Time Spent on Reading and Reading Comprehension in Second Language Learning

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Abstract: This study examined the relationship between time spent on reading and reading comprehension in a second language (L2). Eighty-one French-speaking learners of English, from beginners to advanced, were tested for reading comprehension in French and in English as well as for English grammar and vocabulary competence. Low-proficiency learners showed low, non-significant correlations between time spent on reading English and English reading comprehension, while correlations for high-proficiency learners were moderate and significant. The results suggest that if L2 reading is used to enhancing L2 reading development, it may not serve that purpose effectively for beginning and intermediate learners, whose working memory is still taxed by word decoding processes.

Résumé : Cette étude examine le lien entre le temps passé en lecture et la compréhension en lecture en langue seconde (L2). Quatre-vingt-un apprenants francophones de l'anglais – des niveaux débutant à avancé – ont été testés pour leur compréhension en lecture en français et en anglais de même que pour leur compétence en grammaire et en vocabulaire anglais. Les apprenants de faible compétence ont démontré des corrélations faibles et non significatives entre le temps passé à lire en anglais et la compréhension en lecture de cette langue, alors que les corrélations pour les apprenants de haute compétence ressortent comme étant modérées et significatives. Les résultats suggèrent que si le fait de lire en L2 vise à favoriser le développement de la lecture en L2, cela pourrait s'avérer peu efficace pour les apprenants débutants et intermédiaires, dont la mémoire de travail serait toujours encombrée par des processus de décodage de mots.

Introduction

After several decades in which methods and approaches in second language (L2) teaching focused mainly on oral communication, we have witnessed in the last 20 years the development of extensive reading programs and a renewed emphasis on activities involving reading in L2 courses. Work by respected proponents of extensive reading (e.g., Bamford & Day, 2003; Elley, 1996; Grabe, 2002; Krashen, 1993; Nuttall, 1996) and the high number of non-native speakers who must attain functional literacy skills in the target language incite educators to accord renewed importance to reading activities. The three main goals for including reading tasks in language courses are related to attitudes toward reading, to language learning, and to reading development (Day & Bamford, 1998). Educators teach with several goals in mind that are not exclusive: they want their students to enjoy reading, to learn new words in the L2, and to become good readers in that language. Evidence regarding relationships with L2 reading will be examined in light of these three goals before discussing why this study addresses the third goal and how it does so.

Goal #1: L2 reading for improving attitudes toward reading

The relationship between L2 reading and attitudes toward reading has received support from research. In a compilation of 11 studies on the impact of L2 extensive reading (hereafter ER), Day and Bamford (1998) note an exclusively positive impact on attitudes toward reading. Further L2 reading studies have shown similar relationships (Alshamrani, 2003; Mori, 2002; Renandya, Rajan, & Jacobs, 1999; Taguchi, Takayasu-Maass, & Gorsuch, 2004; Yang, 2001). In his review of 28 articles on the effect of ER in second languages, Waring observes that 'The positive effect of ER on motivation and attitude to reading is very commonly reported and probably the strongest finding in all the articles reviewed here' (2001, p. 8).

Goal #2: L2 reading for language learning

Despite the general acceptance that L2 reading, when done extensively, is 'good for vocabulary acquisition' (Hulstijn, Hollander, & Greidanus, 1996), researchers have begun to note that vocabulary acquisition[1] through reading seems to be gradual and, following an incremental pattern,[2] may become evident only once a certain level of L2 competence is achieved (Coady, 1993; Stoller & Grabe, 1993). This pattern explains

mitigated research results related to reading as an efficient means for vocabulary gains. Among the few studies that have investigated the impact of extensive reading on vocabulary acquisition, several show enhanced vocabulary gains (e.g., Cho & Krashen, 1994; Constantino, Lee, Cho, & Krashen, 1997; Hafiz & Tudor, 1990; Kim & Krashen, 1998; Pitts, White, & Krashen, 1989), while other studies show no significant vocabulary benefits (e.g., Hafiz & Tudor, 1989; Rodrigo, 1995; Tudor & Hafiz, 1989; Tsang, 1996). Waring and Takaki (2003) observed that, on average, the meaning of only one of their 25 target words was remembered after three months, and they found no recall for words encountered fewer than eight times. Similarly, Zahar et al. (2001) show their participants learning one word for every 14 unknown words tested, amounting to less than one word learned for every 1,000 words read. This efficiency seems to increase, among advanced learners, through the use of marginal glosses or with the help of a dictionary (Hulstijn et al., 1996; Laufer, 2000). Without such support, the reader tends to skip unknown words or assign them a wrong meaning (Nassaji, 2003). Assisted reading proves to be more effective, indeed, but only to a certain extent; both Hulstijn and Laufer (2001) and Laufer (2003) show that even when marginal glosses were provided in a reading task, it proved less effective for vocabulary learning than a writing task incorporating the target words.

Such evidence of limited vocabulary learning through reading is not unexpected, since it has been estimated that readers must know about 98% of the words contained in a text in order to understand that text in unassisted reading (Hsueh-Chao & Nation, 2000). In addition, for acquisition to take place, these new words must be repeated a number of times. According to Nation and Wang (1999), at least 10 exposures are necessary for a word to be a good candidate for acquisition, and the probability of learning a new word after only one encounter has been estimated at 0.05 (Herman, Anderson, Pearson, & Nagy, 1987). Vocabulary acquisition through reading, therefore, requires conditions that are difficult to meet. On the one hand, a text must contain a proportion of new words below a limit on the order of a few percentage points, which, in an L2 reading context, requires either advanced learners or very easy texts. On the other hand, texts are normally much less redundant than spoken language, and a text must include considerable repetition for the few new target words to be learned. Consequently, although reading, especially extensive reading, does lead to language learning, evidence suggests that it may not be a very effective vocabulary learning activity for beginners, and the question of whether a functional reading lexicon can be acquired through reading remains unresolved (Zahar et al., 2001).

Goal #3: L2 reading for reading development

Finally, building reading comprehension abilities is often the main focus of extensive reading (Aebersold & Field, 1997). The main goal pursued through reading may be not to improve the students' language competence or their attitudes toward reading but, rather, to make them better L2 readers. Despite evidence that L2 reading develops 'sight vocabulary' (i.e., automatic word recognition; Grabe, 2002) and reading speed (Mason & Krashen, 1996; Sheu, 2003), considerations from research also cast doubt on the effectiveness of L2 reading for developing L2 reading comprehension ability, at least for beginners. Some arguments to this effect highlight the close relationship between vocabulary knowledge and reading comprehension; the presence of too many unknown words is said to cause tunnel vision (Smith, 1994), and insufficient knowledge of the language will tend to 'short-circuit' the student's reading system (Clarke, 1980). The view adopted by many researchers (e.g., Adams, 1994; Harrington & Sawyer, 1992; Segalowitz, 2000) posits that too many unknown words force the reader to rely on letter-by-letter 'bottom-up' decoding, overloading the working memory and preventing 'top-down processing,' such as the simultaneous application of higher-level reading strategies.[3] Therefore, learners may not use and benefit from higher-level reading strategies until a certain level of proficiency in the target language frees them from strenuous decoding.

In addition, even when readers become proficient enough in the target language to use reading skills and strategies, they often tend to use those developed in their native language (see Akamatsu, 2003; Koda, 1988). Most reading researchers now agree that reading skills such as decoding ability and higher-level reading strategies can be transferred from one language to another, and many studies have shown strong correlations between reading scores in the two languages – and stronger correlations for advanced learners than for the less advanced (e.g., Bernhardt & Kamil, 1995; Brisbois, 1995; Fecteau, 1999; Pichette, 1998; Taillefer, 1996; Yamashita, 2002a). Studies on reading transfer indicate a long duration of first language strategy use in the target language (see Enright et al., 2000). Therefore, in addition to the possible short-circuiting of the reading system caused by strenuous decoding, another reason to doubt the effectiveness of L2 reading activities for L2 reading development is that, in the absence of direct L2 reading instruction, if L1 strategies can lead to some reading comprehension in the target language, readers may continue using them for a long time instead of developing new strategies more suitable for the L2.

Such a practice may be detrimental, since L1 strategies are not always fully successful in helping readers construct appropriate meaning representations of L2 text (Yamashita, 2002b).

Empirical data on the influence of L2 reading practice for reading development were also obtained in a study conducted with 50 learners of French (Pichette, Segalowitz, & Connors, 2003) that showed no significant correlation between time spent on reading French (through students' self-reports, corroborated by teachers for in-class reading times) and performance on French cloze reading tests. With some exceptions (e.g., Lightbown, Halter, White, & Horst, 2002), studies on L2 extensive reading contradict this observation, as well as hypotheses based on working memory capacity, by showing a generally positive effect on reading proficiency (Day & Bamford, 1998). However, since reading speed and comprehension remain strongly intertwined (Bell, 2001) and increased speed often appears without comprehension gains (e.g., Hayashi, 1999), it remains to be verified how much of the gain shows up mainly through speeding-up of reading processes and how much reflects actual impact on reading comprehension processes. It would also be useful to investigate how much of the gain in reading comprehension is accounted for by vocabulary increase during extensive reading programs, which occurs especially for advanced learners.

In summary, among the desired outcomes of L2 reading, there is little doubt that the most important impact is on attitudes toward reading. The impact of L2 reading on L2 vocabulary acquisition seems to show an incremental pattern that is becoming clearer as research progresses. However, research on the impact on L2 reading ability is much more mitigated, given the contradictory results obtained in previous studies.

Research questions

Given the mitigated nature of this research, the present study focuses on the third goal mentioned above for including reading activities in language courses: to develop students' reading ability in the target language. Therefore, the goal of this study is to examine the relationship between reading time and reading comprehension for French-speaking college and university students learning English as a second language (ESL). The research questions addressed are as follows:

1 Is there a relationship between time spent on reading in English as a second language and ESL reading comprehension?
2 Is the relationship between time spent on reading English and reading comprehension stronger for more advanced ESL learners than for less advanced learners?

Method

Participants

Eighty-one adult ESL learners participated in the study. The participants were from one university and two Cégeps (colleges of general and professional instruction). They were non-language specialists enrolled in English classes to meet language requirements and were of various levels of proficiency, from high beginner to early advanced. Testing took place in Quebec City, whose population is 95% francophone and where French is the predominant language of everyday life. This location was chosen to control for reading time as a variable in this study. For reading time estimates to be as accurate as possible, it was imperative that the participants be tested in a place where contact with the L2 is limited as much as possible to the classroom, so that reading of non-academic material is not overlooked (e.g., flyers in the mail, public signs). In Quebec City, language laws enforce the use of French for official correspondence and for official public usage (restaurant menus, public signs, etc.). French is the language of the majority of newspapers, magazines, periodicals, and television channels available to the participants.

It is important to mention at this point that identification questionnaires reported eight participants as non-native speakers of French and five others as speakers and readers of another language. In order to ensure a homogeneous language profile (L1 French, L2 English), data from these 13 participants were analyzed separately.

Measures

Reading time was measured in terms of time spent on reading in the L2. Information was gathered using identification questionnaires about reading times and reading habits, for both languages. A reading comprehension test (for French and for English) measured reading comprehension in both languages. A separate test evaluated English language competence.

In the present study, the term *language competence* refers to knowledge of vocabulary and grammar, these two components being apparently the major linguistic components of language competence (see Yamashita, 2002a), although there is evidence for several other types of knowledge as probable components of language competence, including knowledge of rhetorical organization, sociolinguistic elements, and so on (see Bachman, 1990). To test English competence, TOEFL-type questions were obtained from TestMagic.com, a company

specializing in TOEFL preparation courses. Two types of multiple-choice questions assessed vocabulary and grammar competence: (1) sentences where a word was missing and the participant had to choose from among four words the one that should go in the blank space; (2) sentences in which four words were underlined, one of which was incorrect and had to be identified by the participant. Examples of each type of question are provided in Appendix A. The questions were piloted in Florida in spring 2002, with 30 ESL students from various language backgrounds who were also taking the paper version of the official TOEFL test (Educational Testing Service, 2001). From an original pool of 75 questions used in the pilot test, I kept the combination of 60 questions that yielded the highest correlation with the TOEFL scores ($r = 0.83$, $p < 0.01$). The reliability of the ESL test (Cronbach's alpha/Kuder-Richardson 20) was 0.87. Considering the reliability figure of $r = 0.95$ ($SEM = 10.8$) provided for the TOEFL test (ETS, 2001), the correlation of 0.83 between scores on our test and on the TOEFL was corrected for attenuation based on the tests' reliabilities.[4] This operation yielded a corrected correlation of $r = 0.91$ between scores on the two tests.

Sentence verification technique (SVT) tests (Royer, 2001) were used to test *reading comprehension.* SVT tests are based on short texts of 12 sentences each. Following the reading of each text, the reader is presented with 16 sentences and is asked to write 'Yes' if what the sentence says corresponds to information provided in the text, and 'No' if it does not, without going back to the text. The 16 sentences are prepared as follows: four of the sentences in the text are left intact, four others are paraphrased by changing as many words as possible while preserving their meaning, four others have their meaning transformed by a change of only one or two words, and four are added as distracters, providing additional information not encountered in the text. SVT tests measure reading for meaning, assuming that comprehension involves the preservation of the meaning but not necessarily the exact words. The reliability of a four-passage test (64 sentence questions) is typically between 0.7 and 0.8. Royer (2005) reviews research indicating that SVT tests are sensitive to variation in reading skill and to text difficulty, that they measure passage comprehension rather than sentence comprehension, and that performance on these tests correlates moderately highly and positively with other tests that measure reading comprehension while having much smaller relationships with tests that measure attributes other than comprehension. SVT tests have been used to measure ESL reading comprehension by native speakers of Spanish, whose performance varied in accordance with teachers' judgements of

reading competence (Royer & Carlo, 1991; Royer, Carlo, Carlisle, & Furman, 1991). SVT tests have also been developed for L1 reading in other languages, such as Czech (Zdenka, 1986) and Spanish (Carlo, n.d., as cited in Royer, 2005), but apparently not for French. For more details about the nature and validity of SVT tests, see Royer (2001, 2005).

Although French reading scores were not necessary for addressing the research questions, I took this opportunity to develop SVT tests in French and to measure the participants' L1 reading comprehension. The aim of this development and testing process was to provide further empirical data on the relationship between L1 and L2 reading and on the relative impact of L1 reading and L2 competence on L2 reading comprehension. For each language in the study, SVT tests contained four texts whose readability levels were determined using Fry's formula for English (Fry, 1977) and Henry's formula for French (Henry, 1975). The texts used were short narratives (non-technical anecdotes or short biographies) in which information was presented chronologically, with an introduction, a development, and a conclusion. ESL texts ranged from Grade 4 to Grade 8, whereas French texts for testing native speakers ranged from Grade 10 to Grade 13. The difference between texts of different levels is assumed to lie not in the genre, structure, or schemata but in the length of the sentences and the frequency of the vocabulary used (according to established frequency lists). Each test contained a total of 64 sentence questions. Reliability coefficients were 0.791 for the French test and 0.686 for the English one. An example of a text is provided in Appendix B. These reading tests were also piloted in 2002 with 12 French-speaking ESL learners to ensure that scores were significantly above chance level (i.e., 32/64) while far enough from perfect scores to discriminate between participants. Our average scores in the L1 and L2 pilot testing (54.43, SD = 5.18, and 51.61, SD = 6.49, respectively) were deemed satisfactory for their use in this study.

Data for *reading times* were determined from student self reports. Participants were given examples of reading tasks or activities to think about: novels, textbooks, newspapers, magazines, class notes. They were then asked to evaluate as accurately as possible the amount of time per week they spent reading such materials in English, both in class and out of class. The combination of the two figures given by each participant was taken as the amount of time to include in the analyses.

Figures obtained for participants' in-class reading time (mean time = 5.3 hours/week, SD = 4.7, range = [0.5–25]) were judged to be plausible by their respective teachers. Data for out of class reading were also judged to be plausible (mean time = 6.1 hours/week, SD = 6.0, range = [0–27]). The important variation is due to the fact that courses

varied greatly in the number of teaching hours per week and in the methods and approaches used. None of the courses included intensive reading or teaching of reading strategies or had a special focus on reading. Reading materials consisted of both narrative and expository texts, and reading tasks were used mainly to provide information. These tasks were sometimes followed by comprehension verification and/or activities based on the topic covered.

Procedure

Testing was conducted in two colleges and one university, as mentioned earlier, where various methods and textbooks were used and, consequently, varying amounts and times of English reading were required from students. Tests were not speeded.[5] Participants were given 90 minutes for the testing session, and all of them completed the tasks within that time. Ordering of the reading tests was randomized, and whenever a participant had finished one test, he or she received another one until all three tests were completed. Participants were debriefed in French about their right to withdraw at any moment without penalty, and they received instructions as to the procedure for answering questions on every test. Participants first signed an informed consent form, after which they completed the identification questionnaire, followed by a reading comprehension test, the ESL test, and the remaining reading test. Approximately half the participants did the French reading test first, while the other half began with the English test, in order to avoid the possible influence of a task learning factor. Money was awarded post hoc as participation prizes in the form of a lottery.

Results

Table 1 shows scores obtained by all 81 participants on SVT tests designed to assess reading comprehension. Mean scores are comparable to those obtained in the pilot study: they are significantly above chance level, but far enough from maximum scores to avoid any ceiling effect.

An observation can also be made here regarding interactions between variables. A Pearson correlation coefficient between reading scores in

TABLE 1
Scores on SVT tests

Test	*M* (/64)	*SD*	*SE*	Range
French L1	51.4	16.15	0.68	[41–61]
English L2	52.03	4.93	0.55	[27–61]

English and French for the 68 native speakers of French proved to be highly significant ($r = 0.483$, $p < 0.001$), suggesting that L1 and L2 reading involve skills shared by both activities. In addition, a multiple regression analysis was conducted using English reading scores as the criterion variable and French reading scores and English competence scores as predictor variables. Together, the two independent variables accounted for less than half of the variance of English reading ability ($R^2 = 0.42$, $F = 24.81$, $p < 0.001$), with L2 competence ($\beta = 0.52$, $t = 6.17$, $p < 0.001$) showing as a more important contributor to L2 reading scores than L1 reading ($\beta = 0.19$, $t = 2.28$, $p = 0.003$).

Results are discussed below in relation to the two research questions identified earlier. For all the analyses reported below, the level of confidence for rejecting a null hypothesis was 0.05.

Question 1: Is there a relationship between time spent on reading in English as a second language and ESL reading comprehension?

In order to address the relationship between reading time and reading comprehension in a second language, correlations between reading times and reading scores in English were examined. For the 68 native speakers of French who did not speak any other language but English, the correlation was significant ($r = 0.35$, $p < 0.01$), suggesting that reading time has a significant but limited effect on reading comprehension development, given the relatively low r value for the sample size.

For the 13 participants for whom different languages were involved, a non-significant correlation of 0.08 ($p = 0.79$) was found. The other languages spoken included Spanish (3 as L1, 4 as L2) and Kinyarwanda, Ewe, Romanian, Berber, German, and Vietnamese (each as a L1 for one speaker). Several of the languages spoken by these participants show vocabulary and grammar characteristics more different from English than those of French. Clearly, the small sample size is not sufficient to draw any conclusions, but if this pattern were eventually seen in data from more participants, it could suggest that language distance may indeed influence the amount and impact of reading skill transfer and the effectiveness of L2 reading for L2 reading development.

Question 2: Is the relationship between time spent on reading English and reading comprehension stronger for more advanced ESL learners than for less advanced learners?

It was hypothesized earlier that only once the French ESL learners have reached a certain level of English competence will they benefit from top-

down processes such as higher-level reading strategies. This hypothesis, along with other considerations mentioned above, suggests that we could expect the correlation between reading time and reading comprehension to be stronger for participants who are more proficient in English than for the less proficient ones, who are struggling with many unknown words, the decoding of which requires more cognitive resources.

To verify this hypothesis, the 68 participants who spoke only French and English were divided into two clearly distinct, non-overlapping subgroups on the basis of their level of L2 competence.

The mean ESL score for these 68 participants was 31.8/60 (SD = 8.70), with scores ranging from 14 to 55. In order to obtain two distinct groups, I eliminated data from 23 participants whose competence scores were in the middle range, that is, between 10% above and 10% below the mean of 31.8/60. This classification reduced the total number of participants to 45. The low-proficiency group consisted of 23 participants who scored 28 and below (individual scores have no decimals), whereas the high-proficiency group included 22 participants who scored 35 and above.

Reference to a more widely used measurement test for ESL competence will give a clearer idea of the strength of each group. The piloting of my ESL test in 2002 allowed for a comparison of those participants' scores with their scores on the paper version of the TOEFL test. The equivalences obtained suggest that the low-proficiency group's upper threshold of 28/60 compares to a TOEFL score of approximately 425 (the minimum and maximum possible being 310 and 677) for the paper version, or 113 for the computer version (the minimum and maximum possible being 40 and 300). For the high-proficiency group, the lower threshold score of 35/60 compares to a TOEFL score of approximately 500 (paper) or 173 (computer). Table 2 below shows Pearson product-moment correlations between reading time and reading comprehension for each group.

A clear picture emerges from this analysis. As expected, the low-proficiency group showed no significant correlations between time spent on reading and reading comprehension (r = 0.01, p = 0.95). The

TABLE 2
Correlations between reading time and reading comprehension (by proficiency group)

Group	N	Score range (/60)	Score range (TOEFL)	Correlation (r)
Low proficiency	23	< 28	< 425 (paper) < 113 (computer)	0.01 (p = 0.95)
High proficiency	22	> 55	> 500 (paper) > 173 (computer)	0.55 (p <0.01)

high-proficiency group showed a significant and moderate correlation ($r = 0.55$, $p < 0.01$). There was no significant difference between the two groups in the time spent on reading in English.

Discussion

If L2 reading is used in the classroom mainly for reading development, the results of the present study suggest that reading activities may not be useful for that purpose, at least for French ESL learners with a relatively low competence level in English (i.e., below an approximate TOEFL score of 425 on paper or 113 on computer). If reading activities influenced reading development, we would expect to see a significant correlation between time spent on reading and reading comprehension scores, whereby the students who engage in more reading would show higher reading scores. This was not the case for the low-proficiency participants in this study, however.

The data show a clear difference between the low-proficiency and high-proficiency groups of learners. Only for the more advanced learners did time spent on reading show a significant, moderate relationship with the type of reading comprehension measured by SVT tests. A minimum competence level in the range of a 500 TOEFL score for these participants shows that learners must be beyond the elementary levels for time spent on reading to show relationships with reading comprehension. Among American universities that have TOEFL score requirements, these generally range from 450 to 600 (133 to 250 on computer), and specialists would probably agree that a score of 500 is the likely performance of a high-intermediate learner. It is certain that the limited number of participants in the subgroups does not allow for much generalization, but the results nevertheless indicate an interesting avenue to explore. In addition, the amounts of time spent on reading may not necessarily correspond perfectly with amounts of reading, since people read at different rates and use different reading strategies such as skipping or rereading. This point could be addressed in further studies on the outcomes of reading practice.

This study is a first step toward a more comprehensive examination of the role of time spent on reading in reading development. Further studies involving more participants and different language pairs could indicate, for various language combinations, competence levels at which reading time begins to influence reading comprehension. In cases where spending time reading proves influential, the goal will be to investigate the existence of an optimal L2 reading time for enhancing L2 reading ability and whether that time varies according to the learners' first

language. Extensive reading undoubtedly offers a wide range of benefits to the L2 learner. However, if reading development is a major goal pursued, further support for the present results may provide indicators for determining the amount of reading to include in L2 courses.

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Acknowledgements

Notes

1   In addition to the widely studied aspect of vocabulary acquisition, on which this article focuses, the acquisition of syntax through reading has also attracted the interest of educators and researchers (e.g., Lee, 2002).
2   This incremental pattern is further enhanced by the fact that advanced learners seem to need fewer occurrences of a word in order to learn it (Zahar, Cobb, & Spada, 2001).
3   For a distinction between bottom-up and top-down reading strategies, see Carrell, Devine, and Eskey (1988).
4   The formula for this correction is $r_{CA} = \dfrac{r_{xy}}{\sqrt{r_{ttx}r_{tty}}}$, where r_{CA} is the corrected correlation, r_{xy} is the uncorrected correlation, and r_{ttx} and r_{tty} are the reliabilities of both tests (see Hatch & Lazaraton, 1991).
5   A *speeded* test, in which a test taker's score is dependent on the rate at which work is performed as well as on the correctness of the responses, forces participants to go faster than they normally would in performing the task, resulting in missing answers (especially toward the end of the task) and lower scores.

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Appendix A

Sample of four questions used on the test

Grammar questions

2 Come _____ with us.
   a. play   b. to play   c. to playing   d. played
36 Although it is among <u>the smallest</u> of all mammals, the shrew is known <u>as preying</u> <u>on</u> other animals <u>twice</u> its size.
   a. the smallest   b. as preying   c. on   d. twice
   Vocabulary questions
45 Did you _____ the meeting yesterday?
   a. attend   b. part   c. assist   d. present
46 She participates in a lot of things. She is _____ in this project too.
   a. implied   b. involved   c. implicated   d. involucrated

Appendix B

SVT test: 4th French text (Level 13)

Le tragique épilogue du Cessna

Le 17 mars, au moment de l'ultime signal radio, peu après son décollage, le monomoteur survolait la Provence dans des conditions météorologiques très défavorables. Pendant une semaine, les recherches mobilisèrent quatre hélicoptères et plus d'une centaine de gendarmes qui fouillèrent le territoire.

Mais, demeurées vaines par la suite, elles durent être abandonnées. Par la suite, les enquêteurs menèrent leur investigation de façon sporadique en fonction des renseignements qui leur étaient communiqués. Mais, jeudi, en début de soirée, un promeneur découvrit, dans une forêt de pins près du col de la Graille, un débris du fuselage. Il en informa les gendarmes qui envoyèrent aussitôt une patrouille sur place. Quelques instants plus tard, l'information fut confirmée et les autorités aussitôt alertées. Le lendemain matin, l'hélicoptère de la gendarmerie décolla et, 45 minutes plus tard, l'épave du Cessna fut repérée. Selon les premiers éléments de l'enquête, le pilote de l'engin qui, apparemment, se trouvait en perdition dans le brouillard, voulut entreprendre un virage afin de rallier l'aérodrome de Saint-Auban à 15 kilomètres à vol d'oiseau. Hélas! Sans qu'on puisse en déterminer les causes – erreur de pilotage, instruments de navigation défaillants ou perte brutale d'altitude – l'appareil heurta de l'aile le sommet d'un conifère avant de s'écraser au sol. Trois des occupants furent éjectés et probablement tués instantanément, alors que les deux autres passagers trouvèrent la mort dans le cockpit en flammes. Hier, en milieu d'après-midi, cinq ambulances réquisitionnées par les gendarmes ont pris en charge les corps des victimes, qui ont été transportés à l'hôpital.

(Sentences)

1 Pendant une semaine, les recherches mobilisèrent quatre hélicoptères et plus d'une centaine de gendarmes qui fouillèrent le territoire.
2 Mais, jeudi, en début de soirée, un pilote découvrit dans une forêt de pins près du col de la Graille, un débris du fuselage.
3 Au moment du décollage, les conditions météo étaient pourtant agréables.
4 Mais, puisqu'elles ne donnaient pas de résultats par la suite, elles durent être abandonnées.
5 Le 17 mars, quand eut lieu le dernier contact radio, peu après son décollage, le Cessna survolait la Provence dans de mauvaises conditions météorologiques.
6 Par la suite, les enquêteurs menèrent leur investigation de façon continue en fonction des renseignements qui leur étaient communiqués.
7 Une aile de l'avion reposait toujours au sommet d'un sapin.
8 Il en informa les gendarmes qui envoyèrent aussitôt une patrouille sur place.
9 Les cinq ambulances ont eu peine à se rendre sur le site en raison de l'absence de route.
10 On a confirmé l'information peu de temps après et on a immédiatement alerté les autorités.

11 Le soir même, l'hélicoptère de la gendarmerie décolla et, 45 minutes plus tard, l'épave du Cessna fut repérée.

12 Les premiers éléments de l'enquête suggèrent que le pilote se trouvait en plein brouillard et a décidé de tourner afin de se rendre à l'aéroport de Saint-Auban situé à 15 kilomètres de distance.

13 Les familles des victimes ont été contactées le lendemain.

14 Hélas! Sans qu'on puisse en déterminer les causes – erreur de pilotage, instruments de navigation défaillants ou perte brutale d'altitude – l'appareil heurta de l'aile le sommet d'un conifère avant de s'écraser au sol.

15 Hier, en milieu d'après-midi, cinq ambulances réquisitionnées par les gendarmes ont pris en charge les corps des victimes, qui ont été transportés à la morgue.

16 Trois des occupants furent éjectés et probablement tués instantanément, alors que les deux autres passagers trouvèrent la mort dans le cockpit en flammes.

(This test was substantially adapted from a text found in Capelle and Gidon (1995, p. 128).)