meyer et al., 1980, p. 99) will strategically focus students on main text structures rather than on minor grammatical links. Learning top-level structuring therefore is likely to help low-SES students develop a stronger sense of reading control and to help them select the important information in a text.

**Motivational Support**

Strategy instruction alone will not ensure acquisition and deployment of these important cognitive skills in reading comprehension (Guthrie & Wigfield, 2000). Students need to be motivated to use top-level structuring (Anmarkrud & Bråten, 2009; Meyer et al., 1998). The current intervention explores the possibility of tapping motivational support derived from a resource made available to the students and teachers in this study in the form of a third party, an older adult volunteer, to assist low-SES students’ reading pursuits. The important consideration in the current study is that older adults were to provide effective feedback to support students’ learning of top-level structuring and to convey genuine interest in students’ reading activities. Meyer and colleagues (2002) previously had recruited older adults to tutor fifth-graders on top-level structuring using an online system. We, too, connected students with our volunteers online using e-mail. However, while the older adults in Meyer et al.’s study assumed a teaching role as their primary...
function, in our study their role was to provide motivational support on the basis of what students informed them about their classroom learning of top-level structuring and of their applications of this.

We used e-mail communication to establish a personalized and performance-focused motivational environment. Several studies have found that e-mail messages can be manipulated for promoting personalized support for motivation (e.g., Hodges, 2008; Kim & Keller, 2008; Overbaugh, 2002; Visser, Plomp, Amiral, & Kuiper, 2002) and facilitate learning (e.g., Absalom & Marden, 2004; Boxie, 2004; van der Meji & Boersma, 2002). For example, Kim and Keller (2008) found that personalized e-mail messages were associated with a higher level of learning motivation. Most of these studies examined the effects of personalized e-mail messages among undergraduate students. Few studies (e.g., van der Meji & Boersma, 2002) have examined how e-mail messages can be used to promote learning and motivation for primary students. In the current study, e-mail exchange between older adults and students in one of the experimental groups was intended to create a motivational dialogue (cf. Ames, 1992) to focus students on learning and using the top-level structuring strategy.

To achieve this goal, e-mail exchanges in this study focused on providing support and promoting learning. First, older adults’ e-mails to the experimental group always conveyed a sense of personal interest and support. For example, in the early exchange, older adults often wrote about their interest in understanding what students had learned at school and specifically about their understanding of top-level structuring. Second, older adults’ messages were constructed in such a way that they initiated a discussion on the top-level structuring and how this reading strategy might be used effectively in daily life. In responding to these messages, students retold their understanding of top-level structuring, explained how the strategy could be applied to daily use, and practiced using it in common life situations. For example, students discussed the comparison structure in selecting a good restaurant and list structure in reading a restaurant menu—and their combination in selecting items from the menu. In this way, the e-mail exchange focused not just on providing social support, but also on promoting students’ understanding of these structures and the strategic application of this knowledge, providing an au-
that authentic opportunity for using them and applying them to real life situations. In this way, the motivational dialogue created through e-mail exchange can be likened to creating a mastery-oriented learning environment (cf. Ames, 1992), focusing students on understanding and using top-level structuring. In addition, older adults’ messages were always targeted at a specific individual. The praise, encouragement, and other forms of support conveyed in an e-mail message were intended always to be interpreted as having personal relevance, because of the direct line of response and specific feedback to what a student had communicated of his/her experience with a learning moment or a particular application.

Taken together, this study examined the effectiveness of an intervention combining both strategy instruction and motivational support to promote reading for low-SES students. It was designed to test the proposition that motivational support will enhance the positive effects of strategy instruction in improving reading performance.

This study also assumed that the intervention would have positive impact on students’ motivation to read. Different models have been used to assess students’ motivation to read, among which students’ achievement goals, reading self-efficacy, and reading enjoyment are dominant forms of reading motivation.

Achievement goals refer to students’ perceived purposes for engaging in reading. In this study, four different types of achievement goals were included: mastery goals focused students to read for understanding and development; performance-approach goals focused students to read for outperforming others; performance-avoidance goals directed students to avoid showing a lack of reading abilities; work-avoidance goals referred to the avoidance of spending time and effort on reading. In general, past studies on achievement goals have found that students focusing on adaptive goals such as mastery goals and performance-approach goals would have a more engaged pattern of learning compared to those holding avoidance goals (Kaplan & Maehr, 2007). Relatively few studies, however, have investigated achievement goals in the context of reading. Among the few published studies, Meece and Miller (1999, 2001) confirmed that primary students held strong mastery goals for reading and writing, and their mastery focus was associated with the use of active learning strategies. In another study, Meece and Holt (1993) found
that individuals with a strong mastery goal had a higher level of reading comprehension than did those holding a weak mastery goal. Botsas and Padeliadu (2003) provided similar findings, and their studies found that Greek students’ mastery goals for reading were associated with effective use of reading strategies and better reading results. The findings of these studies are consistent with the bulk of achievement goal research, confirming the adaptive nature of mastery goals. The negative impact of work avoidance has also been confirmed (Wigfield & Guthrie, 1997). Our knowledge about the nature of performance-approach and avoidance goals on reading is, however, rather limited.

The current study assumed that the intervention would improve students’ desire for mastery and high performance in reading, while their intention to avoid showing their lack of abilities and to reduce effort and time on reading would be lessened. This hypothesized result would be more pronounced for students who were provided a chance to interact with older adults using e-mail communication. Given that the e-mail communications were meant for promoting mastery, endorsing achievement, and providing support, it was likely that these students would become more mastery-oriented and intentional about focusing on demonstrating their reading performance. This hypothesized effect was in line with the result in Meece and Miller (1999).

Reading enjoyment is an intrinsic form of motivation. Students find engaging in reading activities itself an inherently enjoyable experience. Past studies have shown that reading enjoyment was associated with a higher level of reading involvement (Wigfield & Guthrie, 1997), and more time spent on reading activities and reading achievement (Baker & Wigfield, 1999). Most of these previous studies have focused on subject matter or topics that have aroused students’ curiosity and enjoyment (Baker & Wigfield, 1999). Relatively few investigations have looked into reading itself as an inherently enjoyable activity (e.g., Nolen, 2007). This study assumed that students’ reading enjoyment itself would be improved when they were equipped with better reading skills (the learning of top-level structuring), enabling them to improve their reading comprehension. In addition, the motivational support derived from e-mail communication with the older adults would further strengthen students’ personal sense of reading enjoyment.
Students’ reading self-efficacy represents the judgment of their ability to complete a specific reading task. Reading self-efficacy has been extensively researched (e.g., Grambrell, Palmer, Codling, & Mazzoni, 1996). In general, past research has demonstrated that readers with low reading self-efficacy tend to be distracted from reading activities, give up easily, and even avoid engaging in reading (Baker & Wigfield, 1999). In contrast, high levels of reading self-efficacy are associated with better achievement (e.g., Chapman & Tunmer, 1995; Katzir, Lesaux, & Kim, 2009; Taboada, Tonks, Wigfield, & Guthrie, 2009). Within the context of the current study, it was argued that mastering of top-level structuring for students in both experimental groups would strengthen their reading self-efficacy. In addition, the motivational dialogue with older adults would provide verbal persuasion facilitating the development of a stronger sense of reading self-efficacy.

In short, we consider that students in the experimental groups, relative to those in the control group, would find reading enjoyable, develop a stronger sense of reading efficacy, and focus more on mastery and outperforming others as goals to drive their reading pursuit. To track the change in these motivational variables, this study took a pre- and postintervention design, requesting students in both experimental and control groups to complete a questionnaire evaluating their achievement goals, levels of reading enjoyment, and self-efficacy.

**Method**

**Participants**

Seventy-six fifth year students from a state primary school situated in a low-SES suburb in Brisbane, Australia, were included in this intervention study. Students’ reports on parental occupations confirmed that each was part of a low-income family. The reading and other literacy levels of Year 3, 5, and 7 students in this specific school were substantially below the national average, according to the results of national tests in the National Assessment Program of Literacy and Numeracy (NAPLAN) in 2008 and 2009 (The Ministerial Council for Education, Early Childhood Development and Youth Affairs, MCEECDYA, 2008, 2009).
This current sample contained 40 boys and 36 girls with a mean age of 9.57 years (SD = .57). The students belonged to three Year 5 classes. According to their teachers, students across these three classes had similar achievement and motivational levels in reading. These students reported that they spent 1 to 2 hours weekly reading on their own, which included the time they spent on reading in school and at home. Given the various opportunities in which they were able to read independently and interactively in groups in their class each week, apparently these students were not keen readers.

**Measures**

**ACHIEVEMENT INDICATORS**

Students’ reading achievement was assessed in two different ways. First, they took a reading comprehension test before and after the intervention. Students read a 196-word passage on “The First Fleet—Why Did It Come?” and completed a free recall question on the content of the passage (see Appendix 2). Using Meyer’s prose analysis scheme (Meyer, 1975), 329 scorable units were identified in the passage. This formed the basis for assessing students’ free recall responses. Appendix 3 shows the analysis template. Two researchers marked students’ written responses and compared their marking. The inter-rater correlation was .90.

Second, students took part in the NAPLAN reading test (The Australian Curriculum, Assessment and Reporting Authority, n.d.) immediately before the intervention. The NAPLAN reading test is an annual standardized test on reading comprehension administered to all Year 3, 5, and 7 Australian students. The Year 5 reading test contains six stimulus texts and includes literal, sequential, and inferential questions on reading comprehension. Students took this test in a formal examination setting and were required to spend 45 minutes to answer a combination of 35 multiple choice and short answer (words, phrase, or sentence) questions related to the stimulus texts. Students’ scores in this standardized test were taken as an objective indication of their reading achievement prior to the intervention. The NAPLAN reading test was re-administered 4 weeks after the conclusion of
the intervention, forming a second delayed assessment of the effect of the intervention on students’ reading achievement.

MOTIVATIONAL INDICATORS

Students’ motivation to read was assessed using achievement goals, reading enjoyment, and efficacy. Appendix 1 provides sample items for these constructs, and Cronbach Alpha values at both pre- and post-test stage were given. Achievement goals were students’ perceived purposes for reading engagement, which included mastery, performance-approach, performance-avoidance, work-avoidance, and social approval goals. Mastery goals assess students’ intention to read for understanding and improvement. Performance-approach goals focus students on their relative abilities in reading, and students read with these goals to outperform others. Performance-avoidance goals are about not showing one’s lack of reading ability. Work-avoidance goals refer to the intention to avoid spending effort and time in reading. Social approval goals focus students on gaining approval from teachers. Items assessing students’ achievement goals were adapted from past studies (Ames & Archer, 1988; Meece & Miller, 1999).

Reading enjoyment assessed students’ interest in reading. Items forming reading efficacy required students to evaluate their own abilities in reading. These items were adapted from Wigfield and Guthrie (1997).

PERCEIVED USEFULNESS OF TOP-LEVEL STRUCTURING

Six items written specifically for this study assessed students’ perceived usefulness of top-level structuring as a literacy tool for promoting understanding, facilitating recall, and developing reading efficacy. A high score in this construct indicates that students consider top-level structuring important and useful for reading. Sample items are given in Appendix 1.

SOCIAL SUPPORT DERIVED FROM E-MAIL COMMUNICATION

Eight items written specifically for this study assessed students’ perceived social support derived from exchanging e-mail communication with older adults. These items asked students to evaluate the extent to which they received praise, encouragement, and support from older adults in their e-mail communication. A high score in this construct means that students feel supported in
their e-mail exchange with the older adults. Appendix 1 shows a sample item in this construct. In addition, students were required to respond to an open-ended question that asked them what they liked most about the e-mail interaction with the older adults.

Procedure

Parental consent was sought for students to take part in the intervention. Prior to the commencement of the intervention, students completed the preintervention survey, the reading comprehension test, and also the NAPLAN test.

Scores in the NAPLAN reading test verified the teachers’ advice that students in three classes did not differ in reading achievement levels (ANOVA \( F[2,67] = 2.47, p > .09 \)). Also, nonsignificant ANOVA results at the preintervention survey confirmed that students in the three classes did not differ in reported levels of reading enjoyment (\( F[2,74] = 1.01, p > .30 \)) or reading efficacy (\( F[2,74] = 1.47, p > .40 \)). Nor did they differ in the amount of time spent on reading at home (\( F[2,71] = .84, p > .40 \)). All students reported that they spent around 1 to 2 hours reading on their own in school and at home on a weekly basis. In addition, no significant difference was found in gender mix in these three groups (\( \chi^2 (2, 76) = .12, p > .90 \)).

The three classes were assigned randomly to experimental and control conditions.

- TLS-e-mail group receiving strategy instruction and e-mail support
- TLS-only group receiving strategy instruction only
- Control group with no strategy instruction or e-mail support

Identical training materials and learning activities were used in the experimental groups. Students learned to identify top-level structure in texts, to understand the signal words and other cues indicating the various forms of such structure, and to discuss examples of these in commonly encountered text materials. Six lessons covered four main structures found in texts (Bartlett, 1978, 2010), specifically listing, comparison, problem-solution, and cause-effect. These lessons were taught to the experimental
TABLE 1 Text Structures (Adapted From Meyer & Poon, 2001)

<table>
<thead>
<tr>
<th>Text Structures</th>
<th>Examples of Signal Words</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Listing</strong></td>
<td>First, second, third...</td>
</tr>
<tr>
<td>This text structure involves a list of descriptions, attributes, steps, or other important information related to a specific topic, event, or person in a text.</td>
<td>The most important...the least important...</td>
</tr>
<tr>
<td></td>
<td>Afterwards, later, finally</td>
</tr>
<tr>
<td></td>
<td>Namely, characteristics are, such as, for example</td>
</tr>
<tr>
<td><strong>Comparison</strong></td>
<td>Compared to, in contrast, however, on the other hand, unlike, the same as, different from</td>
</tr>
<tr>
<td>This text structure refers to the similarities and differences in descriptions, events, and attributes related to a specific topic, event, or person in a text.</td>
<td></td>
</tr>
<tr>
<td><strong>Problem—Solution</strong></td>
<td>Problem: problem, question, query, issue, trouble, puzzle Solution: solution, answer, response, reply</td>
</tr>
<tr>
<td>This text structure involves two parts, a problem part and a solution part that responds to the problem.</td>
<td></td>
</tr>
<tr>
<td><strong>Cause and Effect</strong></td>
<td>As a result, because, since, consequence, thus, in order to, the reason, therefore</td>
</tr>
<tr>
<td>This text structure presents causal or cause-and-effect-like relations between ideas, events, and actions.</td>
<td></td>
</tr>
</tbody>
</table>

groups (see Table 1). The lesson materials for teaching top-level structuring were fully integrated into the existing English curriculum. Appendix 4 shows a sample of an integrated lesson.

Professional training on text structure and top-level structuring was given to the teachers responsible for the experimental groups. Two training sessions conducted by an experienced trainer on top-level structuring were held in the school with the teachers responsible for the experimental groups. The first session introduced teachers to text structure and top-level structuring and included a discussion on various ways that top-level structuring can be incorporated into the school curriculum. The second session explained the integrated lessons, including lesson plans, classroom activities, and assigned readings designed for integrating the teaching of top-level structuring to the school curriculum (see Appendix 4). A thorough discussion was held to ensure that teachers in the experimental groups developed a clear
understanding of the requirements of the teaching of top-level structuring in these integrated lessons.

To ensure a high level of consistency, both experimental groups used identical lesson materials, activities, and reading materials designed by the research team. Each integrated lesson ran for about 60 minutes. Students in the control group had their normal 60-minute lessons from the school curriculum and studied identical reading materials used in the experimental groups, without the opportunities of learning top-level structuring and completing related learning activities.

The treatment difference between the TLS-e-mail group and TLS-only group was that the former group received e-mail support from older adults. Three male older adults with a mean age of 54 years provided motivational support to students in the TLS-e-mail group. These older adults had formal teacher training and were working as university lecturers at the time of the intervention. Professional training was provided in forms of (a) studying published research (Meyer et al., 2002) on top-level structuring, and (b) discussion on how to provide social support and to reinforce learning and use of top-level structuring in real social situations. Aligned with an achievement goal perspective (cf. Ames, 1992), the 1-hour discussion focused older adults on constructing a motivational dialogue that promotes mastery, encourages effort expenditure, reinforces understanding, extends knowledge, and offers praise for achievement. In particular, older adults were introduced to several real-world situations that could be used in their e-mail communication with the students to discuss how top-level structuring can be applied to common daily issues.

Each of the older adults was responsible for 9 or 10 students in the TLS-e-mail group. E-Mail messages were sent to a centrally managed e-mail account held within the university computer system. In this way, the e-mail communications were monitored. More importantly, this arrangement avoided direct contact between students and older adults using their personal e-mail accounts. Students identified themselves using their first names only, and older adults used pseudonames to disguise their identities and gender.

Older adults sent the first e-mail introducing themselves and expressing their interest in learning about students’ classroom
literacy activities. The turn-around time was an issue in the first week of the intervention, as students did not have access to computers in their classroom and were rostered in using the school’s computer laboratory. The situation improved substantially when the roster was changed to provide 30-minute access in two school days for students in the TLS-e-mail group to the computing facilities in the school computing laboratory.

The e-mail interaction period lasted for 6 weeks. In total, 362 messages were exchanged. To ensure an explicit linkage between the teaching of top-level structuring strategies in the class and the provision of social support, older adults sent messages to students in the TLS group once the teaching of a specific structure (e.g., listing) was completed. In this way, older adults showed constant interest in students’ progressive learning of the strategy and initiated discussion of its application in common everyday routines to convey a sense of usefulness and relevance.

At the conclusion of the intervention period, the pre-intervention survey and reading comprehension test were re-administered. For the experimental groups, additional items requesting responses on the learning of top-level structuring were included in the second survey. In addition, students in the TLS-e-mail group were asked to respond to questions seeking their views about the support they received from e-mail communication with the older adults. Four weeks after the completion of the intervention, the NAPLAN reading test was re-administered to examine if the benefits from the intervention could be maintained.

**Research Questions**

Using a pre- and post-test design, this study explored the possible impact of the intervention on students’ reading achievement and motivation. Four questions were addressed.

1. What effect will the intervention design have on students’ reading achievement?
2. What effect will the intervention design have on students’ reading goals, reading enjoyment, and reading efficacy?
3. What will students think of top-level structuring?
4. What will students think of e-mail support from older adults?
Results

The data were screened for outliers and variable normality checked. Participants whose scores on reading tests were higher than +/-3 standard deviations from the overall means were considered as outliers. In total, five cases were deleted, leaving 76 students in the final sample. The follow-up normality tests indicated that the normality assumptions were not violated after removing the outliers. Table 2 shows the descriptive statistics of major constructs in this study at both pre- and postintervention stage.

Did the Intervention Improve Reading Achievement?

Significant paired T-test results showed that students in the TLS-email group had substantial improvement in their NAPLAN reading test, \( t(21) = -4.69, p < .0001, r = .51 \) and the reading comprehension test, \( t(26) = -6.62, p < .0001, r = .65 \). Students in the TLS-only group also showed significant improvement in their NAPLAN reading test, \( t(22) = -5.94, p < .0001, r = .61 \) and reading comprehension test, \( t(21) = -3.71, p < .0001, r = .37 \). A non-significant paired T-test result for the control group indicated no significant change in scores on these tests.

Further analyses were conducted to compare reading achievement across groups. While the experimental and control groups did not differ in the NAPLAN reading test conducted prior to the intervention \( (F[2,67] = 2.47, p > .09) \), between-group scores on its second administration were significantly different \( (F[2,64] = 10.03, p < .0001) \). In particular, students in the TLS-email group \( (\bar{X} = 24.54) \) and TLS-only group \( (\bar{X} = 21.65) \) had higher scores than did those in the control group \( (\bar{X} = 17.80) \) on the second NAPLAN. Figure 1 shows significant interaction between the three groups in their NAPLAN reading tests.

An ANCOVA test on the postintervention reading comprehension test, taking students’ preintervention comprehension scores as a covariate, found significant differences between the three groups \( (F[2,78] = 5.48, p < .005) \). Two findings were notable. First, after control for preintervention differences in reading comprehension, students in the TLS-email group had significantly higher reading comprehension scores \( (\bar{X} = 66.23) \) after the intervention than did those in the other two groups. Second,
<table>
<thead>
<tr>
<th></th>
<th>TLS-E-Mail Group</th>
<th>TLS-Only Group</th>
<th>Control Group</th>
<th>Whole Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Time 1 Mean (SD)</td>
<td>Time 2 Mean (SD)</td>
<td>Time 1 Mean (SD)</td>
<td>Time 2 Mean (SD)</td>
</tr>
<tr>
<td><strong>NAPLAN Reading test</strong></td>
<td>21.00 (3.35)</td>
<td>24.54 (2.98)</td>
<td>17.13 (7.93)</td>
<td>21.65 (6.14)</td>
</tr>
<tr>
<td><strong>Reading comprehension test</strong></td>
<td>34.67 (24.15)</td>
<td>66.63 (30.28)</td>
<td>13.84 (13.17)</td>
<td>30.32 (22.26)</td>
</tr>
<tr>
<td><strong>Reading efficacy</strong></td>
<td>3.43 (1.02)</td>
<td>3.37 (1.09)</td>
<td>3.86 (.92)</td>
<td>3.84 (.73)</td>
</tr>
<tr>
<td><strong>Reading enjoyment</strong></td>
<td>3.57 (1.36)</td>
<td>3.67 (.99)</td>
<td>3.57 (1.27)</td>
<td>3.69 (1.22)</td>
</tr>
<tr>
<td><strong>Mastery goals</strong></td>
<td>3.77 (1.21)</td>
<td>3.72 (.86)</td>
<td>3.58 (1.02)</td>
<td>3.83 (.72)</td>
</tr>
<tr>
<td><strong>Performance-approach goals</strong></td>
<td>3.70 (.98)</td>
<td>3.43 (.90)</td>
<td>3.49 (1.03)</td>
<td>3.07 (.90)</td>
</tr>
<tr>
<td><strong>Performance-avoidance goals</strong></td>
<td>3.87 (1.27)</td>
<td>3.81 (1.10)</td>
<td>3.84 (1.07)</td>
<td>3.94 (.96)</td>
</tr>
<tr>
<td><strong>Work avoidance goals</strong></td>
<td>2.81 (1.23)</td>
<td>2.86 (1.03)</td>
<td>3.07 (.95)</td>
<td>2.75 (.91)</td>
</tr>
<tr>
<td><strong>Social approval goals</strong></td>
<td>4.81 (.59)</td>
<td>4.74 (.42)</td>
<td>4.41 (.83)</td>
<td>4.06 (1.30)</td>
</tr>
</tbody>
</table>

Note. Time 1 = Preintervention; Time 2 = Postintervention.
FIGURE 1 Change in NAPLAN Reading Test Scores (Color figure available online).

while the TLS-only group had the lowest scores in the preintervention reading comprehension ($\bar{X} = 13.84$), their postintervention comprehension scores showed substantial improvement ($\bar{X} = 30.32$). No significant interaction was found between the three groups on reading comprehension scores.

Taken together, these results confirmed that the intervention had positive effects on the reading performance of the two experimental groups. The control group recorded no significant improvement in reading scores on both reading tests.

**Did the Intervention Improve Reading Motivation?**

A repeated measure MANOVA on students’ achievement goals over the intervention period was significant, Wilks $\lambda = .79$, $F[5,50] = 2.65$, $p < .05$, $\eta^2 = .21$. The significant result was due to a drop in performance-approach goals in the TLS-only group ($t(16) = 2.44$, $p < .001$, $r = .27$) and the control group ($t(17) = 2.28$, $p < .001$, $r = .23$). However, this result should be interpreted
with caution, as the reliability scores of performance-approach goals did not reach .70 (cf. Nunnally, 1978). Other main and interaction effects were nonsignificant.

Separate repeated measures ANOVA tests on reading enjoyment and efficacy found that these three classes of students did not show significant change in their perceived levels of enjoyment ($F[1, 59] = .03, p = .87$) and efficacy ($F[1, 59] = .15, p = .22$). These results revealed that the intervention had limited effects on students’ reading motivation measured in terms of reading goals, enjoyment, and efficacy.

**What Did Students Think About Top-Level Structuring?**

The mean score for the construct on perceived usefulness of top-level structuring was 3.53 with a standard deviation of .84. Over 75% of students ($N = 35$) in both TLS-e-mail and TLS-only groups considered that top-level structuring was useful, important, and facilitating in relation to their understanding and recall of reading content. These views were shared among students in the TLS-e-mail and TLS-only groups, and no significant difference was found between them (ANOVA, $F[1, 44] = 3.74, p > .05$).

In the final message to the students in TLS-e-mail group, the older adults asked students to summarize what they had learned about top-level structuring. The messages that students sent back indicate they had a good grasp of top-level structuring. An example is shown below:

Dear Ms Heather

We have learnt about 4 main things to do with top level struture. They were called cause and affect, problem solving, lists and comparing. I have learnt that lists are everywhere. lists can be a christmas list or a shopping list. you put the most important at the top and the least important at the bottom. cause and affect is when you have consequences for things. you need to think before you do things and see what the affect might be. it can be good or bad. problem solving is when you fix a problem for someone. you think up lots of solutions and you compare them to come up with the best one. we did comparing at the start. you look at things the same and different. you make lists of the things and this helps you make a choice. miss k says we will keep learning about top level structuter. i really like it. she is having a party with us tomorrow for her birthday. you can come if
What Did Students Think About E-mail Support?

In total, 362 messages were exchanged during the intervention. These focused overtly on students’ learning and application of top-level structuring. Older adults praised students’ work, encouraged them to keep up with the learning, and shared with them their own experiences in using top-level structuring. To reinforce students’ learning, older adults initiated discussion on how the strategy could be used to deal with common everyday routines. Over 88% ($N = 24$) of students in the TLS-e-mail group considered that they felt supported by the e-mail communication they had with the older adults (mean $= 3.98$, SD $= .94$).

Students’ comments on what they liked about the e-mail communication corroborated the quantitative evidence. Twenty-seven comments were provided, from which 41 unique descriptions were identified. These descriptions focus on both social and learning aspects of e-mail communication that students valued:

1. Friendship (e.g., “I liked my e-mail buddy”; 9 entries; 21.95%).
2. Being nice and friendly (e.g., “She was really nice to me”; 14 entries; 34.15%).
3. Social interaction (e.g., “He listened and replied every time”; 8 entries; 19.51%).
4. Supporting learning (e.g., “I liked that I learnt more”; 4 entries; 9.76%).
5. Using the computer (e.g., “I could have fun on the computer”; 5 entries; 12.20%).

While students’ comments focused mainly on the social aspects of the e-mail communication, a content analysis showed that 58.85% ($N = 123$) and 99.34% ($N = 152$) of the messages sent by older adults and students, respectively, had focused on explaining and discussing the use of top-level structuring with its various structural forms (lists, comparison, problem-solution, and cause-effect). In other words, students’ favorable comments on various social aspects of communicating with the older adults were
underpinned by a strong focus on the learning and deliberate use of top-level structuring as a strategy. Taken together, these results indicate that e-mail communication had successfully served its two planned functions—providing motivational support and reinforcing the learning of the top-level strategies.

Discussion

The most important finding of the current study was that the experimental groups had significant improvement in their reading achievement, as both NAPLAN and reading comprehension tests indicated. The effect size was rather large ($r > .50$, except in the case of the postintervention comprehension test for the TLS-only group; cf. Guthrie et al., 2007), indicating that the effect of the intervention was quite significant in practical terms (cf. Field, 2009, p. 332). These findings, consistent with previous intervention studies (e.g., Bartlett, 2010; Meyer et al., 2002; Meyer et al., 2010), confirmed the importance of learning top-level structuring in promoting reading and extends these findings to include performances of SES-disadvantaged students.

Moreover, this intervention study was significant because the improved reading performances were achieved in a short-term (6-week) intervention among low-SES students. The effects were maintained 1 month after the intervention and were evident in the second administration of the NAPLAN reading test examining not just content recall but also students’ general reading skills and understanding. This particular finding is that the acquisition of top-level structuring promotes students’ general reading performance. It adds to much of the extant research (e.g., Meyer & Poon, 2001; Meyer et al., 2002) that has focused exclusively on the facilitating effect of the strategy on recall. Our result suggests that students are capable of transferring top-level structuring and applying it successfully in understanding other reading comprehension tasks. Therefore, providing SES-disadvantaged students with instruction on top-level structuring and conditional knowledge of its application hold promise for improving reading achievement for disadvantaged students and narrowing the existing achievement gap between disadvantaged and nondisadvantaged students.
In this study, the TLS-e-mail group made more progress over the intervention period and had the highest scores in postintervention reading tests. These results were consistent with Souvignier and Mokhlesgerami (2006) and suggest that motivational support derived from e-mail communication with older adults enhances the positive effect of top-level structuring on reading performance (Anmarkrud & Bråten, 2009).

One may argue that it was the additional time that students in the TLS-e-mail group spent on discussing top-level structuring with older adults that may have contributed to their improved achievement. To evaluate this argument, it should be noted that 27 students in the TLS-e-mail group, in total, wrote 153 e-mails to the older adults and received 209 e-mails over 6 weeks. On the average, each student in the TLS-e-mail group received one to two e-mails from the older adults and sent one e-mail message to older adults in a week. Even though students were given two sessions of 30-minute computer access for e-mailing, they did not spend this period totally on e-mailing. The teacher confirmed this observation. In other words, students did not spend a significant amount of time on communicating with older adults on top-level structuring. It is important to point out that this intervention did not conceptualize time-on-task as a critical variable for promoting reading achievement. Rather, it was the opportunity for students to engage in a motivational dialogue that created for students a mastery-focused environment to discuss the learning and using of top-level structuring that has been taken as a motivational component for promoting reading achievement. The time spent on communicating with older adults was brief. Nevertheless, the learning-focused messages, positive comments, and encouraging remarks from the older adults stayed with them and motivated them to learn.

Nevertheless, while students in the TLS-e-mail group improved their reading achievement, their reading motivation, as measured by achievement goals, did not show significant change over the intervention period. This result suggests that while the e-mail support improved students’ understanding and use of top-level structuring strategies, it was not strong enough to trigger a shift in students’ achievement goals. In addition to the low reliability scores in some of the motivational constructs, the short-term
nature of the current study (6 weeks) may be another reason for the nonsignificant change in reading motivation. Past studies on reading motivation that recorded significant change usually involved longer terms. For example, Meece and Miller (1999) studied students’ achievement goals in a reading intervention study that lasted over 2 years. A further reason may be due to the fact that the items assessing reading motivation were quite general and did not refer to specific reading tasks. Using task-specific measurement of reading motivation would be a tangible way to investigate this possibility in a follow-up study.

While the motivational change was statistically nonsignificant, students’ comments on the e-mail interaction focus us on the effectiveness of motivational support that the older adults had communicated through their e-mails. Though the adults were unknown to the students at the beginning, the students considered them as their “buddies” and commented favorably on the friendships, learning, and social supports they received through the e-mails. These results highlight the importance of the provision of quality feedback and support for low-SES students, and volunteer groups that many schools arrange to help support teachers and students in the pursuit of learning present opportunities to do this. Given the ease with which the older adults as “support volunteers” in this study worked with students and the key constructs of strategy and motivation, we agree with McKenna’s (1994) contention that it does not matter who the (helping) person is as long as a supportive relationship and genuine interest in students’ learning are established.

The current intervention study was limited by its small scale. However, the large effect size warrants that such a design be extended to include other disadvantaged students over a longer term. In such an extension study, it is desirable to explore how an innovative reading intervention can benefit both older adults and other types of disadvantaged students (cf. Meyer et al., 2002).

In addition, some of the reading motivation constructs did not reach an acceptable level of reliability of .70 (Nunnally, 1978). The results should be interpreted taking this limitation into consideration. The re-administration of the reading comprehension test using an identical passage did not show how the intervention may affect reading of other curriculum texts. Future studies
should consider using passages from other curriculum areas in order to examine the possibility of effect transfer. In addition, the large standard deviations associated with students’ reading comprehension scores in the current study, as well as those in a previous study (Meyer et al., 2002), suggest that the reading comprehension test might not be effective in assessing students’ reading achievement as compared to a standardized reading test. In the current study, both forms of testing were included and the results complemented each other. It therefore seems important to assess reading achievement using alternative testing arrangements.

When concluding the lessons learned from the first international literacy test, PISA 2000, the OECD argued that the promotion of reading engagement can help overcome home disadvantages (The Organisation for Economic Co-operation and Development (OECD), 2004). This paper provides empirical findings supporting this argument. The current intervention yielded compelling evidence attesting to its effectiveness in developing low-SES students’ reading skills, and the potential enhancement effect of motivational support through e-mail communication with older adults. The overall results suggest that the current intervention design is capable of helping SES-disadvantaged students to read expository texts and to improve their reading performance. To maintain the reading gain, it is important for teachers of SES-disadvantaged students to continue teaching top-level structuring and to help students apply this learning as procedural technique regardless of the content domain of their curriculum texts. Providing motivational support will promote persistence in pursuing deep understanding and effective use of this important reading strategy. While this study was designed with economically disadvantaged students in mind, top-level structuring and motivation for reading are equally important for other student groups. In this sense, the current intervention can be applied to other student groups to promote reading achievement.

Note

1. Content analysis procedure involved reading and rereading of 362 e-mail messages from both adults and students. One of the foci of the content analysis was on the content focus of e-mail messages. To do this, a coding system was developed based on four top-level strategies and integrated discussion of two
or more strategies. These messages were classified as learning focus when it was found while focusing on one of these strategies. One of the researchers classified these e-mail messages according to this scheme. To verify the coding scheme, a research assistant who did not have knowledge about the research classified the messages according to this scheme. The inter-coder reliability was .99.

References


Improving Reading Performance for Economically Disadvantaged Students


Appendix 1. Major Constructs

Constructs and Sample items (all items were set in Likert scale 1 (strongly disagree) to 5 (strongly agree))

<table>
<thead>
<tr>
<th>Construct</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mastery goals (5 items)</td>
<td>.80</td>
<td>.72</td>
</tr>
<tr>
<td>“I want to learn something new every time I read”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance-approach goals (3 items)</td>
<td>.52</td>
<td>.64</td>
</tr>
<tr>
<td>“I read because I want to show that I’m a better reader than other students”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance-avoidance goals (3 items)</td>
<td>.72</td>
<td>.65</td>
</tr>
<tr>
<td>“I don’t want others to think that I can’t read”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work-avoidance goals (4 items)</td>
<td>.49</td>
<td>.64</td>
</tr>
<tr>
<td>“I usually try to finish the reading as quickly as possible”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social approval goals (2 items)</td>
<td>.67</td>
<td>.59</td>
</tr>
<tr>
<td>“My teacher will be happy if I can finish the reading tasks”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading ability (4 items)</td>
<td>.61</td>
<td>.72</td>
</tr>
<tr>
<td>“I consider that I’m a capable reader”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading enjoyment (3 items)</td>
<td>.83</td>
<td>.76</td>
</tr>
<tr>
<td>“I find reading books fun”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Usefulness of top-level structuring (6 items)</td>
<td>N/A</td>
<td>.72</td>
</tr>
<tr>
<td>“The Top-level structure strategies I learnt are useful and important”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social support (8 items)</td>
<td>N/A</td>
<td>.90</td>
</tr>
<tr>
<td>“I often felt supported after reading the e-mail messages from the older adult”</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
MULTICULTURAL AUSTRALIA: EARLY SETTLERS

Information Sheet: The First Fleet—Why Did It Come?

Over two hundred years ago in England, many people were so poor they could not afford to feed their families. Some desperately hungry people stole food. Of course there were also other people who broke the law for different reasons. Punishments were harsh for all crimes and often people were hanged for simple theft, as well as for murder.

English prisons were filthy, full of diseases and overcrowded. Many people died in them. The government, looking for extra places to put prisoners, decided to send them to Botany Bay on the east coast of Australia. The first convicts were transported by the First Fleet.

There were also other reasons the English Government sent convicts to Australia. When Captain Cook had explored the east coast he’d seen tall straight trees on Norfolk Island, not far from Botany Bay. England needed tall timber to build sailing ships, especially their masts, so convict labour was used to cut timber and send back to England.

Another reason England sent convicts to Australia was that the government was afraid that if the English didn’t claim Australia by starting settlements here, the French would. Sending convicts to Australia solved this problem, too.
Free Recall Test
In your own words write everything you can remember about the text you just read.

Appendix 3: Top-Level Structuring Analysis Template

Mega level 4. The First Fleet—Why Did It Come?

CODE:

<table>
<thead>
<tr>
<th>Content units (words)</th>
<th>– underlined</th>
<th>129 units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhetorical Predicates</td>
<td>– bolded</td>
<td>28 units</td>
</tr>
<tr>
<td>Specified rhetoricals</td>
<td>– bolded</td>
<td>52 units</td>
</tr>
<tr>
<td>Lexical Predicates</td>
<td>– italicised and bolded</td>
<td>29 units</td>
</tr>
<tr>
<td>Role relations</td>
<td>– italicised</td>
<td>85 units</td>
</tr>
<tr>
<td>(TOTAL)</td>
<td></td>
<td>(329 units)</td>
</tr>
</tbody>
</table>

The units are spatially represented across ten columns. The closer to the left margin, the more interrelated the unit, i.e. the greater importance assigned to it.

RHETORICAL PREDICATE (#S 2, 11)
PROBLEM (QUESTION)

*lexical predicate*

Did come

agent

it

*equivalent*

The First Fleet

*setting location*

Why

SOLUTION (ANSWER)

RHETORICAL PREDICATE (# 13)

LIST– (Its coming was a) solution for a collection of 3 sets of problems facing England 200 years ago

RHETORICAL PREDICATE (#15, 26)

(PROBLEM)-SOLUTION A (the First Fleet brought convicts to much-needed extra prison places)

*lexical predicate*

were transported by

agent

(thel First) Fleet

*specific*
the First patient
(The first) convicts
specific
the first

PROBLEM-(SOLUTION) A (What to do with English convicts)

RHETORICAL PREDICATE (#28)

SPECIFIC

RHETORICAL PREDICATE (#S 30, 467)
(PROBLEM)-SOLUTION A1 (looking for extra prison place
.. send them to Botany Bay)

RHETORICAL PREDICATE (#S 32)
LIST (of two lexical predicates: decided to send and looking for extra places)

lexical predicate
decided to send

agent
The government
patient
them (the first convicts)
setting location
to Botany Bay

specific setting location
(on the east coast of) Australia

specific
collection
coast
east

PROBLEM-(SOLUTION) A1 (looking for a place to put English convicts)

RHETORICAL PREDICATE (#S 49, 62)

(CAUSE)-EFFECT (the need arose from poor prison conditions)

lexical predicate
looking
range
for (extra) places

specific
extra

lexical predicate
Improving Reading Performance for Economically Disadvantaged Students

RHETORICAL PREDICATE (# 61)
EXPLANATION (prison conditions and deaths caused...)
CAUSE-(EFFECT) (poor conditions were causative...)

lexical predicate
were (filthy, full of diseases and overcrowded)

agent
(English) prisons

specific
English
range

RHETORICAL PREDICATE (# 71)
LIST (of prison conditions)
filthy
(full of) diseases

specific
full of
overcrowded

(CAUSE)-EFFECT (. as a result of these conditions)

lexical predicate
died

agent
(Many) people

specific
Many

setting location

in them

RHETORICAL PREDICATE (#86)

(EXPLANATION
RHETORICAL PREDICATE (#87; 88,100; 89)
LIST (of causes and effects re prison conditions)
CAUSE-(EFFECT) (people being so poor caused...)

lexical predicate
were
agent
(many) people
specific
many
range
(so) poor
specific
so
setting time
(Over 200) years ago
specific
LIST
Over
200
setting location
in England
(CAUSE)-EFFECT (unable to feed their families)
RHETORICAL PREDICATE(#S105,116)
CAUSE-(EFFECT) (in turn, this caused..)

lexical predicate
could not afford
agent
they
lexical predicate
to feed
patient
(their) families
specific
their
(CAUSE)-EFFECT (to steal)
lexical predicate
stole
agent
people
specific
(some) hungry
specific
some
specific
Of course also CAUSE-(EFFECT) (punishments were harsh)

lexical predicate were

agent Punishments manner so harsh specific so range for all crimes specific all
(CAUSE)-EFFECT and often lexical predicate were hanged

patient people range LIST for simple theft specific simple as well as for murder

RHETORICAL PREDICATE (#S 87, 159)

COMPARISON

lexical predicate

RHETORICAL PREDICATE (# 162)

LIST (of two lexical predicates: were and broke the law)

were agent
there
    patient
    (other people
      specific
      other
    lexical predicate
  broke (the law)
    agent
    who
  range
for different reasons

RHETORICAL PREDICATE (#S 178, 228)
(PROBLEM)-SOLUTION B (Convicts now can cut tall timbers
    and send to England for ship-building)
RHETORICAL PREDICATE (#S 15 180)
COMPARISON (Other reasons for sending convicts to Australia)
RHETORICAL PREDICATE (#S 182)
LIST (of two lexical predicates: were and sent)
RHETORICAL PREDICATE (#S 184, 193)
CAUSE-(EFFECT) (other reasons for sending convicts.)
    lexical predicate
were (other reasons)
    agent
    there
    patient
    (other) reasons
      specific
      other
(CAUSE)-EFFECT (as a result, the convicts were sent)
    lexical predicate
sent
    agent
    the (English) government
      specific
      English
    patient
    convicts
setting location
to Australia

RHETORICAL PREDICATE (#S 205)
EXPLANATION

RHETORICAL PREDICATE (#S 207, 216)

CAUSE- (EFFECT) (need for tall timbers)

*lexical predicate*

`needed`

agent

England

patient

(tall) timber

specific

tall

(CAUSE)-EFFECT (in order to build ships)

*lexical predicate*

to build

patient

(sailing) ships

specific

tsailing

specific

(especially) their masts

specific

especially

so

(PROBLEM)-SOLUTION B

RHETORICAL PREDICATE (#S 230, 237)

(PROBLEM)-SOLUTION B1

*lexical predicate*

was used

patient

(convict) labour

specific

convict

PROBLEM-(SOLUTION) B1

RHETORICAL PREDICATE (# 239)

LIST (of two lexical predicates: to cut and to send back)

*lexical predicate*

to cut

patient

timber

and

*lexical predicate*
send back
setting location
to England

RHETORICAL PREDICATE (#S 250)

EXPLANATION

RHETORICAL PREDICATE (#S 251)

LIST (two lexical predicates: had explored and ‘d seen)

setting time
When

lexical predicate
had explored

agent
Captain Cook

setting location
the (east) coast

specific

east

lexical predicate
(he’d) seen

agent
he’d

patient
(tall, strait) trees

specific

LIST
tall

strait

setting location

On Norfolk Island

specific

(not far from) Botany Bay

specific

not far from

RHETORICAL PREDICATE (#S 281, 288)

(PROBLEM)-SOLUTION C (The First Fleet’s arrival prevented the French from claiming Australia)

lexical predicate
sending

patient

convicts

setting location
to Australia

**PROBLEM-(SOLUTION) C**

*lexical predicate*
solved

(patient

*(this) problem

specific

this

range {EQUIVALENT (Links Problem-Solution C with P-S A and B)}

too
equivalent

was afraid

*agent*

the government

specific

that

**RHETORICAL PREDICATE (#S 303, 321)**

**CAUSE-** (EFFECT)

If

**RHETORICAL PREDICATE (#S 307)**

**LIST** (of two lexical predicates: didn’t claim and starting)

*lexical predicate*

didn’t claim

*agent*

the English

*patient*

Australia

*Manner*

*lexical predicate*

by starting

*patient*

settlements

*setting location*

here

(CAUSE)-**EFFECT**

*lexical predicate*

would

*agent*

the French
## Appendix 4: A Sample of Integrated Lesson

<table>
<thead>
<tr>
<th>Topic: List Lesson—1 Year: Five</th>
<th>Duration: 60 mins</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Objectives:</strong></td>
<td></td>
</tr>
<tr>
<td>– Students understand the purpose of lists and the role they play in our day-to-day lives.</td>
<td>Essential Learnings (Knowledge and Understanding):</td>
</tr>
<tr>
<td>– Students develop list language including “first, then, and also.”</td>
<td>Writing and Designing: The purpose of writing and designing includes reporting and conveying simple messages and information.</td>
</tr>
<tr>
<td>– Students create a dinner list from a McDonalds menu and share it with the class (information-sharing and exploring ideas)</td>
<td>Speaking and Listening: The purpose of speaking and listening includes entertaining, supporting relationships, giving opinions and getting things done.</td>
</tr>
<tr>
<td><strong>Essential Learnings (Ways of Working):</strong></td>
<td></td>
</tr>
<tr>
<td>1. Recognize and select vocabulary to describe subject matter</td>
<td></td>
</tr>
<tr>
<td>2. Identify main ideas and the sequence of events to make simple</td>
<td></td>
</tr>
<tr>
<td>3. Reflect on learning to identify new understandings</td>
<td></td>
</tr>
<tr>
<td>Step</td>
<td>Specific Objectives</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Introduction</td>
<td>S understand the way lists can help you to remember things.</td>
</tr>
<tr>
<td>10 mins</td>
<td></td>
</tr>
</tbody>
</table>

(Continued on next page)
<table>
<thead>
<tr>
<th>Step</th>
<th>Specific Objectives</th>
<th>Teacher (T)</th>
<th>Students (S)</th>
<th>Behavior Management and Additional Needs</th>
<th>Organization and Resources</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body 30 mins</td>
<td>S continue to develop list language including “first,” “then,” “and” “also.”</td>
<td>T shows S a picture of a group of children trying to decide what they want to order from a mixed-up McDonalds menu.</td>
<td>S look at the picture of the menu the T has in front of her and listen as the T explains the features of a menu.</td>
<td>The thinking mat is used for S who may get off task during the lesson.</td>
<td>O: S sitting on the carpet facing the T who is seated next to the whiteboard.</td>
<td>Do S use list language during the activity? Are more S starting to grasp the concept of TLS–Lists?</td>
</tr>
<tr>
<td></td>
<td>S understand having a heading at the top of the list is important.</td>
<td>T uses open questions to generate discussion on the picture including, “I wonder why the children are having trouble choosing?” and “How could you organize the menu to make it easy to read?”</td>
<td>S participate in free discussion about the picture and menus in general.</td>
<td>Reward chart is used for S who contribute constructively to the class discussion.</td>
<td>R: McDonalds menu picture</td>
<td>Do S understand why having a heading at the top of a list is so important?</td>
</tr>
</tbody>
</table>
T offers S the chance to help McDonalds and create a menu that is easier for the children to read. T guides the discussion, providing S with the opportunity to verbalize list language such as 'first, last, most important, then, least important.'

S suggest items that should go on the McDonalds menu and explain why they have chosen that particular item.

Butchers paper
Pen

Conclusion
20 mins
S can differentiate between the most important and least important items on a menu list.

T reads the menu that the S have come up with and congratulates them on doing such a good job.

S listen and follow along as T reads out some of the menus.

The marble bucket is used if the whole class is using their listening skills on the carpet.

O: S sitting on the carpet facing the T who is seated next to the whiteboard.

Are S able to differentiate between the most important and least important items on a list?

(Continued on next page)
<table>
<thead>
<tr>
<th>Step</th>
<th>Specific Objectives</th>
<th>Teacher (T)</th>
<th>Students (S)</th>
<th>Behavior Management and Additional Needs</th>
<th>Organization and Resources</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S reflect on their learning by justifying their decisions. T provides an opportunity for S to reflect on what they have learned by justifying their menu plan and selection of items to the class.</td>
<td>S stand up and listen as T finishes off the book <em>What's for dinner Mr Gum?</em></td>
<td>R: <em>What's for dinner Mr Gum?</em> book. Are S able to reflect on what they have learned during the lesson?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>S participate in a reflective discussion about what they have learned about lists. T finishes off reading the book <em>What's for dinner Mr Gum?</em></td>
<td></td>
<td></td>
<td>Menu List</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Pens</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Butchers paper</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>