

A Study of the Effect of English Media Exposure on English Acquisition of High School Students in China

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Abstract. This study investigates the impact of English media exposure on the English acquisition of high school students in China, focusing on five media types: English movies, books, games, musicals, and system language settings. Using a mixed-methods approach, the research combines quantitative data from 60 participants via questionnaires with qualitative insights from semi-structured interviews. Results indicate a significant positive correlation between time spent reading English books and TOEFL writing scores, as well as between exposure to English musicals and vocabulary acquisition. Qualitative findings further reveal that books and movies are perceived as the most beneficial media types for language learning, providing contextual and cultural understanding. The study highlights the potential of media-based language learning and suggests practical applications for English teaching methodologies in China, while also acknowledging limitations such as regional bias and sample size.

Keywords: English media exposure, English acquisition, high school students, mixed-methods research, language learning strategies.

1. Introduction

In China, learning English is mandatory for Chinese high school students [1]. However, most of the English learning in Chinese high schools happens in class, while students are seldom exposed to English outside the class [2]. Social media is becoming increasingly globalized and interconnected, so more and more students have started to actively immerse themselves in English media.

1.1. English movies

This study examines the effect of English movies on the English level of high school students in China. Some of the effects of watching English movies on students' English level have already been tested in previous studies. Students' enthusiasm and sense of participation in English classes increase after regularly watching movies. The combination of auditory and visual elements of movies helps students study phrases and pronunciation. This audiolingual method focuses on language study and its use in context. Watching English movies results in a large increase in speaking and listening skills [3]. The effect of movies on improving language level was also confirmed in other languages. After being exposed to movies in the target language with subtitles in their native language for one

to two years, participants improved in four language skills: reading (B1 level), writing (A2), speaking (B1), and listening (B1). Learning occurred naturally, often unconsciously, as they initially watched for entertainment [4].

1.2. English books

The effect of English books on the English level of high school students in China is also one of the topics of this study. Exposure to large numbers of books will affect general language competence. Exposure to high interest illustrated books showed significant improvements in reading and listening comprehension. Reading books bridges the gap between L1 and L2 learning by providing intrinsic motivation, emphasizing meaning over form, and increasing exposure to the target language. High-interest story books provide a basis for language learning, which goes a long way to bridge the gap between L1 and L2 learning contexts. Repeated exposure to print, pictures, and engaging stories in a supportive environment was the critical factor in improving language skills, particularly in receptive abilities like reading and listening comprehension. Uncontrolled reading materials, when supported by contextual cues like pictures, can effectively help learners acquire new language structures without strict vocabulary controls [5]. Book reading supports language learning by providing opportunities for joint attention, responsive interactions, and exposure to low-frequency words not commonly encountered in everyday conversations [6].

1.3. English games

The effect of playing English games on students' English level has already been tested in previous studies. Games provide the students with an interesting and relaxing study environment. There are a lot of advantages to using games to study words and phrases. For example, games are entertaining, and they make the studying procedure more similar to the acquisition procedure, which makes students study more naturally. Playing games helps students learn vocabulary more effectively because it creates an enjoyable and interactive environment, making the learning process feel natural and engaging.

Games are highly motivating for students learning English as a foreign language. They provide opportunities for communication, practice, and vocabulary retention in a fun and meaningful way. Games also help students overcome their fear of using the language and encourage long-term memory retention. The students can be more willing to study English words and phrases after playing games. It also improves collaboration between students. Games are effective in teaching non-native languages because they are entertaining, allowing students to practice all language skills and communication aspects. Games increased their vocabulary mastery, as games often require them to use English for communication and understanding in-game content [7].

1.4. English musicals

Although only a few studies focused on the effect of watching musicals, an art form that became popular recently, on the English level, these studies showed some specific effects of English musicals. The use of musicals in English learning provided students with meaningful opportunities to use the language, making them more imaginative, creative, and less frustrated. This approach also boosted their confidence and motivation. Through drama activities, language is used in meaningful situations. It provides the opportunity for the student to use language meaningfully and appropriately. Singing and acting in English made the learning process enjoyable and helped them

internalize the language more effectively. Drama activities, such as musicals, enhanced students' motivation, self-esteem, and empathy while reducing their fear of rejection, making English learning more engaging and effective [8]. Music in musicals is usually sung at a high volume and with clarity. Also, they are often not as fast as usual speech. Their meanings are usually more understandable since they are about the plot, and their grammar, words, and phrases are relatively simple. These advantages make them an effective material for learning English as a foreign language [9].

1.5. Methodological concern

Most of the studies focused on quantitative analysis and ignored qualitative analysis. However, qualitative analysis can provide additional information that quantitative analysis cannot provide. Integrations of interviews, observational studies, and literature reviews are expected in a lot of research. Studies that use only a single method are more susceptible to errors about that method (e.g., unfair interview questions, biased answers) than are studies that use more than one method, because data obtained through different methods provide cross-method effectiveness examinations. Qualitative research is as effective as quantitative research. In addition, qualitative methods provide different insights. By their nature, qualitative findings are highly context-dependent and case-dependent. The focus is on understanding and illuminating important cases rather than on generalizing from a sample to a population [10].

2. Method

This study aims to investigate the relationship between media exposure and the English level of high school students in China. This study explores media exposure in five domains: system language, English games, English books, English movies, and English musicals. This study uses the highest TOEFL (Test of English as a Foreign Language) score and vocabulary to measure the English skills of students. This study applied a method similar to Almekhlafy, who designed quantitative analysis, which includes questionnaires, and qualitative analysis, which includes interviews [11]. Before implementing the experiment, the questions in the questionnaires and interviews were piloted on 15 participants, and they examined the questions and gave suggestions for modifications that made the questions more related to the research topic and more understandable for participants.

2.1. Participants

One hundred participants were recruited through poster messages in WeChat groups and chats. 30 participants were excluded from the dataset because these participants did not meet the criterion about age, which restricted the participants to high school students. In the rest of the participants, 10 participants were excluded from the dataset because they did not provide their TOEFL scores in their responses. 60 participants provided valid responses. The final sample includes 60 valid responses ($M_{age} = 16.96$, $SD = 0.91$). Among the 60 participants, 47.1% are male, and 48.6% are female. Of the 60 participants, 22 provided the number of English vocabulary words they know. Of the 60 participants, four participants (one male, three female) voluntarily joined the semi-structured interview session ($M_{age} = 17.25$, $SD = 0.87$).

2.2. Materials & procedure

To find the relationship between the frequencies of categories of media exposures and TOEFL scores of different subjects, a Wenjuanxing questionnaire (<https://www.wjx.cn/vm/momU3ZD.aspx#>) was sent via WeChat. This questionnaire contains 5 parts. The first part is the consent form, which tells the participants the aim and the data collected from this study, and asks the participants whether they want to join the study. If they choose NO, it means that they voluntarily exit the study. If they choose yes, they agree to join the study. The first part is the frequency of the 5 categories mentioned above of media exposure. (e.g. Q: How long do you spend on watching English movies per week? A.< 5 hours B. 5-10 hours C. 10-15 hours D. 15-20 hours) The second part is about demographic information of the participants (e.g., gender, age). The third part is the TOEFL reading, listening, writing, and speaking scores of participants. (e.g., Please input your highest TOEFL reading score) The last part asks participants whether they want to join the interview session and asks them to provide their contact information if they choose “yes”. In the interview session, participants were asked to talk about the specific effect the media exposure has on the English level of the participants.

3. Results

3.1. Quantitative analysis

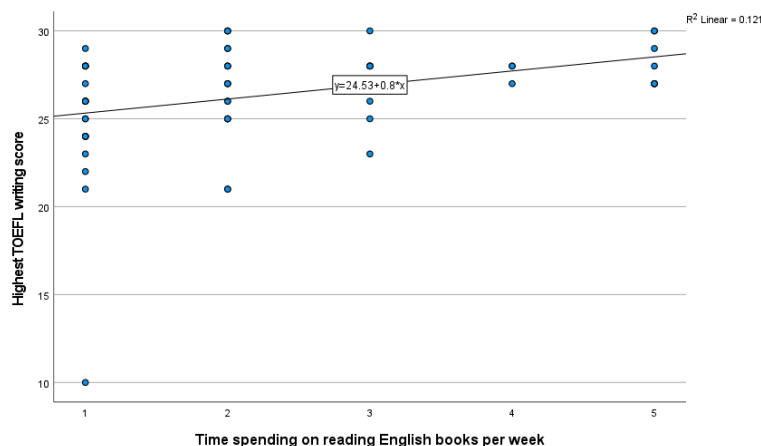


Figure 1. The scatter plot of the frequency of reading English books and the TOEFL writing scores of the participants (1 = <5 h/wk, 2 = 5-10 h/wk, 3 = 10-15 h/wk, 4 = 15-20 h/wk, 5 = >20 h/wk)

Table 1. The relationship of the frequency of reading English books and the TOEFL writing scores of the participants

		Highest TOEFL writing score	Time spending on reading English books per week
Pearson Correlation	Highest TOEFL writing score	1	0.348
	Time spending on reading English books per week	0.348	1
Sig. (1-tailed)	Highest TOEFL writing score	.	0.003
	Time spending on reading English books per week	0.003	.
N	Highest TOEFL writing score	60	60
	Time spending on reading English books per week	60	60

As shown in Figure 1, there is a linear correlation between the time of reading English books and writing level.

According to Table 1, the p-value < 0.01, which means that the linear correlation between the time of reading English books and writing level is very strong.

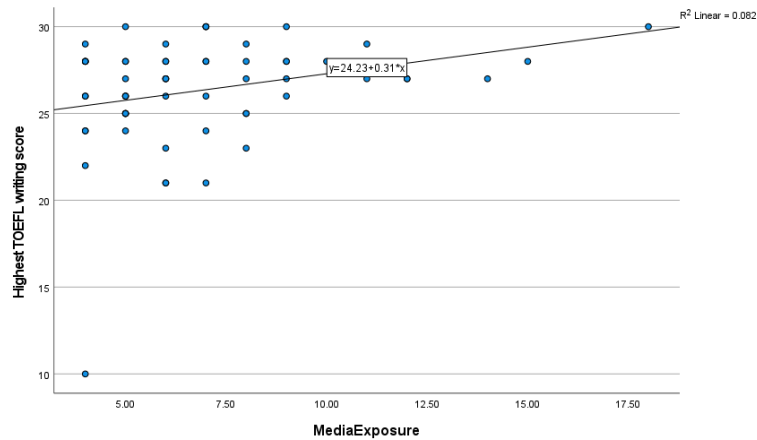


Figure 2. The scatter plot of the frequency of all media exposure in total and the TOEFL writing scores of the participants

Table 2. The relationship of the time of media exposure in total and the TOEFL writing scores of the participants

		MediaExposure	Highest TOEFL writing score
MediaExposure	Pearson Correlation	1	.286*
	Sig. (2-tailed)		0.027
	N	60	60
Highest TOEFL writing score	Pearson Correlation	.286*	1
	Sig. (2-tailed)	0.027	
	N	60	60

As shown in Figure 2, there is a linear correlation between the time of media exposure in total and writing level.

According to Table 2, the p -value < 0.05 , which means that the linear correlation between all media exposure in total and writing level is relatively strong.

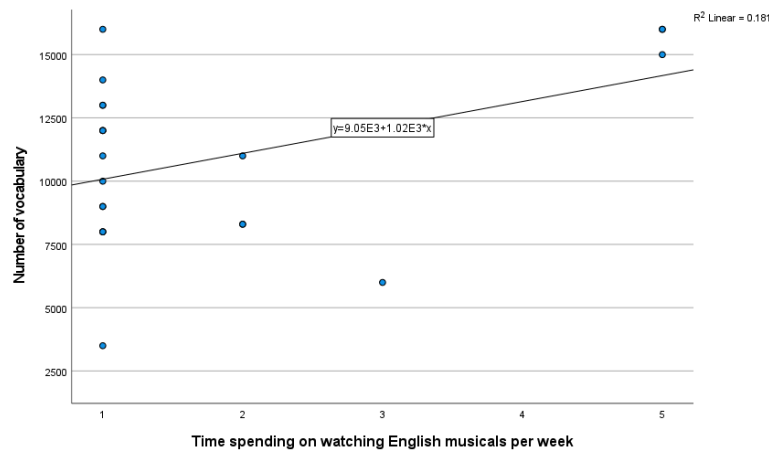


Figure 3. The scatter plot of the frequency of watching English musicals and the number of vocabulary of the participants (1 = <5 h/wk, 2 = 5-10 h/wk, 3 = 10-15 h/wk, 4 = 15-20 h/wk, 5 = >20 h/wk)

Table 3. The relationship of the frequency of watching English musicals and the number of vocabulary of the participants

		Time spending on watching English musicals per week	Number of vocabulary
Time spending on watching English musicals per week	Pearson Correlation	1	.425*
	Sig. (2-tailed)		0.049
	N	60	22
Number of vocabulary	Pearson Correlation	.425*	1
	Sig. (2-tailed)	0.049	
	N	22	22

According to Table 3, $p\text{-value} < 0.05$, which means that the linear relationship between the time of watching English musicals and the number of vocabulary is relatively strong.

All the p -values of other correlations between the categories of media exposure and the aspects of English level are higher than 0.05, which means that quantitative analysis cannot find the relationship between those categories and those aspects.

3.2. Qualitative analysis

This study uses NVivo to analyze the data for qualitative analysis.

For the first category – system language of the smartphone and computer, one participant uses English for both the smartphone and the computer, one participant uses English only for the computer language, and two participants use Chinese for the system language. According to the participants, setting up the system language can help them learn about the functions of the smartphone and computer, but there is little effect on the English level overall. One participant reported that she sets the language of the smartphone and the computer because she has a high English level, not the opposite.

For the second category – English games, only one participant plays the English card games (e.g., UNO), while the rest of the participants play both board games and online games. According to the participants, playing card games provides little advantage in learning English compared to playing online games. Playing online games can help students learn more vocabulary. Also, students can learn more English expressions that are close to daily life, and English topics are more interesting to teenagers in the United States, which are rarely seen in the standardized tests, such as the TOEFL and SAT.

For the third category – English books or articles, all of the participants reported that the type of books that they have read most is the novels in the original English version. According to the participants, reading English books can help them learn the meanings of the words or phrases in context, which contributes to their reading comprehension skills. Also, some authors use some particular words very often, for example, one participant reported that Mary Shelly likes to use the word “endeavor” in her texts, so she understood the word “endeavor” after reading Shelly’s novels. In addition, reading English books can help them to understand the cultural background of English.

For the fourth category – English movies, all of the participants reported that they watched English Movies with both Chinese and English subtitles. Three participants also watched English TV series, one participant also watched English TV shows, such as *The Voice* and *Tonight Show Starring Jimmy Fallon*. According to the participants, watching English movies can help students learn some special expressions in English, such as some slang and native expressions, because it can provide more on the expressions of normal English-speaking people. Also, because there are many liaisons in English movies, more attention needs to be paid to the movies, which can improve listening skills.

For the fifth category, three participants reported that they have watched English musicals, such as *Hamilton* and *Phantom of the Opera*. According to the participants, watching musicals for once does not offer them much benefit on English level, except for becoming more accustomed to the tone of English and improving their English listening skills. That’s because people may focus more on the artistic aspect instead of the language aspect of the musicals. One participant has watched certain musicals like *Hamilton* and *Les Misérables* more than once. She said that she did so because the songs in the musicals are very motivational. She reported that watching musicals more than once helps her speak English more fluently and improves her listening comprehension skills.

Among all the categories, two participants reported that watching English movies affected their English level the most, but it is only because they watched the movies for the most. The other two participants reported that reading English books and articles affected their English level the most. According to them, when they are watching movies or musicals, they may focus more on the scene and ignore the language aspects they can learn from. However, when they are reading English books, they can focus solely on English texts, which can help them build an English mindset. For the category that affected the English level the least. One participant reported playing games because she had not played English games for a long time. Two participants reported setting English as the system language because it can only provide limited vocabulary content.

4. Conclusion

Qualitative analysis serves as a supplement to the data obtained by quantitative analysis. To be specific, qualitative analysis corroborates with quantitative analysis that reading English books contributes most to the English level. Also, the research shows that English writing skills are affected most by media exposure. In addition, the study provided surprising, unexpected data that there is a relatively strong correlation between watching English musicals and the number of vocabulary words, which can be beneficial for future studies about media exposure and English acquisition.

4.1. Limitation

There are some shortcomings in the studies that can be improved in future studies. First, this study only studied 5 categories of media exposure, and some other categories of media exposure, such as the frequency of using English social media like YouTube or Instagram, were ignored. Consequently, the study students in China are comprehensive.

Secondly, this study uses the highest TOEFL score to measure the English level of high school students, which is not the best way to measure the different aspects of English level. Also, the highest TOEFL score cannot show the change of the English level of participants chronologically.

Thirdly, this study may introduce bias because of the demographics of the participants. In this study, because most participants are recruited by sending the questionnaire in classmate groups in WeChat, most of the participants are from high schools in Beijing. Thus, regional bias may be introduced to the results.

Finally, this study only includes 4 participants in the interview session. It may be unrepresentative of all the high school students in China. Thus, the result obtained from the qualitative research may somewhat deviate from the actual results.

4.2. Applications

This study can make the English teaching and studying of Chinese high school students more efficient. Firstly, this study provides insights into English teaching that educators can use the media as a teaching method more efficiently. Also, the study finds that there are some strong or surprising correlations between different categories of media exposure in the quantitative study, and they are confirmed in the qualitative study. Thus, this study can offer students more effective ways to learn English through different media. Also, the results and research methods can be applied to future studies of the acquisition of languages other than English.

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Appendix

Questionnaire:

1. THE STUDY

This study is being conducted as part of a class project for CIS. The goal of this study is to find the relationship between media exposure and English level. This study consists of answering a few questions on your personal information, experiences, and opinions.

The survey includes a questionnaire which spends around five minutes for completion.

2. RISKS/BENEFITS

This study does not have predictable risks or unwellness outside of what you face in daily life. Although you may not directly benefit from your participation, other people may benefit from the results gathered in this survey.

3. CONFIDENTIALITY

You are not identified in the reports on this survey. Your participation will be kept confidential. However, the teaching team supervising this study may inspect these records.

4. CONSENT

Your participation in the survey is willing. Even after you agree to consent, you can choose to quit the survey at any time without any punishment or effects. You can refuse to fill in any questions for any cause without any negative effects.

Questions or concerns of the survey can be sent to Rongqi Zhang (email address: rongqi_kl1102@163.com).

1. Do you agree to attend this study?

A. Yes B, No

2. Do you use English as your system language of your cell phone?
A. Yes B. No
3. Do you use English as your system language of your computer?
A. Yes B. No
4. The time you spend playing English games each week, in hours
A. Neither more than nor equal to five B. From five to less than ten C. From ten to less than fifteen D. From fifteen to less than twenty E. Neither less than nor equal to twenty
5. The time you spend in reading English books each week, in hours
A. Neither more than nor equal to five B. From five to less than ten C. From ten to less than fifteen D. From fifteen to less than twenty E. Neither less than nor equal to twenty
6. The time you spend watching English films each week, in hours
A. Neither more than nor equal to five B. From five to less than ten C. From ten to less than fifteen D. From fifteen to less than twenty E. Neither less than nor equal to twenty
7. The time you spend watching English musicals each week, in hours
A. Neither more than nor equal to five B. From five to less than ten C. From ten to less than fifteen D. From fifteen to less than twenty E. Neither less than nor equal to twenty
8. Your gender
A. Male B. Female C. Other D. Prefer not to say
9. Your birth date
10. Your TOEFL Reading score
11. Your TOEFL Listening score
12. Your TOEFL Speaking score
13. Your TOEFL Writing score
14. Your vocabulary (If not sure, please input "unknown")
15. Do you want to join our interview session
A. Yes B. No
16. Your contact (phone number/email address /Wechat ID)