

A Study of Science Undergraduate Students' English Extracurricular Reading in Chuxiong Normal University

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Abstract: This study investigated aspects of English extracurricular reading in Chuxiong Normal University. There were 126 students who answered the questionnaire. The sample was divided into three groups based on their performance on China's National standardized College English Test (CET-6/4) for interviewing. The study found that: 1) 115 students (91 %) claimed that they did English extracurricular reading; 2) Short English passages for CET-6/4 were the most frequently (52 %) read type of extracurricular reading material, followed by newspapers, and magazines; 3) The average amount of time spent on English extracurricular reading for the fourth year students was 0.93 hours each day; 4) A majority (53 %) of students claimed to have a positive attitude toward English extracurricular reading; 5) Many students (45%) claimed learning English through English extracurricular reading is not the best and most effective way; 6) Frequent reading strategies included reading without interruption, getting the main idea at first, looking up unknown vocabulary after reading, and looking up unknown vocabulary while reading; 7) All students who did English extracurricular reading claimed they had problems with it; and 8) No students claimed that there were other factors that lead them to pass CET-6, or CET-4, or not yet pass CET-4. The results of the study have strong implications for what can be done to improve the non-English major's English proficiency.

Key Words: Science undergraduate students, English extracurricular reading, Chuxiong Normal University.

Introduction

English reading has always been considered one of the most important parts of English language learning. Reading can help to develop competence in listening, speaking and writing. The amount of reading largely determines the overall competency in English (Krashen, 1989; Stanovich & Cunningham, 1993, pp. 440-464).

Goodman (1973) described reading as a psycholinguistic guessing game. It involves an interaction between thought and language. English extracurricular reading is the reading which students choose to do on their own; it refers to reading any materials in English other than English textbooks. It is an exercise where students self-select and independently read appropriate books.

The purpose of having students participate in extracurricular reading is to improve comprehension skills, to broaden reading experiences, and to

engage in personal interests outside the classroom in order to create lifelong learners (Elliott & Colunnist, 2007, pp. 35-40).

Reading strategies have been defined (Garner, 1987; Afflerbach, Pearson & Paris, 2008) as specific, deliberate, goal-directed mental processes or behaviors, which control and modify the reader's efforts to decode a text, understand words and construct the meaning of a text. Reading strategies have been usually classified (O'Malley & Chamot, 1990) into three broad categories, depending on the level or type of thinking processing involved: cognitive, metacognitive strategies and social affective strategies

Students learn words through wide reading (Nagy & Herman, 1987; Fielding, Wilson & Anderson, 1986). Students who read independently become better readers, score higher on achievement tests in all subject areas, and have greater content knowledge than those who do not (Krashen, 1989;

Stanovich & Cunningham, 1993, pp. 440-464).

In summary, research generally supports the view that during English extracurricular reading, even a small amount of English extracurricular reading helps increase students' reading comprehension, listening comprehension, vocabulary growth, spelling facility, understanding of grammar, speaking, writing, and knowledge of the world.

This study aimed to investigate the following research questions:

1. Did students do English extracurricular reading?
2. What kinds of reading materials did students read regularly?
3. How many hours did students spend on English extracurricular reading per day?
4. Did students have a positive attitude toward extracurricular reading?
5. Is learning English through English extracurricular reading is the best and most effective way of improving their English?
6. What reading strategies were employed by students who passed CET-6 or CET-4, or were working to pass CET-4?
7. Did students who passed CET-6 or CET-4, or were working to pass CET-4 have any problems with English extracurricular reading?
8. Were there any other factors that lead students to pass CET-6 or CET-4, or to not yet pass CET-4? For example, Had they taken a remedial course? Did they have a tutor? Were they sick? What is the profession of their parents?

Research Methods

Participants

The participants were 126 fourth year Chinese students majoring in Biotechnology (42 students), Chemistry (39), or Science education (45) at Chuxiong Normal University, Chuxiong, Yunnan province of China. The participants were divided into three groups as follows:

Group 1: Science students who had previously passed CET-6 (2 students);

Group 2: Science students who had previously passed CET-4 (21 students);

Group 3: Science students who were working to pass CET-4 (103 students).

Research instruments

The research instruments consisted of questionnaires and interviews. Questionnaires were used to collect data to answer research questions 1, 2, 3, 4 and 5, while interviews were used to collect data for questions 6, 7 and 8.

Data collection

The questionnaire was administered during three different classes, and all students completed questionnaires. All the interviews were recorded by a MP4 device, and by taking notes. There were only two fourth-year students who majored in science and had passed CET-6. There were 21 fourth-year students who majored in science and had passed CET-4. The researcher planned to interview all 21 students, but only 15 students volunteered to be interviewed. There were 103 fourth-year students who majored in science and were still working to pass CET-4. The researcher planned to interview 23 students (equal to the sample in group 1 and group 2, combined). The researcher chose 23 students by systematic random sampling: the researcher listed the 103 students according to their student's ID number, and then chose the 20 numbers that can be divided by 5 (i.e. 5, 10, 15, and 20); the other three interviewees were interviewed as the opportunity arose. Fifteen students volunteered to be interviewed.

Data analysis

Data from questionnaires of the 126 students were entered in Microsoft Office Excel for analyses. Interview recordings were first transcribed in Chinese and then translated into English. Then, the researcher categorized, tabulated, and recombined data to address the initial interview questions of the study.

Results

The research questions addressed in this study were as follows.

RQ 1: Did students do English extracurricular reading?

There were 115 students (91 %) who claimed that they did at least some English extracurricular reading, while 11 students (9 %) claimed they never did English extracurricular reading (see Table. 1).

Table 1 Time spent on English extracurricular reading.

No. of hours per day																	
None		0-1		1-2		2-3		3-4		4-5		5-6		6-7		N	μ
No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
Students																	
11	9	82	65	19	15	6	5	4	3	4	3	-	-	-	-	126	0.93

RQ 2: What kind of reading materials did students read regularly?

English short passages for CET-4/6 preparation were the most frequent or popular type of English extracurricular reading materials among students, read frequently by 52 % of the respondents. Newspapers were the next most frequent. Magazines ranked third, with simplified novels running a close fourth and English websites fifth. Books of English literature were sixth, original novels seventh, and prose/poetry were least often read (see Table. 2).

The results from the questionnaire and interview revealed the same results: English short passages for CET-6/4 were the most frequent. Newspapers were the next most frequent and magazines ranked third.

RQ 3: How many hours did students spend on English extracurricular reading per day?

The overall percentage distributions of time spent on English extracurricular reading by the fourth year students, along with N and μ are presented in Table 1. To quantify the responses, the median was assigned to each category (e.g. 1.5 for 1-2 hours, 2.5 for 2-3 hours), and means (μ) were calculated for each group of students, and for the entire sample.

Most science students spent less than one hour per day on English extracurricular reading. Among the full sample of 126 students, 9 % read none, 65 % read less than 1 hour, 15 % read 1-2 hours, 5 % read 2-3 hours, 3 % read 3-4, and 3 % read 4-5 hours. None of the students reported reading more than 5 hours per day. The average amount of time spent on English extracurricular reading for the fourth year students was 0.93 hours (i.e., 56 minutes) each day.

Table 2 English extracurricular reading materials that students read

Aspect	English materials	Level								μ
		Never		Seldom		Sometimes		Frequently		
		No.	%	No.	%	No.	%	No.	%	
English materials	Newspapers	17	13	36	29	37	29	36	29	1.73
	Magazines	19	15	46	37	39	31	22	17	1.51
	English short passages for CET-6/4 for CET-4/CET-6	11	9	18	14	32	25	65	52	2.2
	Books of English literature	49	39	39	31	23	18	15	12	1.03
	Simplified novels	36	29	40	32	24	19	26	21	1.32
	Original novels	62	49	39	31	16	13	9	7	0.77
	Prose/poetry	88	70	26	21	12	10	-	-	0.4
English websites	26	21	59	47	30	24	11	9	1.21	

RQ 4: Did students have a positive attitude toward extracurricular reading?

Table 3 shows the results from section 3 of the questionnaire, which addresses the research questions regarding attitude towards English extracurricular reading, and the effectiveness of English extracurricular reading.

Of the 126 students, 54 % (17+37) of students claimed to have positive attitude toward English extracurricular reading, of whom 17 % strongly agreed that they have a positive attitude toward English extracurricular reading. Meanwhile, 13 % of students claimed they have a negative attitude toward English extracurricular reading, and 34 % of students neither agreed nor disagreed that they have a positive attitude toward English extracurricular reading.

RQ 5: Is learning English through English extra-

curricular reading the best and most effective way of improving their English?

There were 68 % (21+47) of students claimed they thought English extracurricular reading is very important for improving English. However, 39 % (33+6) of students claimed that English extracurricular reading did not work well when they took CET-6/4; 44 % (36+8) of students disagreed that "in English learning, reading is the skill that I want to learn most"; 46 % (37+9) of students disagreed that learning English through English extracurricular reading is the most effective way. So, most Chinese science students agreed English extracurricular reading is very important for improving English, but claimed that English extracurricular reading is not the best and most effective way to learn English (see Table 3).

Table 3 Students' attitude toward English extracurricular reading

Item	Statement	Level of opinions									
		SA		A		N		D		SD	
		No.	%	No.	%	No.	%	No.	%	No.	%
1	I have a positive attitude toward English extracurricular reading.	21	17	46	37	43	34	13	10	3	2
2	In my view, English extracurricular reading is very important for improving English.	26	21	59	47	27	21	10	8	4	3
3	English extracurricular reading works well when I took CET-4/CET-6.	17	14	21	17	39	31	42	33	7	6
4	In English learning, reading is the skill that I want to learn most	9	7	23	18	39	31	45	36	10	8
5	I think learning English through English extracurricular reading is the most effective way.	6	5	19	15	44	35	46	37	11	9

(Note: SA: Strongly agree; A: Agree; N: Neither agree nor disagree; D: Disagree; SD: Strongly disagree.)

RQ 6: What reading strategies were employed by students who passed CET-6 or CET-4, or were working to pass CET-4?

The top three reading strategies according to the interviews with group 1(N=2) were: 1. Reading without interruption, getting the main idea at first; 2. Looking up all the unknown vocabulary after reading; and 3. Looking up the unknown but important words while reading.

The top three reading strategies from group 2 (N=15) were: 1. Looking up all the unknown vocabulary after reading; 2. Reading without interruption, getting the main idea at first; and 3. Reviewing the unknown vocabulary after reading.

The top three reading strategies from group 3 (N=15) were: 1. Looking up all the unknown vocabulary while reading; 2. Looking up all the unknown vocabulary after reading; and 3. Taking notes (see Table 4).

Table 4. Reading strategies used during English extracurricular reading

Aspect	Statement	Group		
		1 N=2	2 N=15	3 N=15
What reading strategies did you employ?	Reading without interruption, getting the main idea at first	2	6	1
	Looking up all the unknown vocabulary after reading	1	8	2
	Looking up all the unknown vocabulary while reading	-	2	6
	Looking up the unknown but important words while reading	1	3	-
	Reviewing the unknown vocabulary after reading	1	5	-
	Analyzing the structure while reading	1	-	-
	Taking note while reading	1	3	2
	Guessing the meaning when you met an unknown word	1	3	1
	Using background knowledge	1	3	-
	Using prefix, stem and suffix while reading	1	3	-
	Reading one passage many times	-	2	-
	Reading at fixed time	-	2	1
	Reciting the sentence that contain unknown words	-	1	-
	Reviewing the passage that was read last time before reading a new one	-	1	1
	Reading at a fixed place	-	1	-
	Translating whole passages to Chinese while reading	-	1	-
	Reading at least two short passages per day	-	-	1

RQ 7: Did students who passed CET-6 or CET-4, or were working to pass CET-4 have any problem with English extracurricular reading?

Both the students from group 1 claimed that they had problems with English extracurricular reading, as summarized in Table 5. All 15 students interviewed from group 2 claimed that they had problems with English extracurricular reading.

In group 3, ten students claimed that they had problems with English extracurricular reading, and five students claimed they did not do English extracurricular reading. Thus, all the students who did English extracurricular reading claimed they had problems with English extracurricular reading.

Table 5 Problems with English extracurricular reading

Aspect	Problems	Group		
		1 N=2	2 N=15	3 N=15
Do you have any problems with English extracurricular reading?	It's difficult to understand collocations and idioms	1	3	1
	It's tiring to look up many unknown words.	1	5	-
	Lacks of vocabulary	-	7	9
	Grammar is weak point	-	4	2
	Cannot find good English extracurricular reading materials	-	1	-
	Cannot improve listening skills	-	1	-
	Some English material is very difficult to understand	-	1	1
	Self-control	-	1	3
	Many long sentences especially clauses cannot understand	-	1	-
	Lacks of western culture	-	1	1

RQ 8: Were there any other factors that lead students to pass CET-6 or CET-4, or not pass CET-4? E.g. Had they taken a remedial course? Did they have a tutor? Were they sick? What is the profession of their parents?

All the students from the three groups claimed that there were no other factors that lead them to pass CET-6 or CET-4, or not pass CET-4 (see Table 6).

Table 6 Factors leading students to pass CET-6/4 or to not yet pass CET-4

Aspect	Statement	Group		
		1 N=2	2 N=15	3 N=15
Are there any other factors that lead you to pass CET-6 or CET-4 or to not yet pass CET-4?	Yes	-	-	-
	No	2	15	15

Discussion

Reading materials

The results from the questionnaire and interviews revealed consistent results: English short passages for CET-4/6 preparation were the most frequent or popular type of English extracurricular reading, while newspapers were the next most frequently

read. Magazines ranked third. Other materials were read, but much less commonly. These findings were inconsistent with those of previous studies.

For electronic media and English extracurricular reading, there is a lot to be examined when thinking of college students and English reading. Students learn English, not only by English extracurricular reading, but also from other sources. Students in this study mentioned that movies

with the dialog in English and English songs from the internet are very good resources for learning English. They said that English movies that had English audio and Chinese subtitles were an especially good way to improve English vocabulary. When an unknown word appears, one can pause the movie and read the Chinese subtitles to see a translation. The same situation is true when listening to English songs.

In its 2007 overview of studies of adult reading habits, "To Read or Not to Read," the NEA (National Education Association) suggested that studies are needed to examine the "effectiveness and costs and benefits of programs to foster life-long reading and skills development" (Elliott & Columnist, 2007, p. 343), as well as studies to examine the "effects of electronic media and screen reading" in young adult reading development. The researcher found that the internet is becoming more and more popular in university, as many students use a computer for studying and entertainment. So, do the internet, instant messaging, reading blogs, games, and other electronic media, which many claim have replaced English extracurricular reading, have a detrimental effect, or are those claims exaggerated?

Prose/poetry was the least commonly read material. In this study, no student claimed to read prose/poetry frequently for extracurricular English reading, while 70 % of students claimed they never read prose/poetry, and 21 % of students claimed they seldom read prose/poetry. This result is similar to Chen's study, which found that "the average of prose/poetry equals 1.33 (a popularity ranking) for first year university students, 1.02 for third year university students, and prose/poetry stayed at the bottom of reading interests" (Chen, 2007, p.649).

Reading strategy

For the reading strategies, reading without interruption, getting the main idea at first, and looking up all the unknown vocabulary after reading were the most frequent reading strategies that proficient students employed. Other reading strategies were also employed by proficient students. Each reading strategy is important at a particular time and strategies can be mixed. A reader may want to scan a chapter until they find a particular paragraph or explanation that is important to them. One may

want to skim to understand the important ideas before a tutorial and read certain parts in full later when one has to write an essay. Readers may skim because they understand a certain concept, but then read in full when they need to understand the ideas in the way the author has explained them, and use the examples for assistance (Available at <http://tluecom.unimelb.edu.au/pdfs/reading3ed.pdf>).

Goodman (1973) indicated that proficient readers recognize the purpose for reading, approach the reading with that purpose in mind, use strategies that have proven successful to them in the past when reading similar texts for similar purposes, monitor their comprehension of the text in light of the purpose for reading, and if needed adjust their strategy. Proficient readers know when unknown words will interfere with achieving their purpose for reading, and when they will not. When unknown words arise and their meaning is needed for comprehension, proficient readers have a number of word attack strategies available to them that will allow them to decipher the meaning of the words to the extent that they are needed to achieve the purpose for reading. This researcher found that effective reading requires you to be able to: understand the main idea without interruption, identify the important ideas, read as many times as you can, think actively as you are reading about the significance of the text and the connections between it and other things you have been reading, and take notes that will be useful to you.

Hosenfeld (1977) compared 20 successful and 20 unsuccessful ninth-grade students' use of reading strategies in learning to read French as a second language, and concluded that the successful readers kept the meaning of the passage in mind while reading, skipped unimportant words, read in 'broad phrases', relied on context to determine word meaning, and were confident in themselves as readers. Unsuccessful readers translated sentences and lost the general meaning of the passage, rarely skipped words, looked up unknown words in a glossary, and had a poor self-concept as readers. These results clearly showed the strategies that students used to process the text, but the relationship between the strategies used and the comprehension of specific paragraphs or the text as a whole was not clear.

Conclusion

Based on the findings of this research, most Chinese science students believed that learning English through English extracurricular reading is a very important way for improving their English, but did not agree that it is the best and most effective method for learning English. If students spend more hours on English extracurricular reading, they will receive more benefit. English simplified novels, original novels, and newspapers are good choices as reading materials. When reading, the following strategies were found to be useful: reading without interruption, getting the main idea at first, and looking up all the unknown vocabulary

after reading. Other factors (e.g., remedial courses, tutors, or the profession of their parents) did not appear to be important. So, even if a student's parents are not English teachers, and do not have the benefit of a tutor or remedial course, they may still learn the English language well. Finally, the more a person reads the better results are achieved, according to most studies.

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