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ABSTRACT

This chapter introduces the idea of Extensive Reading and why it is necessary. The chapter begins by setting out the case, from a vocabulary perspective, why learners cannot avoid Extensive Reading. The frequency of word occurrence and the number of times a word needs to be met shows all learners should be exposed to massive amounts of text. However, typical course books do not cover the required volume of text needed for long-term retention; therefore, supplemental input is necessary. The chapter shows how to set up an extensive reading program, and suggests ways to manage the program and get it running effectively.

INTRODUCTION

There was a time, not long ago, when most EFL practitioners had not heard of Extensive Reading (ER) nor its sister Extensive Listening (EL). Now this is not the case. In the past two decades, hundreds of research papers and books have been published. Thousands of graded reading materials are now available, and there are numerous websites, courses, symposia and discussions all promoting Extensive Reading. So, what happened?

Historically in EFL, language teachers were seen as product providers – their job was to teach – and by doing so give information about the vocabulary, the grammar and other systems that make up a language. However, this atomistic approach to EFL did not allow learners to build up their own sense of how the language works as a whole because each element was taught and learned in discrete and mostly abstract ways. In other words, the learners of the “EFL-as-product” era knew a lot *about* English (its vocabulary and grammar for example), but could hardly communicate using it.

In the 1980’s and 1990’s there came the realization that language study should include fluency and be based on communication on top of the “break-the-language-into-pieces-and-teach-the-bits” approach that had been so common until then. This was an improvement, but it meant learners were still largely not expressing themselves, nor necessarily working in their own way. It was still to some extent a dictatorial system directed by the teacher.

In the past decade, our field has discovered that rather than see a class as a group. It is beneficial to allow learners to explore their own language development and work towards

their own goals through discovery, transformation and creative manipulation of their second language at their own pace. The current boom in Extensive Reading is a by-product and a natural outcome of this vision.

EXTENSIVE READING

When learners are reading extensively, they are primarily focused on the message of the text and what it is saying. By contrast, *intensive reading* focuses on developing language knowledge and discrete reading skills presented as “language work” in a reading text. Typical intensive reading passages can be found in course books and “reading skills” texts. The texts are short – less than one page of text – and function not only to introduce the unit’s theme, but also to present and teach its vocabulary and a language point. The result of this is that the texts are often difficult, and the reading is typically slow and often requires dictionary use.

The main aims of extensive reading, by contrast, are to build the learners’ fluency, reading speed and general comprehension of reading texts as well as practicing the skill of reading itself. Typically, learners will be reading a text with a very high percentage of the words already known, so they can read fluently and smoothly with high levels of comprehension. In other words, for this to happen, the learners should READ:

- Read** quickly and . . .
- Enjoyably** with . . .
- Adequate** comprehension so they . . .
- Don’t** need a dictionary.

If the learners are reading slowly because unknown language slows them down, it means they have stopped reading for communication (i.e., understanding the content), but instead have to focus on the language items (words and grammar, for example). In other words, they are “study reading” – not **READING**. Just as one cannot drive quickly over speed bumps in the road, learners cannot build reading speed or fluency if the text is too difficult. Reading to study language items when learners read intensively is a useful activity. However, there is a time for study, and time for practice just like there is time for driving school and a time for enjoying a drive along the coast on a sunny day. Extensive Reading is the practice time where learners read a lot of easy-to-read texts.

One of the well-known benefits of reading a lot is the effect it has on vocabulary development. The more words a learner meets and the more frequently they are met, the greater the likelihood long-term acquisition will take place. The question is though, how well can learners learn from reading extensively? Estimates of the uptake (learning rate) of vocabulary from reading extensively vary considerably. For example, Dupuy and Krashen (1993) state that 25% of their target words were learned, and in other studies the figures range from 20% (Horst, Cobb & Meara, 1998), to 6.1% (Pitts, White & Krashen, 1989), and

to 5.8% (Day, Omura & Hiramatsu, 1991). More recent estimates put the uptake rate and 25% and 4% (Waring & Takaki, 2003) depending on the type of test used to measure gains. However, it is clear that learners need to meet words numerous times for them to be retained for the long term. Waring and Takaki (2003), for example, suggest that an average word be met more than 25 times for it to be known well enough to understand it and not slow down comprehension when reading. Other research also showed that some words met over a hundred times are still not known. An important point here is that most of the above uptake rates are based on measurements taken immediately after reading or learning. However, when the subjects are given delay tests some weeks or months later, their retention drops precipitously, suggesting the vocabulary knowledge learned while reading was fragile. These data together suggest that learners must read (and listen to) massive amounts of text to not only retain what they know, but to develop it too. This would apply to grammar, phrases, and collocations as much as it does to individual words (Waring, 2009).

The next thing to determine is whether they are meeting the required volume of language in their course books to ensure that they not only meet words sufficient times, but also retain them for the long-term. Thus, the next questions are: “how much language do learners meet only in their course work?” and “is it sufficient for long-term vocabulary acquisition?” An analysis of a typical 4-skills course book in Waring (2009) showed that 60% of the English words in the 5-level Beginner-to-Intermediate series were function words (*in, of, the, under*) and high frequency delexical verbs (*be, go, do, have, etc.*), which are fairly representative of the language as a whole (Nation, 2001). Waring’s analysis shows that 82.88% (Table 1) of the running words in the series are words which occur more than 51 times, but these actually only account for 400 of the total of 4358 types (different spellings) in the 5 level series. Moreover, 79.21% of the words are from the first 1000 most frequent words in English. This means a smallish vocabulary accounted for the vast majority of the volume of words in a series. 795 types occurred more than 20 times but accounted for only 18.25% of the total types met in the books. 43.08% of the types were singletons (single occurrence words) and doublets, which are very unlikely to be learned due to their infrequency of occurrence.

Table 1. *The Percentage of the Total Number of Running Words by Recurrence Rate by Frequency Band Level in Sequences* (from Waring, 2009, p. 104)

Frequency band	51+	21-50	20-10	9-5	4-3	2-1	Total
1-1000	79.21%	4.49%	1.28%	0.47%	0.12%	0.06%	85.63%
1001-2000	1.91%	1.75%	1.03%	0.62%	0.19%	0.16%	5.67%
2001-3000	0.53%	0.25%	0.48%	0.33%	0.12%	0.12%	1.83%
3001 +	1.22%	1.16%	1.32%	1.21%	0.74%	1.21%	6.87%
Total	82.88%	7.65%	4.11%	2.64%	1.18%	1.54%	100%

The above suggests that if learners want to master many words in their language classes, they will need to meet them repeatedly, but a typical course book series does not give them enough exposure to learn them deeply enough for long-term retention. The obvious conclusion, therefore, is to require learners to read and listen to massive amounts of text *in addition to* their coursework—such as that provided by reading or listening to graded readers.

GRADED READERS

Graded readers are books written at various levels of difficulty from beginner to advanced and are the typical, but not only, materials used for Extensive Reading. A “beginner level” graded reader contains only “beginner” level vocabulary (as few as only 75 different word forms in the entire book) and grammar found in the earliest stages of a course book series as well as having a simple story plot to make the reading easier and manageable at this level. A higher-level book will step up the difficulty by adding more advanced grammar and vocabulary, and so on up the levels to the highest levels, which may contain several thousand different words and complex grammar. In this way, beginning level learners would read beginning level books, while intermediates would read materials written at their level. By choosing a book at the right reading level, the learners can read the book reasonably quickly as they will not be meeting much unknown language, which allows them to build reading speed and fluency. This has the enabling effect of allowing them to read more, which allows them to deepen their knowledge of the language through repetitively meeting words and grammar they met in their course book. Thus, graded readers should be seen as complementary to course books, not as a competition for them.

Graded readers are a valuable resource for learners who can select from a very wide range of age-appropriate materials at all levels, and for all interests. There are currently about 1500 different titles available in all genres both fact and fiction, and a brief look at any of the major EFL/ESL publisher’s catalogue will show a list of dozens if not hundreds of graded readers. The vast majority of these come with audio recordings to allow learners to read while listening or just listen if they prefer. This allows learners to choose to just read, read-while listen, or listen only to these books to practice in the way they feel most comfortable.

SETTING UP AN ER PROGRAM

Recently, there has been a growing awareness of the need for learners to have access to comprehensible reading material at or about their language level so that they can develop reading fluency, practice the reading and listening skills, and deepen partially vocabulary and grammar learning. This realization has led many teachers to set up ER programs. Some of these programs have been small and modest – often just one class with a library of a few dozen books. Others are more ambitious and widespread involving whole schools, universities, and even whole school districts with thousands of books and dedicated libraries.

Many of these programs are very successful and well run. But sadly, among these programs there are many that have not lasted and many programs have faltered. This is not usually from a lack of interest or enthusiasm for ER, but due to inadequate planning, poor execution, or insufficient resources.

This section will provide a roadmap for implementing, maintaining, and running an extensive reading program. First, let us consider what the program will look like when it is up and running. When the program is fully functional, it will:

- be an integral part of the school's curriculum;
- raise the learners' reading ability and general English levels and have knock-on effects on their writing skills, spelling, grammar, and speaking;
- motivate the learners to read, and learn from their reading;
- have goals that set out how much reading should be done and by when;
- have a reading library from which learners can select their own texts;
- have systems in place for cataloguing, labeling, checking out, recording and returning the reading materials;
- have a variety of materials to read, not only graded readers and other simplified materials;
- show teachers, parents and the administration that you take ER seriously;
- have targets of both learner and program attainment that clearly show the success of the program; and
- be bigger and more resilient than one teacher and have sufficient support that it will continue indefinitely.

Preparation of the ER Program

But how does one get there? Probably the most important piece of advice is to “think big, act small” (Hill, 1997). This means building management and pedagogical systems, which can be expanded or contracted with minimal pain as the program evolves. If a successful program is to prosper, it has to have vision, and the will to survive potential threats to its existence. Among these threats are increases in lost or mislaid materials, insufficient resources to maintain a library, teaching and financial resources being moved to other projects, and a general lessening in enthusiasm after the highs of the “big start.” Therefore, the program should be well-planned, but should have built-in flexibility and adaptability for future changes.

The very first step is to find ways that the program will fit within the goals, aims and objectives of the school; otherwise, the ER program may fail from lack of direction or purpose. Moreover, it needs to not only be part of a larger reading program, but also part of the larger language learning program within the institution because reading extensively should co-exist with “normal course work” as we have seen. There also needs to be

instruction and practice in intensive reading and the development of reading strategies and skills, for example. Thus, the key to a successful reading program is striking a good balance of course work and extensive reading. Too much intensive reading leads to not enough work on developing fluency. Too much extensive reading can lead to a learner not noticing certain language, and too much work only on reading skills will not practice the skill of reading. Not enough work on vocabulary leads to learners who cannot develop their reading fast enough. The balance of these elements for learners at different ability levels must be determined before the programs can take shape.

The next step is to ensure that *everyone* is involved not only in the planning and in the setting up, but also involved in decisions that are made as a group. If the staff or learners do not feel they have a stake in the program, their lack of commitment may lead to frustration and anger if things do not go well. It may even result in resentment if it is felt that something is being pushed upon them – especially something that they do not understand, nor care about. This implies a lot of careful groundwork and planning to ensure that everyone involved understands the reasons for the program and its aims, goals and objectives. This includes the learners and possibly their parents. Experience from countless ER programs shows that the more the learners are involved in the funding, setting up, and running of the library, the higher the chances are that the program will flourish.

After there has been a decision to go ahead, there will need to be funding for reading materials. If the program is using graded readers, there will need to be enough funds not only to buy the initial stock, but to ensure there is follow-up funding for improving the stock and to replace damaged and lost items. Most schools and school districts will have a budget for books, but if this is not available, money can be requested from sponsors, parents, or the learners themselves, or raised at school events or by sponsoring learners in a reading marathon, and so on.

There is no need to wait to start ER until the library has hundreds of titles. Initially, the program can start with a bag of books which the teacher takes to class for the learners to read. Learners can share these books. They do not need to buy a new book each time they finish one. The school would have to provide one book per learner (or even one between two if books are shared) and these can be rotated each week at a designated return date. Eventually, the ER program will need three to four books per learner to ensure sufficient variety, range of levels, and interest.

The effective library management of graded readers and other fluency-based reading materials needs a lot of forethought and planning specific to each institution or class. Some schools and colleges are lucky enough to have their library keep the books. However, many libraries are too under-resourced to deal with an additional load of books to check-out, check-

in and restock. To get around the resource issue, some schools request the learners to work in the school library to take turns to administer the book lending.

In the absence of support from the school library, teachers will need to set up book management systems, which should be simple and transparent to anyone who picks up a book. The first thing to do is to make a grading scheme so that materials can be graded by difficulty (and age appropriacy). The Extensive Reading Foundation’s Grading Scale (Figure 1), is one commonly used way to level books. Teachers put different colors labels on each book depending on their level. For example, the yellow level might refer to books below 300 headwords, green books may be between 300 and 450 and so on. It is not a good idea to code them by the publisher’s levels of *elementary*, *intermediate* and so on because these vary tremendously between publishers.

Figure 1. *The Extensive Reading Foundation’s Graded Reader Scale*

Beginner				Elementary			Intermediate			Upper Intermediate			Advanced		
Alphabet	Early	Mid	High	Early	Mid	High	Early	Mid	High	Early	Mid	High	Early	Mid	High
1-50	51-100	101-200	201-300	301-400	401-600	601-800	801-1000	1001-1250	1251-1500	1501-1800	1801-2100	2101-2400	2401-3000	3001-3600	3601-4500

Many foreign and second language ER programs use a 6 to 8 level scheme going from the easiest materials to the more difficult. The books and materials can then be kept in boxes or on different shelves and should have color tape on the spine for ease of identification. If the program has too few levels, the gap between levels can be too large and off-putting for learners who need a steady sense of progress and accomplishment. In addition, each book should be numbered and if so desired, coded by its level and book number. Book numbers are necessary to account for multiple-copies of titles. For example, a book may be coded *G4070* (G = Green level, 4 = biographies, and 070 is the book number). Other coding schemes can be used to identify class sets of readers, or readers for a particular class or set of classes, or even short term loan books. Whatever the code, it should be clearly visible on the cover and very transparent to everyone, including the learners. There is probably no need to put them in author or book number order, —just drop them in the appropriately color-coded box.

The program will need a book borrowing system. It is not a good idea to use an “honor system,” as colleagues from around the world report high instances of “lost” or “forgotten” books, so a system needs to be set up. For a single class, this can be as simple as a checkout sheet with the learner’s name and book number listed by week (see Figure 2). When books are returned, they are crossed off.

Figure 2. *A Checkout Sheet for a Single Class*

Name	April 1	April 8	April 15	April 22	...
Akiyo Nagai	G5345	G2453	G3232		
Bert Nuefelt	Y1785	Y2121	Y2778		
Shu Wei	P2352	P2099	G6435		
Carlos Sanchez	543	547	444		

Alternatively, a different sheet can be made for each learner that includes the book title, the book number, and the borrowing and return dates (see Figure 3).

Figure 3. *A Checkout Sheet for a Single Learner*

Name		Learner number ... 032012			
Title	Book number	Borrowed	Returned	Comments	
Alice in Wonderland	G5345	April 13	April 16	I really enjoyed this book because....	
The green eye	Y1785	April 16			

It is also much easier if all the learners borrow and return books; at the same time, the library can be managed effectively. For example, they could put the returning books in the “drop box” at the beginning of class (or after the time allocated for discussing their reading with others is over). In a quiet moment, the teacher (or the learners, in rotation) check off which books have been returned and those which have not. Books should only be returned to the borrowing stock once the books have been crossed off.

Teachers will probably want to know which books each learner has read, how many pages, and at which difficulty levels so that they can monitor (or assess) their reading. There are many ways to do this, but this is commonly done by requiring learners to write (or give an oral) short report on each book in a notebook, or on a specially prepared questionnaire (examples of these are on the websites described below). However, there are dozens of other ways to assess their reading, such as making posters, drawing a picture of a scene, talking about the characters and the plot, reaction reports and tests as well if preferred. Alternatively, teachers can use an online system such as that at www.moodlereader.org to track their learners’ progress.

INTRODUCING THE ER PROGRAM

Once the preparation has been done, teachers will need to introduce the ER program to the learners. However, it should be noted that poorly planned and executed introductions to an ER program is one of the leading reasons for its failure. Many teachers get enthused by ER and tend to force it upon their learners trying to “sell” it and its benefits instead of bringing it slowly and gradually as well as in a well-planned way. Learners tend to be busy, and any idea, no matter how wonderful, will be resisted by learners if they are not doing the reading willingly. Just introducing the reading and making learners take the books home from day one, is likely to lead to opposition especially if the work is considered “extra” or because the learners do not know why they are doing it and how it benefits them. The key points for a successful introduction are to start out with easy materials for the whole class and gradually introduce the reading over several weeks.

It is best not to introduce the library of books to the learners before they understand what ER is and why it is important. The following is a typical introduction to reading graded materials. The teacher should have multiple copies – one for each learner – of an “introduction book” (one that is very easy for the class) to use to introduce this kind of reading. The teacher shows the book cover to the learners, and the learners guess what it is about and do other pre-reading (non-language based) activities. They read (or read and listen to) the story together as a class for the first say chapter or two – but no more than about 5-8 minutes. The teacher stops them (they close their books), and the learners recall what has already happened and predict what will happen next. The teacher takes back the books and returns them in the following class after the learners have been reminded of their predictions. Then, the next chapters of the book are covered in the same way that the books are taken away and returned. This continues in the same way until the story is finished over several classes. The teacher then sets up a discussion about the book focusing on the content, the learners’ reactions to it, their favorite moment or character and so on. The teacher should *not* test them on the content of the book. By testing their understanding, it gives the message that *all* reading must and will be tested, which goes against the spirit of ER, which is to help learners to read for themselves without pressure so that they can build a life-long love of reading in English. Once the learners have read a book as a class, it is wise to repeat this with two or three more titles so that they get the idea of this type of reading.

To ensure a successful launch, it is essential, therefore, that the first book they read together is very easy for most learners so that they will be able to READ it easily. The suitability of the book can be ascertained beforehand by asking a representative lower ability level learner within the class in a private moment whether the book under consideration can be READ easily or not. Some teachers may worry that the learners will not understand the book. However, if it is established that the book will be easy to read *before* they read it, there is no need to test their comprehension anyway. The point of using easy materials that they can

READ quickly and with high levels of comprehension is to make learners notice the difference between the intensive reading in their course books and the easy reading of these story books.

Once the class has read two or three graded readers as a class as described above, the teacher can introduce the library from which the learners will choose their own individual reading books. When the teacher introduces the library of graded readers, she or he needs to explain to the learners why Extensive Reading is important and convey this to learners as often they cannot see the benefits of this reading and just see it as yet more homework. Not introducing the library well is the leading cause of failure of ER programs. The learners need to understand that their course book provides them with the new language, but Extensive Reading helps them to build their reading speed and automaticity in reading of *already met language* in a pleasurable way. As we saw above, if they do not read or listen extensively, they cannot build reading speed and gain all the benefits that come from it. Figure 4 can be very helpful for explaining the difference between intensive and extensive reading to learners (based on Welsh, 1997).

Figure 4. *A Table for Explaining the Difference between Intensive and Extensive Reading to Learners*

Intensive Reading		Extensive Reading
Analysis of the language	WHY?	Fluency, skill forming
Usually difficult	DIFFICULTY?	Very easy
All learners study the same material	WHAT MATERIAL?	All learners read different things (something interesting to them)
Little	AMOUNT?	A book a week
Teacher selects	SELECTION?	Learner selects
In class	WHERE?	Mostly at home and in class
Checked by specific questions	COMPREHENSION?	Checked by reports/summaries

It is also important for the learners to know how many times they need to meet words to learn them and what that means for the volume of reading they need to do. Nishizawa, Yoshioka and Fukuda (in press) found that Japanese EFL engineering learners needed to read 300,000 words to get to the threshold where they were able to read fluently without translation and reach the point at which the learners felt the true enjoyment of reading in English. They also found that programs that required less than 100,000 words of reading per semester had little or no effect on the learners' long-term affinity with ER. Learners who read over 1,000,000

words made significant gains (over 200 points) on their TOEIC scores and significantly outscored their age-peers in other disciplines including learners who had studied abroad for ten or more months. Teachers should bear these findings in mind when deciding how much reading needs to be done.

Finding Their own Reading Level

Once the learners understand the difference between Intensive and Extensive Reading, it is the time to show the library of books they will read from. However, before they select a title to read, they should be made aware that the books are written at varying levels of difficulty, and each learner will need to find his or her own “reading level.” One easy way to do this is to spread out the books (color coded as described above) on a table in level order, left to right, and let the learners choose a title they like. They then should read a page of a book. If the material is too difficult (i.e., their reading speed is under 80 words per minute, and if there are more than 1 or 2 unknown words per page, and if they do not have high levels of comprehension), they choose a book at an easier level. If they feel it is okay, they could try another book at that level to be sure. If they feel a given level is easy, they can then go up levels until they still feel comfortable. If the next level down is also difficult, they should go down again until they find the “right” level. Once they know their “level,” they select a book they want to read at that level and go back to their seat and read it silently until everyone has finished finding a book.

Some teachers ask learners to take a vocabulary or reading placement test as an alternative, but there is not always a good correlation between their fluent reading ability and their vocabulary level, so this should be used with caution. Whichever way is chosen, the learners will need help in finding their comfort level and will need advice about finding suitable material. Therefore, it is important for there to be a sustained silent reading time for 10-15 minutes once every few classes, when the learners read their book. At this time, the teacher should go around the class monitoring that they are reading at the right level by talking to each learner individually asking if their book is easy and if they understand it. If they are not enjoying the book, or it is too difficult, they should stop and read something else. To make sure the learners understand what to do and know they are making appropriate choices of both materials and their level, there should be some silent reading time so that teachers can check.

Once the teacher is sure, the learners have selected their first book appropriately, the learners can either take this book home to finish or bring it to the next class to continue reading. It is also important that teachers read a large number of the titles in the library so that they can help them to select appropriately.

In addition to the above, the learners also need to know:

- the goals of the ER program;
- when they have to return books;
- how much they need to read either by number of books or page targets (research suggests a “book a week at their own level” is sufficient);
- how many books they can borrow;
- how their reading will be evaluated (if at all);
- when they have access to the library; and
- whether they have to do follow up exercises or write reports, etc.

CONCLUSION

In contrast to the past, many teachers have now heard of extensive reading, but there are still too few teachers that require it for their learners. Extensive reading is still most often seen as “additional” or “supplemental” to a main program, which can be omitted if time does not allow. This chapter argues that it should be a core part of every language program’s curriculum, and all language programs should have an extensive reading component to deepen and enrich the language the learners meet in their coursework. This chapter also presents ideas for setting up and running an Extensive Reading program so that this necessary listening and reading may be done.

REFERENCES

- Day, R., Omura C., & Hiramatsu, M. (1991). Incidental EFL vocabulary learning and reading. *Reading in a Foreign Language*, 7, 541-551.
- Dupuy, B., & Krashen, S. (1993). Incidental vocabulary acquisition in French as a foreign language. *Applied Language Learning*, 4, 55-63.
- Hill, D. (1997). Setting up an extensive reading programme: Practical tips. *The Language Teacher*, 21, 17-20.
- Horst, M., Cobb T., & Meara, P. (1998). Beyond a clockwork orange: Acquiring second language vocabulary through reading. *Reading in a Foreign Language*, 11, 207-223.
- Nation, P. (2001). *Teaching vocabulary in another language*. Cambridge: Cambridge University Press.
- Pitts, M, White, H., & Krashen, S. (1989). Acquiring the second language vocabulary through reading: A replication of the Clockwork Orange study using second language acquirers. *Reading in a Foreign Language* Vol. 5, 271-275.
- Waring, R. (2009). The inescapable case for extensive reading. In Andrzej Cirocki (Ed.), *Extensive reading in English language teaching* (pp. 93-112). Muenchen, Germany: Lincom Europa.
- Waring, R., & Takaki, M. (2003). At what rate do learners learn and retain new vocabulary from reading a graded reader? *Reading in a Foreign Language*, 15, 130-163.

Welch, R. (1997). Introducing extensive reading. *The Language Teacher*, 21, 51-53.

Resources

- List of current graded readers by level: www.robwaring.org/er/scale/ERF_levels.htm
- Rob Waring's ER website: www.robwaring.org/er/
- The Extensive Reading Discussion list groups.yahoo.com/group/ExtensiveReading/
- The Extensive reading website: www.extensivereading.net
- The Extensive Reading Foundation: www.erfoundation.org
- The Extensive Reading Foundation Graded Reader Scale:
www.erfoundation.org/erf/node/44