Article

Extensive Reading and Learning Style

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Abstract

Extensive reading (ER) has been shown to be an effective approach to both improving students' language skills and nurturing positive attitudes toward language reading and learning. However, although the approach has proven to be effective for many learners, as with any teaching approach, it does not seem to work equally well for all learners. The current study hypothesized that learning style might be a factor influencing learners' achievement in and attitude toward ER, and investigated the relationship between learning style, amount of reading, and attitude toward ER, using Cohen, Oxford, and Chi's (2009) Learning Style Survey (LSS). The results showed weak relationships between learning style and reading amount as well as between learning style and attitude toward ER, in both cases found in only a few of the learning style dimensions. The study suggests on this basis that it will be useful to combine quantitative data gained from learning style measurement tools with qualitative data gained from learner observations and discussions, in order to provide appropriate guidance to students in ER programs.

keywords: extensive reading, individual differences, language learning attitude, learning style

Introduction

Over the past few decades, extensive reading (ER) has become increasingly well recognized in the field of foreign and second language teaching as an effective approach to teaching reading. According to Day and Bamford (1998), the term "extensive reading" was first used in the context of foreign language teaching by Palmer (1917/1968), and its theoretical framework and methodology were further developed by prominent teaching practitioners and researchers such as West (1926/1995), Krashen (1993), and Grabe (1991). ER can be roughly defined as "an approach to language teaching in which learners read a lot of easy material in the new language" (Bamford & Day, 2004, p. 1). While there are various ways of implementing an ER program, the following principles appear to be shared among teaching practitioners introducing ER: learners choose books according to their proficiency level and interest, read for fluency and for gist, and read for pleasure. In addition, frequent use of a dictionary is discouraged (Bamford & Day, 2004; Day & Bamford, 1998; Susser &

Robb, 1990; Takase, 2010).

To date, an extensive body of research on the benefits of ER for various aspects of English learning has been published. A partial list of such studies includes those reporting evidence of improvement in learners' overall reading proficiency (Elley & Mangubhai, 1983; Hafiz & Tudor, 1989; Kobayashi, 2010; Mason & Krashen, 1997; Mermelstein, 2014; Robb & Kano, 2013; Robb & Susser, 1989), reading speed (Bell, 2001; Tanaka & Stapleton, 2007), vocabulary acquisition (Chun, Choi, & Kim, 2012; Cho & Krashen, 1994), writing (Janopoulos, 1986), and affect toward language learning (Kawachi, 2010; Nash & Yuan, 1992-1993; Powell, 2005; Yamashita, 2013).[1] Indeed, after reviewing a massive amount of literature on extensive reading, Grabe (2009) remarked that "one has to wonder how much evidence is needed to make the case for extensive reading" (p. 328).

While there seems to be little disagreement over the substantial benefits that ER offers to many language learners, it should be noted that a "one-size-fits-all" approach does not work in language teaching. We have learned from the "methods era" that the idea of an ideal method that works for all learners is but an illusion, and that what is really necessary is to assess the teaching context, including individual learner characteristics and needs, so that we may select, adapt, and modify our teaching approaches accordingly. In fact, carefully reading the numerous reports of successful ER programs from such a standpoint will direct one's attention to the fact that such reports often include reference to a small number of students who were not as enthusiastic as others about the ER experience (Hayashi, 1999; Powell, 2005; Tanaka & Stapleton, 2007).

Reflecting on my own experience teaching ER-based courses over the past several years, I find that a majority of learners have shown positive reactions to ER both cognitively and affectively. Thus, I am convinced of the pedagogical value ER brings to language learners. At the same time, I must also admit that in almost every course I have taught I could not help but notice a small number of students to whom ER did not seem like an optimal mode of learning. Of course, it is generally difficult to engage unmotivated students in language learning tasks, regardless of the approach taken, but it appeared to me that even among some learners who were fairly motivated, a handful struggled with ER.

This line of thought led me to wonder whether individual learner differences, and in particular learning style, might be one of the variables that cause ER to work well for some learners and not so well for others; that is, whether ER caters better to learners with some particular learning style preferences than to those with other style preferences. After all, the learning tasks implemented in an ER course are somewhat limited in terms of the physical senses called upon as well as the level of social interaction required. That is, in ER, one is required to sit quietly by oneself in a chair for a prolonged period of time, following row after row of text with one's eyes. In addition, in ER one is encouraged to withstand ambiguity, for example when encountering unknown words, instead of receiving immediate feedback or otherwise being provided with means to confirm whether or not one's

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1 The cited studies often report improvement in more than one aspect, for instance in both reading comprehension and motivation.

understanding is accurate;[2] this also may lend itself to certain learning styles and not others.

Accordingly, I have set out to investigate the relationship between learners' learning styles and their achievement in an English ER program. Specifically, I explored the following research questions:

1. Is there a relationship between learners' learning style and the amount of reading they do in an ER program?
2. Is there a relationship between learners' learning style and their attitude toward ER?

The next section will define the concept of learning style and review the literature on how learning style has been treated in the context of foreign language learning research.

Literature Review

What is learning style?

Learning style has been defined as "cognitive, affective, and physiological behaviors that serve as relatively stable indicators of how learners perceive, interact, with, and respond to the learning environment" (Keefe, 1979, p. 4). Several researchers warn that learning style is often confused with cognitive style, and emphasize the need to distinguish the two constructs. Ehrman, Leaver, and Oxford (2003) describe cognitive style as "preferred forms of brain activity associated with information acquisition and processing" (p. 314) and state that learning style has more to do with personality variables. Perhaps Brown's (2014) distinction between the two is more straightforward: "When cognitive styles are specifically related to an educational context, where affective and physiological factors are intermingled, they are usually referred to as learning styles" (p. 113).

Another concept similar to but not the same as learning style is that of learning strategy. The main distinction made in the literature between these two is that learning strategies involve conscious decisions and are context dependent, whereas learning styles are traits that come into play unconsciously and are more or less context independent, although not completely free from educational and cultural influences (Dörnyei, 2005/2010). Thus, Kinsella (1995) defined learning style rather strongly as "an individual's natural, habitual, and preferred ways of absorbing, processing, and retaining new information and skills which persist regardless of teaching methods or content area" (p. 171). Because learning styles are unconscious and context independent, it is said that "style wars" (Kroonenberg, 1995, p. 85) often occur when the teacher's teaching style and a learner's learning style do not match.

Taxonomy of learning styles

Numerous taxonomies of learning styles have been presented over the past several decades. For example, Ehrman and Oxford (1990) identified at least twenty different dimensions of learning style and placed them into three categories based on their theoretical basis (each of these bases subsuming the style dimensions given in the parentheses that

2 Many ER courses, including my own, adopt various activities such as oral book reports and story prediction (Kobayashi & Kawachi, 2009) to motivate learners to read and to promote a community of learning. However, a majority of class time in an in-class ER program is often devoted to individual sustained silent reading.

follow): 1) study of perception and Gestalt psychology (Field Independence/Dependence), 2) ego psychology (Leveling/Sharpening, Abstract/Concrete, Flexible/Constricted, Tolerance/ Intolerance for Ambiguity), and 3) the theories of Carl Jung (Kolb learning styles/Myers-Briggs). Reid (1995), on the other hand, places learning styles into the following three categories: 1) cognitive learning styles (Field-Independent/Field-Dependent, Analytic/ Global, Reflective/Impulsive, Kolb Experiential), 2) sensory learning styles (Perceptual, Environmental, Sociological), and 3) affective/temperament (Myers-Briggs Temperament, Tolerance of Ambiguity, Right- and Left-Hemisphere). In addition, Brown (2014) lists the following dimensions as being salient in past research: Random/Sequential, Inductive/ Deductive, and Synthetic/Analytical.

The proliferation of style dimensions proposed by various studies and the inability of researchers to converge them into a common framework have led to criticism of style research as being ill validated and confusing (Dörnyei, 2005/2010). Nevertheless, as Chapelle (1992), notes, to gain a sufficient understanding of the diverse thinking and learning processes that learners go through, we inevitably need to take learner style into account in some way. Moreover, as Kawai (2010) states, an understanding of learner style has the potential to help teachers facing challenges in their teaching situations to gain better understanding of the situation at hand and to bring about a breakthrough to resolve deadlock.

Learning style research in second language learning

In the field of second language (L2) learning, the Field Dependence/Independence construct is recognized as having provided the momentum to learning style research (Dörnyei, 2005/2010). This concept was introduced in the field of psychology by Herman Witkin, who showed that some people are more at ease separating a distinct item from an organized background (that is, they are more Field-Independent), while others tend to see the subject item as part of the embedded context (Field-Dependent) (Witkin & Goodenough, 1981). While past research in L2 learning has hypothesized that field-independent learners tend to perform well in classroom learning that emphasizes analytic drills and paper-and-pencil tasks whereas field-dependent learners tend to perform well in communicative aspects of language learning, there has been a dearth of evidence to verify these hypotheses (Brown, 2014).

Measurement instruments

To measure one or more of the numerous cognitive and learning styles, only some of which are mentioned above, a number of instruments have been developed and published. For example, the Embedded Figures Test (EFT) (Wikin, 1950) and the Group Embedded Figures Test (GEFFT) (Demick, 2014) measure Field-Dependence/Independence specifically. These tests require students to find simple geometric figures embedded in more complex geometric designs, within a given time frame. The more figures a student can find, the more Field-Independent the student is considered to be. However, these tests have been criticized

on the grounds that they in fact measure cognitive restructuring ability rather than position along the Field-Dependency axis (Chapelle, 1995; Dörnyei, 2005/2010).

Many other instruments take the form of self-report questionnaires, such as Kolb's (1984) Learning Style Inventory (LSI); Oxford's (1993) Style Analysis Survey (SAS); Reid's (1984) Perceptual Learning Style Preference Questionnaire (PLSPQ); Cohen, Oxford, and Chi's (2009) Learning Style Survey (LSS); and Ehrman, Leaver, and Shekhtman's (2002) E&L Learning Style Questionnaire. Of these, the E&L Learning Style Questionnaire is distinctive in that it reorganizes ten learning style dimensions such that the two poles of each dimension converge to two superordinate style dimensions: synoptic (unconscious control of learning) and ectenic (conscious control of learning) (Ehrman & Leaver, 2003). From the viewpoint of L2 research, however, the LSS may have the most practical value, since the questions posed in this instrument are directly related to language learning situations.

Learning style and extensive reading

Research on the relationship between learning style and extensive reading has been limited, perhaps in part due to the declining interest in the learning style concept in recent years. However, learning style does every so often emerge as a potential factor contributing to learners' achievement in and attitude toward ER.

For example, when asked in an interview whether ER programs suit particular types of learners more than others, Rob Waring provides a partially affirmative answer, stating that some learners have a preference for learning from texts in solitude while others might prefer more social communication modes. Marc Helgesen, on the other hand, contends that ER can benefit any learner, but then admits that it might have particular appeal to visual learners and to those who are avid readers in their first language (Bradford-Watts & O'Brien, 2007).

In an empirical study, Furukawa (2005) investigated high school students' improvement in English skills in relation to the amount of reading done in an ER program. The results revealed that although two of the groups of students in her study read a similar amount, they showed progress in different skill areas. In analyzing the results, Furukawa identified learning styles as one possible variable contributing to such discrepancies.

At the tertiary level, Kobayashi (2010) analyzed the dispositions, as described by the course instructors, of those students who reported the highest and lowest amounts of reading (respectively) in a university ER program. Some of the descriptors provided by the teachers of those students who read the most included "serious," "having self-control over one's learning," "introverted," but also "extroverted" (p. 109). While some of these descriptions seem contradictory, Kobayashi concludes that there seem to be some common inclinations among those students who read the most as well as among those who read the least. Although she does not use the term "learning style," she suggests the need for teachers to set up advising sessions with individual learners in order to grasp their "situation" (p. 111) and guide them appropriately.

Shen (2008) also highlights the importance of recognizing learners' individual differences to make an ER program more effective. He investigated learners' perspectives and

preferences in terms of particular influential factors and in specific classroom activities in a university ER program, and found that learner's preferences were actually quite diverse. He interprets such findings as constituting empirical evidence for the individuality (person-specificity) of learning; that learners have different perceptions and that therefore different classroom activities are needed for different learners. He concludes that "extensive reading per se is never a panacea for all reading problems" (p. 119).

The literature whose findings are presented above seems to suggest that ER does not work equally well for all learners, but that difference in learning style, or at the very least some kind of individual differences, affect achievement in and attitude toward ER.

In addition, to the best of my knowledge at the time of writing, there is one study that has directly examined the relationship between learning style and ER. Ujitani (1995), who was also concerned about the minority of "students who give unfavorable evaluations" (p. 73) of an ER course offered at a Japanese university, came to wonder if the source of such students' dissatisfaction might be related to their learning style. Thus, she investigated the relationship between students' learning style, their attitude toward ER, and the amount of reading they did. She used Kolb's LSI to measure students' learning style and a self-developed questionnaire to assess their attitude. She divided the students into three groups (high, middle, and low) by subtracting the scores on one pole from those on the other for both of the two LSI dimensions: AC – CE (Abstract Conceptualization minus Concrete Experience) and AE – RO (Active Experimentation minus Reflective Observation). The results indicated that out of the 20 items included in the attitude questionnaire, only a few showed significant differences: high and middle AC scorers felt that their grammar improved, low AC scorers valued the group discussions conducted in class, and high AE scorers felt that ER was more useful than the other groups did. As regards reading amount, high and middle AC scorers seemed to have read more than the low AC scorers, but the differences were non-significant. Ujitani "wishes to believe" (p. 86) the results indicate that the ER program appeals equally well to students with any learning style; at the same time, she lists a number of limitations, including the need to explore other variables such as cognitive style and perceptual learning style.

Despite Ujitani's effort, studies specifically investigating learning style and ER are sparse, as stated earlier. Thus, I believe there is a need to explore the relationship between the two so as to gain a better understanding of why ER might seem not to be a good "fit" for some language learners. Such an attempt, I hope, may move us toward discovery of better instructional methods for motivating such students.

Research Method

Setting

The current study was conducted in an upper-middle-ranked private university in Tokyo. The ER program was implemented in five different classes in the university's Faculty of Law, taught by four different teachers under the course titles "English III" and "English IV." The courses were "mandatory-elective," meaning they were among a group of elective

courses that students had to take in order to fulfill their language credit requirement. They also had the options of taking English courses focusing on other language skills, content areas, methods, etc., or of taking courses in languages other than English. English III was offered in the spring semester (which is the first semester of the academic year in Japan) and English IV was offered in the fall semester. Each semester was 14 weeks long; students met for a single session of 90 minutes weekly. Although English III and English IV were separate courses, many students enrolled in both consecutively, making them function in practice much like a 28-week course. The total number of class hours for students who took both courses amounted to 42.

Although the course sections were taught by different instructors, as stated earlier, the basic class schedule, syllabus, activities, and guiding principles were shared so as to achieve a standard approach. Except for the first class of the spring semester and the last class of the fall semester, in which the students took assessment tests to determine their reading level, most of the class time (60 minutes in each class was the target) was devoted to sustained silent reading (SSR). That is, each student chose a book they could read fluently and with pleasure, based on their proficiency level and interest. From time to time (every other week was the target), various reading-related activities such as reading aloud or oral book-sharing were implemented, with a view to motivating learners to read and to promote a community of learning. The instructors held two rounds of in-class one-on-one interview sessions each semester with each student to monitor their reading progress, make book recommendations, and respond to any questions or problems that students were facing in relation to ER or to English learning in general. Each student kept a brief record of each book they read in a small notebook.

The reading materials available consisted of over 2,000 books, including (1) graded readers targeting learners of English as a second or foreign language, published by major publishers such as Oxford University Press, Pearson-Longman, Cambridge University Press, Macmillan, etc.; (2) leveled readers targeting young native speakers of English, from series such as Oxford Reading Tree, Longman Literacy Land, I Can Read, etc.; and (3) regular, non-graded or -leveled children's books from series such as Curious George, Ladybird Well-loved Tales, Magic Tree House, etc. Regardless of their English reading proficiency, students were advised to start reading from the "lowest level," that is, from leveled readers for very young native-English-speaking children, containing only a few words on each page. This approach was intended to lower the students' affective filter and to encourage them to abandon word-by-word translation, which so many Japanese learners of English are accustomed to. They were also encouraged to raise the level of the books they read gradually, so that they could "read in English" instead of merely "read English". Throughout the two semesters, the students were advised to follow Sakai's (2005) three principles of extensive reading: (1) don't consult a dictionary, (2) skip the difficult words, and (3) stop reading the book when it becomes difficult (p. 7).

Participants

The participants were second, third, and fourth-year university students majoring in either law or politics. The classes were not streamed according to English proficiency; rather, students chose their class section based on class content and the instructor, or more often based on what fit with the student's schedule. Thus, each class consisted of a fairly mixed group of students in terms of English level.

The total number of students who took both the spring and fall semester courses was 82. Unfortunately, there were some missing data, as some students failed to report their reading amounts or were absent on the day the learning style assessment or the post-course questionnaire was administered. After eliminating these students, 75 students' data remained as baseline data on which analyses could be conducted for reading amount and learner styles, and 69 remained for the analysis of attitude-related variables.

Data collection

Learning style assessment.

Cohen, Oxford, and Chi's (2009) Learning Style Survey (LSS) was selected as the measurement tool for the assessment of students' learning style.[3] The rationales for choosing this instrument were that (1) it is relevant to the context of the current study, as a number of items focus on language learning situations; (2) it allows for a number of learning style dimensions to be assessed; and (3) it contains a scoring sheet as well as an explanation of how to interpret the scores in a layperson's terms. The last point was especially important, as I wanted the survey to be useful not only to the researcher/instructor, but also for the students to learn about themselves and how they learn.

The LSS has 11 parts, with each part assessing different style dimensions. Each part is composed of 4 to 30 statements about how "I" learn (Example: "I remember something better if I write it down."). The respondent is to read each statement, think about what he or she usually does when learning in relation to that statement, and choose a response on a five-point Likert-type scale ranging from 0 (Never) to 4 (Always). The results are then tallied, allowing preferences for each learning style dimension to be identified (the higher/highest number in each part indicates the respondent's preference on that dimension).

To avoid bombarding students with too many unfamiliar abstract concepts, the following six dimensions/"parts" which were hypothesized to have bearing on ER achievement/ attitude and assumed to be relatively straightforward for students were selected:

● Part 1: How I use my physical senses (Visual/Auditory/Tactile-Kinesthetic)
● Part 2: How I expose myself to learning situations (Extroverted/Introverted)

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3 *Learning style survey: Assessing your own learning styles* by A. D. Cohen, R. L. Oxford and J. C. Chi, is used/copied with permission from the Center for Advanced Research on Language Acquisition (CARLA) at the University of Minnesota and can be found in the following publication: Mikk, B. K., Cohen, & Paige, R. M., with Chi, J. C., Lassegard, J. P., Maegher, M., and Weaver, S. J. (2009). *Maximizing study abroad: An instructional guide to strategies for language and culture learning and use.* Minneapolis, MN: Center for Advanced Research on Language Acquisition (CARLA), University of Minnesota. More information about this instrument can be found at *www.carla.umn.edu/maxsa/guides.html*

- Part 3: How I handle possibilities (Random-Intuitive/Concrete/Sequential)
- Part 4: How I deal with ambiguity and with deadlines (Closure/Open-Oriented)
- Part 5: How I receive information (Global/Particular)
- Part 8: How I deal with language rules (Deductive/Inductive)

After permission to use and translate the survey was obtained, the six parts as well as the scoring sheet and the explanations were translated into Japanese and administered to the students in the spring semester. Once the students had completed the survey, a briefing session was held to help them understand what their results indicated and how they could utilize the knowledge gained from the results in managing their future language learning.

Reading amount and attitude toward ER.

A post-course questionnaire was used to collect data regarding the amount of reading done by the students and regarding students' attitude toward ER.

- Reading amount: Students were asked to write down the number of books and the total number of words they read over the course of the two semesters. The instructors ensured the validity of students' self-reported final reading amounts by monitoring each student's reading amount via periodic interviews.

- Attitude toward ER: Responses to three of the following post-course questionnaire items were used to assess students' attitude toward ER, in three dimensions:
  (1) ER as an English learning approach was interesting for me. (Interest)
  (2) I feel that this [ER] learning approach was effective for me. (Effect)
  (3) I would like to continue studying English using this [ER] approach. (Will to Continue)

Responses to the three items above were solicited on a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Results

Learning style and reading amount

Reading amount.

The average reading amount for the 75 students is shown in Table 1.

Table 1

Reading Amount (n=75)

Reading Amount	Mean	Min.	Max.	SD
No. of words	129,177	14,032	1,024,752	143,344.35
No. of books	74	23	162	26.75

While most students read less than 170,000 words, seven students read more than 170,000, with one exceptionally avid reader reading 1,024,752 words. In terms of the

number of books, all but one reader read less than 150 books. In order to normalize the distribution, seven outliers for the number of words and one outlier for the number of books were eliminated using the Smirnov–Grubbs test. Table 2 shows the average reading amount after the elimination of outliers.

Table 2

Reading Amount (n=67)

Reading Amount	Mean	Min.	Max.	SD
No. of words	92,885	14,032	160,152	34,203.02
No. of books	72	23	139	23.80

Learning style.

Table 3 shows the mean scores on the LSS for the 67 students whose data were retained, as described earlier.

Table 3

Mean Scores on the LSS (n=67)

Part 1: How I use my physical senses (possible range: 0 to 40)		
Visual	Auditory	Tactile/Kinesthetic
24.6 (62%)	18.8 (47%)	15.3 (38%)

Part 2: How I expose myself to learning situations (possible range: 0 to 24)	
Extroverted	Introverted
11.1 (46%)	13.5 (56%)

Part 3: How I handle possibilities (possible range: 0 to 24)	
Random-Intuitive	Concrete-Sequential
13.5 (56%)	12.9 (54%)

Part 4: How I deal with ambiguity and with deadlines (possible range: 0 to 16)	
Closure-Oriented	Open-Oriented
7.5 (47%)	9.0 (56%)

Part 5: How I receive information (possible range: 0 to 20)	
Global	Particular
12.0 (60%)	10.1 (50%)

Part 8: How I deal with language rules (possible range: 0 to 12)	
Deductive	Inductive
6.5 (54%)	5.6 (47%)

Note. The percentage in the parenthesis after each score gives the mean as a percentage of the maximum possible for each dimension.

On the whole, mean scores tended to converge in a moderate range, with the preferences in each part ranging from 40% to 60% of the maximum total score; the exception is in Part 1, where the scores indicate a mildly high preference for visual learning and a mildly low preference for tactile/kinesthetic learning.

Relationship between learning style and reading amount.

The relationship between learning style and reading amount was analyzed using Pearson's product-moment correlation coefficient. Table 4 presents the correlation coefficients for reading amount and learning style dimensions as assessed by each part of the LSS.

Table 4

Correlations Between Perceptual Leaning Style and Reading Amount (n=67)

		Number of books	Number of words
Part 1	Visual	0.22	0.14
	Auditory	-0.14	0.24
	Tactile/Kinesthetic	0.09	0.07
Part 2	Extroverted	-0.07	-0.17
	Introverted	0.10	0.05
Part 3	Random-Intuitive	-0.02	0.14
	Concrete-Sequential	0.13	0.19
Part 4	Closure-Oriented	0.28*	0.05
	Open-Oriented	-0.20	-0.07
Part 5	Global	0.08	-0.03
	Particular	0.18	0.11
Part 8	Deductive	-0.02	0.02
	Inductive	0.18	-0.26*

*$p < .05$.

A significant correlation was observed in only two parts: In Part 4, a weak positive relationship was observed between Closure-Oriented learning preference and the number of books read, and in Part 8, a weak negative relationship was observed between Inductive learning preference and the number of words read. In addition, in Part 1, a weak positive relationship between Visual preference and the number of books read and a weak positive relationship between Auditory preference and the number of words read were observed, but the correlations were not significant.

Learning style and attitude toward ER

Learning style.

Although the relationship between learning style and attitude toward ER was analyzed for a slightly different population, that is, 69 participants instead of 67, the average LSS scores

remained extremely close to those presented in Table 3, with a maximum of 0.2 points' difference for each score.

Attitude toward ER.

Table 5 shows the means of the 69 students' responses to each of the three questionnaire items assessing their attitude toward ER.

Table 5

Responses to ER-Related Attitude Questionnaire Items (n=69)

Reading Amount	Interest	Effect	Will to Continue
Mean	4.3	4.0	4.0

Note: Possible range: 0.0 to 5.0

Overall, students responded positively to all three attitude-related questionnaire items. In fact, 97% of the students agreed that ER was interesting, 86% said that ER was effective, and 78% agreed that they would like to continue ER.

Relationship between learning style and attitude toward ER.

The relationship between learning style and students' attitude toward ER was analyzed using Pearson's product-moment correlation coefficient. Table 6 presents the coefficients for the attitudinal questions and each learning style dimension assessed.

Table 6

Correlations Between Perceptual Leaning Style and Attitude Toward ER (n=69)

		Interest	Effect	Will to Continue
Part 1	Visual	0.27*	0.01	0.14
	Auditory	0.21	0.26*	0.14
	Tactile/Kinesthetic	-0.04	-0.04	-0.00
Part 2	Extroverted	-0.00	0.05	-0.03
	Introverted	-0.05	-0.03	-0.16
Part 3	Random-Intuitive	0.22	0.08	0.06
	Concrete-Sequential	-004	-0.24	-0.02
Part 4	Closure-Oriented	-0.18	-0.21	-0.18
	Open-Oriented	0.13	0.20	0.21
Part 5	Global	-0.20	-0.01	-0.36**
	Particular	0.08	-0.07	0.07
Part 8	Deductive	0.01	-0.05	0.11
	Inductive	-0.2	-0.2	0.09

$*p < .05$. $**p < .01$.

A significant correlation was observed in each of the following dimensions: (1) positive relationship between Visual learning preference and Interest, (2) positive relationship between Auditory preference and Effect, and (3) negative relationship between Global preference and Will to Continue. Low correlation coefficients (+/-2.0 or higher), though non-significant, were also observed between the following variables: (1) Auditory preference and Interest (positive), (2) Random-Intuitive and Interest (positive), (3) Concrete-Sequential and Effect (negative), (4) Closure-Oriented and Effect (negative), (5) Open-Oriented and Effect (positive), and (6) Global preference and Interest (negative).

Discussion

The first research question posed in this study was whether there is a relationship between learning style and the amount of reading a learner does in an ER program. The results indicate that reading amount correlated weakly with two learning style dimensions: Closure-oriented learning preference correlated positively with number of books read, and Inductive learning preference correlated negatively with number of words read.

One reason for the correlation between Closure-oriented leaning style and number of books might be that students with a Closure-oriented learning preference like to plan their learning carefully and set deadlines. It is possible that these students either tended to set a target number of books to read beforehand and strived to meet that goal or were at least motivated by the fact that they were able to visualize and quantify their accomplishments in their reading record notebook. In addition, since Closure-oriented learners tend to organize their learning materials carefully, it is possible that their record-keeping was more accurate than that of the Open-oriented learners, who might, for example, have left some books unrecorded.

More surprising was the fact that Inductive learning style preference correlated negatively with number of words read. Since Inductive learners tend to induce rules on the basis of exposure to examples of specific language features, it was hypothesized that such learners would enjoy receiving comprehensive input via ER and would be motivated by such input to read more, rather than less. One possible explanation for the contrary result actually gained might be that students were not reading at the right level, that is, that the input they were getting were in fact not comprehensible enough for them to formulate rules based on it. According to Hsueh-chao and Nation (2000), 98% of running words need to be familiar to the reader in order for the text to be comprehensible. Closer monitoring of students' book selection may be necessary in order to ensure that it meets this high standard for comprehensibility and thus that they are reading at the appropriate level.

The second research question pertained to the relationship between learners' learning style and their attitude toward ER. Again, only weak correlations were observed in only a few of the learning style dimensions: Visual learning style correlated positively with Interest, Auditory learning style correlated positively with Effect, and Global learning style correlated

negatively with Will to Continue ER.

The positive relationship observed between Visual learning style preference and Interest makes intuitive sense, since reading is primarily a visual act. However, Visual learners, though interested in ER, did not consider it particularly effective, nor were they motivated to read more. Interestingly, it was the Auditory learners that perceived ER to be an effective approach to improving their English proficiency. Since, as has been pointed out, ER has a positive effect on listening in that it promotes the automatic processing of language input (Kobayashi, 2010; Takase, 2010), the Auditory learners might have noticed improvement in their listening skills more readily than students with other sensory preferences.

The negative relationship found between Global learning style preference and Will to Continue was another unexpected result. It was presupposed that the ER instructional method, in which learners are encouraged to read for gist rather than pay close attention to discrete language features, would match the learning preference of Global learners, who focus on the main idea over details. Again, mismatch between the level of the material and the learners' proficiency might have been one reason for possible frustration on the part of the Global learners, as it is impossible to get the gist when there are too many incomprehensible words in a text.

At this point, it might also be worthwhile to discuss some other learning dimensions, which correlated non-significantly with motivational factors. For example, in Part 3, there were indications that Random-Intuitive learning style might correlate positively with Interest, while Concrete-Sequential style might relate negatively to Effect. These relationships make intuitive sense, since ER requires creative imagination and encourages learners to choose individualized learning paths rather than follow a predetermined, step-by-step sequential path. In addition, in Part 4, there were indications that Closure-oriented learners considered ER to be an ineffective language learning approach, whereas Open-oriented learners regarded it to be effective. Such tendencies were also expected, sine ER requires learners to deal with ambiguity, a condition that is unlikely to be a problem for Open-oriented learners but might make Closure-oriented learners feel insecure.

Conclusion

The findings of this study suggest that only a few learning style dimensions as assessed by the LSS are related to students' achievement in ER or to their attitude toward ER. Moreover, for those learning style dimensions that did seem to relate to achievement and attitude, only weak correlations were observed. Such results may lead one to conclude that differences in students' learning styles do not explain why ER seems unappealing to some students. However, there are some limitations to the current study affecting our interpretation of the results.

First of all, the number of students involved in the study was quite limited. Thus, it seems premature to generalize the current results to a wider context.

Second, and more important, the approach by which learning style was assessed may

need to be reconsidered. Measurement of learning style using self-report questionnaires has been criticized as problematic in that it may not accurately or objectively capture learners' profiles (Brown, 2014; Riding & Rayner, 1998/2007) and that it may lack predictive power (Isemonger, 2012). Dörnyei (2005/2010) points out that most learning style instruments were in fact designed with the pedagogical purpose of raising learners' awareness of learning styles rather than with the academic purpose of research use. Ehrman and Leaver (2003) assert that the construct underlying the E&L Learning Style Questionnaire is useful on its own, but acknowledge that its value multiplies when combined with information obtained through discussions and interviews with students, as such additional information helps to delve into the information gained via the questionnaire in a more context-dependent manner. In a similar vein, Chapelle (1995) suggests that students' learning styles be assessed by observing their behavior in class, as an individual's learning style may shift depending on the learning context.

In the present study, while the LSS did not yield the informative results I had initially hoped for on the relationship between students' learning styles and their performance in and attitude toward an ER program, it did elicit surprisingly positive reactions from students regarding its use. Students commented that the LSS had helped them become aware of their own learning style and that this awareness would guide their future language learning. Given feedback like this, the way forward will be to use learning style measurement instruments not solely as assessment tools but also as a way for students and teachers to gain a deeper understanding of the students' profiles as learners. The teacher can then combine quantitative data obtained from the instrument with qualitative information obtained through student observation, informal discussions, or formal interview sessions, and in this way gain a holistic understanding of the students' characteristics, situation, and challenges in order to provide advice or guidance accordingly. For example, when a student does not appear to be intrigued by ER books, the teacher may refer to the students' learning style assessment results as an additional source of information about the reason(s) behind this lack of interest or motivation, and may suggest that the student take measures such as reading books of a different level, focusing more on the global understanding of the text and less on the details, trying not to worry too much about unknown words, etc.

Of course, it is still not realistic to assume that such interventions will be able to motivate all learners in an ER program without exception. As Yamashita (2013) warns, "teachers should not take the extreme view that the ER approach is always superior in cultivating positive feeling toward reading and improving excitement about learning for all kinds of readers" (p. 259). However, as the responses to the attitudinal questionnaire items presented in this study show, the ER approach is effective in motivating many students. Thus, my hope is that raising both teachers' and students' knowledge of students' learning style and awareness of its importance will serve to help more learners see the value of and consequently get the most out of ER.

Acknowledgments

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