

# Revista de Cercetare si Interventie Sociala

ISSN: 1583-3410 (print), ISSN: 1584-5397 (electronic)

# A COMPARATIVE STUDY OF THE EFFECT OF BILINGUAL SUBTITLES AND ENGLISH SUBTITLES ON COLLEGE ENGLISH TEACHING

Fang FANG, Yuqing ZHANG, Yuan FANG

Revista de cercetare și intervenție socială, 2019, vol. 66, pp. 59-74

https://doi.org/10.33788/rcis.66.4

Published by: Expert Projects Publishing House



On behalf of: "Alexandru Ioan Cuza" University, Department of Sociology and Social Work and HoltIS Association

REVISTA DE CERCETARE SI INTERVENTIE SOCIALA is indexed by Clarivate Analytics (Web of Science) Social Sciences Citation Index
(Sociology and Social Work Domains)

# A Comparative Study of the Effect of Bilingual Subtitles and English Subtitles on College English Teaching

Fang FANG<sup>1</sup>, Yuqing ZHANG<sup>2</sup>, Yuan FANG<sup>3</sup>

### **Abstract**

With the advancement of global integration, cultural exchanges have deepened and English learning has become more extensive and diverse. The development of multimedia technology has made more and more English classes pay attention to the role of film and television teaching materials. In order to apply it better in classroom teaching, more and more scholars focus on the impact of different subtitles on English teaching. Based on the acceptance theory, we constructed an experimental method to learn the subject of English-student as the research object. We randomly selected 3 classes from the second-grade students in Shaanxi University of Science & Technology to conduct experiments to study the impact of different subtitles on students' English learning. Finally, based on the connotation of the acceptance theory, we conducted a questionnaire survey on the participating students. We will further analyze the results to confirm the positive effect of bilingual subtitles on English learning. The results prove that watching film and television works is conducive to cultivating the enthusiasm of college students. At the same time, the selection of subtitles can have a positive effect on English vocabulary acquisition. By watching subtitle videos, students are able to acquire a certain level of vocabulary, which is helpful for expanding the vocabulary of students. From the depth of vocabulary knowledge, watching bilingual subtitles in English drama is more conducive to vocabulary incidental acquisition than watching English subtitles in English.

*Keywords*: English subtitles, bilingual subtitles, acceptance theory, efficient English teaching, vocabulary acquisition, acceptance theory,

<sup>&</sup>lt;sup>1</sup> School of Arts and Sciences, Shaanxi University of Science & Technology, Shaanxi, CHINA. E-mail: fangfang@sust.edu.cn

<sup>&</sup>lt;sup>2</sup> School of Arts and Sciences, Shaanxi University of Science & Technology, Shaanxi, CHINA. E-mail: 517588455@qq.com (Corresponding author)

<sup>&</sup>lt;sup>3</sup> School of General Education, Xi'an Eurasia University, Shaanxi, CHINA. E-mail: fangyuan@eurasia.edu

# Introduction

Under the background of global integration, the cultural exchange between China and the West has deepened, and English learning has become a learning that every learner who pursues his own progress and development must carry out (Peters, & Webb, 2018). In English learning, vocabulary learning is fundamental and crucial. When learners learn English vocabulary, English film and television subtitles are a very effective way to learn, to meet the different needs of English learners (Khezrlou, Ellis, & Sadeghi, 2017). With the wide application of multimedia technology in English classroom teaching, more and more teachers pay attention to the role of film and television materials and apply it better to classroom teaching (Suk, 2017). At the same time, with the development of the film industry, film works can freely switch between Chinese and English subtitles or sounds, or remove subtitles. This is a great help for learners to make reasonable use of different types of subtitles in English movies for incidental vocabulary acquisition (Thordardottir, 2019; Romine, et al., 2017). At the same time, how to use the subtitles to help non-English majors to learn vocabulary is a controversial issue. Different teachers have different views on this. Under the new situation, related research on incidental vocabulary acquisition has become one of the important topics in the study of second language acquisition (Pellicer-Sanchez, 2016; Alemi, Meghdari, & Ghazisaedy, 2015). Acceptance theory is a kind of literary criticism theory, which has similarities with "Faithfulness, Expressiveness and Elegance" in translation. Based on the theory of acceptance, this paper analyzes the video teaching methods of college English teaching. We will use the vocabulary acquisition as the main direction of research, focusing on the impact of different subtitle types of English film and television on learners' English learning.

# Literature Review

Accepting theory, also known as accepting aesthetics. As a theory of literary criticism, it is an important faction in Western contemporary literature theory (Abbas, & Sarfraz, 2018). In the late 1960s and early 1970s, the Constance School of the Federal Republic of Germany, represented by Hans Robert Kauss and Wolfgan Iser, was founded. One of the core ideas they put forward is "reader-centered theory", which is reader-oriented. They believe that readers' insights, aesthetics, judgments and other factors play an important role (Sabouri, Zohrabi, & Osbouei, 2015). In English teaching, one of the most far-reaching categories influenced by acceptance theory is translation teaching. To a certain extent, it has a certain degree of similarity to "Faithfulness, Expressiveness and Elegance". The emergence and development of the theory of acceptance has brought about a diversified development of ideas, and the significance of being deeply involved

in formalism and structuralism has been revealed (Garcia, 2017). In the early development of English translation, we have always emphasized the functional equivalence between text and text, but the reciprocity between single texts. It is a pity that we cannot present the central idea, expression, and text humor of the source text in front of the reader. Therefore, the acceptance of the theory has broken the need for a single function to a certain extent. It also spurred the translator's reader-centric mission at a deeper level (Gilakjani, & Sabouri, 2016). The acceptance theory has had a profound impact on translation studies and has made translation studies really out of the 'text' barrier (Yamchi, & Kumar, 2016). The esteem and criticism of the acceptance theory by various university students makes the influence of the study acceptance theory on English translation a meaningful study.

According to the theory of literary acceptance, the virtual world described in a literary work cannot fully fit the world of readers' experience. The imagination between the author and the reader, the reader and the reader may not be the same (Vulchanova *et al.*, 2015). Therefore, the interpretation of a literary work will inevitably be different, sometimes even very different. In the same way, this can also be applied to the understanding of English subtitles. Each audience will be able to participate in the re-creation of the text rather than passively, so that the interpretation process of the literary text inevitably leaves the subject with unique personality and creativity.

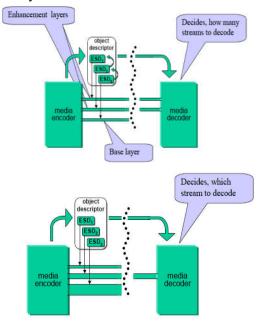


Figure 1: Operating Principle of Subtitle (MPEG)

With the wide application of multimedia technology in English classroom teaching, more and more teachers attach importance to the role of film and television materials, which can be better applied to classroom teaching. Subtitles, as a part of video materials, are implemented by MPEG technology (in figure 1). Acceptance theory mainly affects the translation results from three aspects (Hung, 2017). The difference in translation results determines whether students can master the knowledge well, thus affecting the effectiveness of English teaching. First, whether it is the textual connotation of literature or the subtitle meaning of film and television works, the acceptance theory will focus on subject research (Lindsay, & Creswell, 2017). They reflect the translator's acceptance of the original text through the analysis, summarization or translator's subjective theory research in the translation. Just like the bilingual subtitles of related film and television works released in China, Chinese will be localized and easy to understand. In terms of relative subject theory research, more scholars use the case study method to summarize the translation strategies and methods in the translation and specifically explore the role and play of the translator's subjectivity. However, to a certain extent, bilingual subtitles limit the viewer's self-understanding of the prophetic behavior. They will not rethink the meaning of the translation that can be understood. This has limited their secondary learning to a certain extent. From the perspective of translation, the choice of subtitle translation is also a choice of domestication strategy and alienation strategy (Wu, 2016). Domestication is to cater to the reader's expectations, and alienation is to expand the reader's expectations and summon the reader's imagination. Taking this as a starting point, we can apply it in translation teaching and give play to students' subjective initiative. Secondly, although such works are still dominated by famous names, they are no longer based on one aspect of the work (Shi, & Zhu, 2016; Landry, 2016). They use a more macro-diachronic approach to look at the image, or the construction, variation, and acceptance of the writer's image or work in different periods and heterogeneous cultures. To a certain extent, this has broadened the connotation of translation teaching.

We selected several classes in colleges and universities to play different subtitles. Moreover, we tested the impact of different subtitles on students' English learning through testing. Finally, based on the requirements of the acceptance theory, we conducted a questionnaire survey with students as the main body. We will further analyze the results to confirm the positive effect of bilingual subtitles on English learning.

# Methodology

#### Data Source

We chose the BBC documentary Blue Planet 2 (2017). We chose three episodes of deep sea, coral reef and coast. In order to ensure the impact of the difficulty of different videos on student vocabulary acquisition, we conducted a comparison of the difficulty of the three videos. Video difficulty comparisons include video text comparisons and speech rate comparisons in audiovisual text. After comparison, it is concluded that each video has the most difficult factor and the smallest factor (see *Table 1*). For example, in the deep sea, the unit length of T (14. 28), causal (0. 585) and speech rate (146) are the most difficult, while the lexical density (33.25%) is the least understood. According to the evaluation criteria of the coefficients of each difficulty level, the three-segment video difficulty is similarly understood and is moderately difficult. From this, we can conclude that in this experiment, the interference of the three segments of video can be ignored.

Table 1: Comparison of the difficulty coefficients of three videos

	•			
		Deep sea	Coral reef	Coast
Vocabulary level	Lexical density	33.25%	35.73%	36.56%
·	Word frequency	84.68%	85.2%	83.04%
Syntactic level	T-unit length	14.28	13.24	13.54
	Referential cohesion	0.046	0.036	0.068
Discourse level	Casual cohesion	0.585	0.258	0.364
	Speech of rate (wpm)	146	130	140

In this study, three classes were randomly selected from the second-grade students of Shaanxi University of Science & Technology for experiment. There are 30 students in each class. Through the one-way analysis of variance of the national four test scores before the experiment, the results showed that there was no significant difference in the scores of the students in the three classes (see *Table 2*, p >0.1). Therefore, the English proficiency of the three classes of students did not differ significantly in this study.

Table 2: Analysis of the variance of the students' scores

Class	Average-M(Variance-SD)	Min,Max
Class 1	68.7(1.5)	53,86
Class 2	67.9(1.7)	47,85
Class 3	66.7(1.1)	56,78
Class	1&2 (Significant-Sig.)	1.000
Class	1&3 (Significant-Sig.)	1.000
Class	2&3 (Significant-Sig.)	1.000

Each video will have a corresponding vocabulary benchmark and vocabulary test. The vocabulary benchmark consists of 10 target vocabularies from the video and 20 vocabulary words. Students need to choose whether to know the words and write their Chinese meanings. Vocabulary benchmarking is intended to test students' familiarity with the target vocabulary and adjust accordingly. The vocabulary test is based on Wesche's and Paribakht's VKS (Vocabulary Knowledge Scale, 1996) vocabulary system, which uses multiple choices (selecting the correct sentence for a word) and writing a Chinese translation. In this way, students' mastery of formal representation and conceptual representation is examined. The experiment is divided into three main sections (see *Figure 2*).

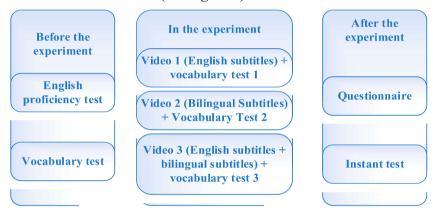


Figure 2: Experimental procedure

# **Results**

We used repeated-measure ANOVA to compare the three sets of data after watching the video. Before using the repeated measures of variance analysis, we tested the raw data by Kolmogor-nov-Smirnov. The results show that the data is in a normal distribution (formal characterization K-S = 0. 128; p = 0. 200. Conceptual characterization K-S = 0. 158; p = 0. 200). As shown in *Table 3*, there are significant differences in the formal representation test scores displayed by the three subtitle groups (F = 4. 431; df = 2; p < 0.05). Specifically, according to the average data analysis, the form representation data of the bilingual subtitle video performed best (M = 83. 00), and the performance of the second language subtitle was second (M = 70. 60). Interestingly, for the vocabulary conceptual representation test, as shown in Table 3, there are also significant differences in the scores of the two subtitle test scores (F = 28.076; df = 2; p < 0.001). However, the subtitle test effect is different from the formal representation: the performance of bilingual subtitle video is still far ahead (M = 60. 67), followed by subtitles (M = 38.33).

*Table 3:* Test data statistics for formal characterization and vocabulary conceptual representation

		Number of people	Average value (M)	Variance (SD)	F	df	Significant (Sig.)
Test data	English	90	67.67	632.299	4.431	2	0.015
statistics	subtitles						
for formal	Bilingual	90	83.00	221.724			
characterization	subtitles						
Test data	English	90	38.33	407.471	28.076	2	0.000
statistics for	subtitles						
vocabulary	Bilingual	90	60.67	502.989			
conceptual	subtitles						
representation							

In order to analyze the significant difference between the test results of different subtitles, the author used post hoc test to further analyze and compare the data. This article chose to use Bonferroni to compare three sets of data. At the same time, we use Games-Howell to measure the accuracy of the final data presentation due to uncertainty about whether the population variance is equal. As shown in Table 4, the results of the formal characterization test scores show that the scores of the subtitles and the bilingual subtitles are significantly different (p < 0.05). At the same time, students in the form of subtitles in the formal representation test performance is significantly better than the single language subtitles (average difference (subtitle) = 15.333). In the Bonferroni multiple comparison of *Table 5*, both subtitles showed significant differences (ps < 0.05). In the proof-of-concept test, students' bilingual subtitle scores were much higher than their subtitles (mean = 22.333). The Games-Howell data in *Tables 4 and 5* is the same as Bonferroni's, reflecting the accuracy of the Bonferroni data. It can be seen that the advantages of bilingual subtitles in student acceptance vocabulary acquisition are significant. Further, we can confirm that bilingual subtitles have a positive effect on English learning and contribute to the development of English teaching in colleges and universities.

*Table 4:* Comparison of test scores in formal characterization between English subtitles and bilingual subtitles

	Subtitle (1)	Subtitle (J)	Average difference (I-J)	Significant (Sig.)
Bonferroni	Bilingual	English subtitles	15.333*	0.019
	subtitles			
Games-	Bilingual	English subtitles	15.333*	0.019
Howell	subtitles			

The author also applied the Pearson's cumulative correlation coefficient for analysis. As shown in Table 6, the subtitles in the formal representation and concept representation scores were not significantly correlated with the English proficiency test (ps > 0.05). It can be seen that the vocabulary acquired by students through subtitles has nothing to do with their English level. This data further confirms the validity of caption acquisition, that is, the vocabulary is not restricted by the students' English level. Watching bilingual subtitles can make students at different levels learn almost the same number of vocabulary.

*Table 5:* Comparison of test scores in vocabulary concepts between English subtitles and bilingual subtitles

	Subtitle (1)	Subtitle (J)	Average difference	Significant
	Subtitle (1)	Subtitle (1)	(I-J)	(Sig.)
Bonferroni	Bilingual subtitles	English subtitles	22.333*	0.000
Games-Howell	Bilingual subtitles	English subtitles	22.333*	0.000

*Table 6:* Pearson's product correlation coefficient among two subtitle test scores and English proficiency test scores

		English proficiency test
English subtitles	Correlation coefficient	0.033
	Significant	0.765
	Number of people	90
English subtitles	Correlation coefficient	0.141
	Significant	0.202
	Number of people	90
Bilingual subtitles	Correlation coefficient	0.049
	Significant	0.661
	Number of people	90
Bilingual subtitles	Correlation coefficient	0.060
	Significant	0.588
	Number of people	90

From the above analysis, we can conclude that the acquisition of the concept representation of the learner not only includes the corresponding connection of the two languages, but also the visual and auditory auxiliary input provided by the video for the learner promotes the fusion of the two languages. At the same time, the positive effects of video on vocabulary acquisition also confirm the researchers' affirmation of video second language acquisition (De Bot, 1986; Tomalin & Stempleski, 1993). Learners have a good degree of complete vocabulary acquisition, and can grasp formal representation and lexical concept representation. Among them, students have a higher degree of acquisition of formal representation. At the same time, the learners learned the vocabulary from the level of their own second language. Therefore, the video of bilingual subtitles provides a good learning environment for students' vocabulary learning. Bilingual subtitles, through the addition of a subtitle in the entire second-language video environment, achieve

the close connection of vocabulary concepts, thus achieving the best vocabulary acquisition effect. In formal representation, students' performance in bilingual subtitles is still better than subtitles in a single language.

Based on the acceptance theory, we conducted a questionnaire survey with students as the main body to confirm the positive effect of bilingual subtitles on college English teaching. Based on the statistical results of the questionnaire, we discussed it from two aspects: descriptive statistics and correlation analysis. We use SPSS 17.0 statistical software to calculate the frequency of students' vocabulary acquired by English drama. The frequency statistics are as follows:

Table 7: Status and types of immersion education

	Master pronunciation	Master spelling	Master grammatical expression	Master usage	Feel familiar	Can guess the meaning of words	Can remember Chinese and English
Valid	%	%	%	%	%	%	%
value							
Very	1.1	1.1	3.3	0	0	0	2.2
disagree							
Disagree	9.9	17.6	17.6	6.6	2.2	5.5	2.2
Uncertain	34.1	37.4	54.9	24.2	14.3	42.9	17.6
Agree	45.1	29.7	19.8	51.6	59.3	41.8	49.5
Very	9.9	14.3	4.4	17.6	24.2	9.9	28.6
agree							

It can be seen that to the extent that vocabulary is viewed in English drama, a higher degree of student recognition focuses on the familiarity of the vocabulary. (See table 7) They can remember the Chinese and English expressions of some words and the usage of words. Some students believe that watching English drama helps to develop the ability to guess and master the correct pronunciation. In terms of the types of vocabulary obtained, the results of the survey indicate that students generally believe that it is easy to remember words that are relevant to their interests and to remember words that are not relevant to their interests but are interesting. We conducted an overall correlation analysis of the student's basic situation, the degree of casual vocabulary, the type of casual vocabulary, and the attitude of the two subtitles. The results are as follows:

Table 8: Overall correlation analysis

Tuble 6. C	verall corre	iation an	arysis					
		Vocabulary	Learning vocabulary motivation	Recognition of vocabulary acquisition	Degree of vocabulary acquisition	Type of learned vocabulary	Attitude towards bilingual subtitles	Attitude towards English subtitles
Vocabulary	Pearson Correlation	1	.482**	.113	.256*	.040	.019	006
Learning vocabulary motivation	Pearson Correlation	.482**	1	.245*	.477*	.110	.172	.054
Recognition of vocabulary acquisition	Pearson Correlation	.113	.245*	1	.460**	.185	.194	.227*
Degree of vocabulary acquisition	Pearson Correlation	.256*	.477*	.460**	1	.175	.240*	.145
Type of learned vocabulary	Pearson Correlation	.040	.110	.185	.175	1	.086	.055
Attitude towards bilingual subtitles	Pearson Correlation	.019	.172	.194	.240*	.086	1	237*
Attitude towards English subtitles	Pearson Correlation	006	.054	.227*	.145	.055	237*	1

The data in *Table 8* shows that the vocabulary level of students, the motivation to learn vocabulary, and the degree of recognition of vocabulary incidental acquisition are significantly related to the degree of vocabulary incidental acquisition. This shows that students with high vocabulary, active learning motivation, and high recognition of the vocabulary acquired by the English drama have a higher degree of vocabulary in the depth (Venkatesh, Thong, & Xu, 2016). At the same time, students' attitudes towards bilingual subtitles are also closely related to the degree of vocabulary acquisition. The correlation between the types of incidental vocabulary and other items is not obvious, and it needs to be further explored in combination with the results of real-time test analysis. In order to further discuss the differences in the degree of vocabulary acquisition of English dramas with two different subtitle types, the results of each individual correlation analysis are organized as follows:

Table II.	linala.	agreedation	onolygic
Tuble 9. S	omgre	correlation	anarysis

	$\mathcal{C}$	-						
		Can remember Chinese and English	Feel familiar	Can guess the meaning of words	Master pronunciation	Master usage	Master grammatical expression	Master spelling
Bilingual	Pearson	.229*	.250*	.001	.039	.298**	.158	.085
subtitles	Correlation							
English	Pearson	.007	.031	.228*	.133	.057	.167	.099
subtitles	Correlation							

Table 9 shows that students' recognition of bilingual subtitles is significantly related to remembering Chinese and English expressions, familiarity of words, and understanding the usage of words. This shows that English dramas with bilingual subtitles make it easier for students to remember the meaning of the words in the film, to deepen their familiarity with the words, and to easily understand the usage of the words in the film. Students' recognition of the English subtitles is significantly related to the guessing meaning. This shows that watching English dramas with full English subtitles is more conducive to cultivating students' ability to guess words.

Questionnaire surveys show that students are easy to remember vocabulary and interesting content related to their interests. In order to explore the differences in the types of vocabulary acquired by English dramas students watching two different subtitle types, we added a random quiz. We asked them to write the corresponding meaning of some English words and use the progressive scoring system to assess. We use SPSS17.0 for statistical analysis of test scores. The results are as follows in table 10.

Table 10: Overall descriptive statistics for real-time testing

	Number of	Lowest	Highest	The average	Standard
	people	score	score	score	deviation
Total score of	30	10	35	21.05	7.152
bilingual subtitles					
Total score of	30	3	23	11.71	6.270
English subtitles					

It can be seen that students score significantly under bilingual subtitles than under English subtitles. To further confirm the difference between the two, we performed a T-test analysis on the two sets of data, assuming no significant difference between the two. After independent sample testing, the t0.05 value was 4.497, the alpha value was 0.05, and the degree of freedom was 40. The T (0.05,40) value is 1.684, t > T, rejecting the null hypothesis. Therefore, there is a significant

difference between the bilingual subtitles and the vocabulary acquisitions under the English subtitles.

Since the test vocabulary contains vocabulary that expresses three aspects of negative meaning, positive meaning and neutral meaning, it is necessary to further examine the influence of two subtitles on these three incidental vocabulary types.

We conducted ANOVA analysis of variance for the three types of vocabulary scores of the negative, positive and neutral meanings of the bilingual subtitles. We get an F value of 13,167, a P value of 0, and a P value that is significantly less than the significance level of 0.05, so it is assumed that no significant difference between the three types is true. We believe that the three types of vocabulary scores of negative meaning, positive meaning and neutral meaning in bilingual subtitles are significantly different. The specific differences are as follows:

Number of	Number of	Standard	Standard error	Significant
groups(I)	groups(I)	deviation(I-J)		
Nogativa maaning	2	4.238*	1.018	.000
Negative meaning	3	4.762*	1.018	.000
Noutral magning	1	-4.238*	1.018	.000
Neutral meaning	3	.524	1.018	.609
Docitivo magnina	1	-4.762*	1.018	.000
Positive meaning	3	524	1 018	609

Table 11: Comparison of types of vocabulary acquired under bilingual subtitles

Table 11 shows that the difference between the scores of negative vocabulary and the positive and neutral vocabulary scores is very significant. Combined with the specific scores of the three types of vocabulary under the bilingual subtitles, the results show that students are more likely to learn the vocabulary that expresses negative meaning after watching the bilingual subtitles.

Table 12: Comparison of the types of vocabulary acquired under the English subtitles						
Number of	Number of	Standard	Standard error	Significant		

Number of	Number of	Standard	Standard error	Significant
groups(I)	groups(I)	deviation(I-J)		
Negative meaning	2 . ,	.000 `	.896	1.000
	3	2.810*	.896	.003
Neutral meaning	1	.000	.896	1.000
	3	2.810*	.896	.003
Positive meaning	1	-2.810*	.896	.003
	3	-2.810*	.896	.003

Table 12 shows that the scores of vocabulary expressing negative and positive meanings are significantly different from those of neutral vocabulary, and the mean difference test scores are 0.003, which is significantly less than the significant level of 0.05. Combined with the specific scores of the three types of vocabulary under the English subtitles, the results show that students have more positive and negative vocabulary than the neutral vocabulary after watching the English dramas.

This study shows that students generally believe that watching English dramas can deepen the familiarity with words and help students master their usage in the corresponding context (Zuiderwijk, Janssen, & Dwivedi, 2015). Some students also believe that watching English dramas is conducive to cultivating the ability to guess and master the correct pronunciation. From the point of view, content that is interesting and interesting is more conducive to vocabulary acquisition. Bilingual subtitles and full English subtitles have different effects on vocabulary incidental acquisition. Watch bilingual subtitles in English, which is good for remembering the Chinese and English expressions of words, deepening the familiarity of words, and understanding the usage of words. Students who watch bilingual subtitles and English dramas learn more negative vocabulary than positive and neutral meaning vocabulary. Students who watch English-speaking subtitles in English are the opposite.

## **Discussion**

It can be seen from the above results that by watching the bilingual subtitle video, the student can acquire a certain degree of vocabulary, which is helpful for expanding the vocabulary of the student. From the perspective of vocabulary knowledge, watching bilingual subtitles is more conducive to vocabulary incidental acquisition than watching English subtitles. Vocabulary is the basis of English learning. In college English learning with a certain knowledge reserve, bilingual subtitles are more conducive to students learning English.

However, in terms of single-language subtitles, it also has different effects on the different levels of vocabulary acquisition. In formal characterization, the data shows that the second-language subtitles are slightly better than the subtitles. This shows that in terms of formal representation, second-language subtitles are more helpful to students in using subtitles to use unfamiliar vocabulary into the second-language environment. We use Chinese subtitles as a medium for English subtitles and English listening input, which can activate students to learn vocabulary by comparing Chinese and English subtitles. At the same time, this paper also proves that students' vocabulary acquired through subtitles has nothing to do with their English level. This undoubtedly affirms the direct impact of subtitles (especially bilingual subtitles) on students' acquired vocabulary. We can use the English vocabulary with the English drama as an auxiliary method of English vocabulary classroom teaching. Language teachers can be supplemented with appropriate guidance when conducting classroom teaching, by arranging diverse viewing tasks and proposing specific viewing requirements. Teachers can guide students in the depth of vocabulary knowledge and vocabulary types, so that students can increase the input of vocabulary cognition processing, to better promote vocabulary incidental acquisition.

### Conclusion

With the wide application of multimedia technology in English classroom teaching, film and television materials can be applied to classroom teaching. Students' subjectivity and dynamism in the process of college English inquiry learning are further strengthened. The introduction of acceptance theory in college English inquiry learning allows us to explore a perfect teaching mechanism from a new perspective. Constructing a heuristic, interactive and open teaching environment can solve the problems in college English teaching. Some teachers affirm the role of film and television subtitles, and believe that film and television subtitles are very helpful for vocabulary learning of non-English majors. Some teachers also believe that Chinese subtitles should be avoided in vocabulary teaching, but English subtitles can be applied to create a real target language environment for students to learn English vocabulary better. Therefore, we empirically studied the positive effects of different subtitles on students' English learning. Our results show that bilingual subtitles exhibit better performance than single-language subtitles in both formal representation and conceptual representation. In the conceptual representation vocabulary, the advantage of bilingual subtitles is much higher than that of single language subtitles, which is very helpful for students to understand the meaning of strange words. It can be seen that watching film and television works is conducive to cultivating the enthusiasm of college students. At the same time, the selection of subtitles can have a positive effect on English vocabulary acquisition. We can use the English vocabulary with the English drama as an auxiliary method of English vocabulary classroom teaching. Language teachers can be supplemented with appropriate guidance when conducting classroom teaching, by arranging diverse viewing tasks and proposing specific viewing requirements. Teachers can guide students in the depth of vocabulary knowledge and vocabulary types, so that students can increase the input of vocabulary cognition processing, so as to better promote vocabulary incidental acquisition.

# Acknowledgements

Financial support for this work was provided by the Young Teachers' Humanities and Social Sciences Support Fund of the School of Arts and Sciences, Shaanxi University of Science & Technology; Industry-University Cooperation and Education Project by Department of Higher Education, Ministry of Education of China (201802064103); the Teaching Reform Research Fund of Shaanxi University of Science & Technology (15XJG058).

# References

- Abbas, A., & Sarfraz, S. (2018). Developing a Prototype to Translate Text and Speech to Pakistan Sign Language With Bilingual Subtitles: A Framework. *Journal of Educational Technology Systems*, 47(2), 248-266. doi: 10.1177/0047239518794168
- Alemi, M., Meghdari, A., & Ghazisaedy, M. (2015). The impact of social robotics on L2 learners' anxiety and attitude in English vocabulary acquisition. *International Journal of Social Robotics*, 7(4), 523-535.
- Garcia, B. (2017). Bilingual subtitles for second language acquisition and application to engineering education as learning pills. *Computer Applications in Engineering Education*, 25(3), 468-479. doi: 10.1002/cae.21814
- Gilakjani, A.P., & Sabouri, N.B. (2016). The significance of listening comprehension in English language teaching. *Theory and Practice in Language Studies*, 6(8), 1670-1677. doi: 10.17507/tpls.0608.22.
- Hung, H.T. (2017). Design-based research: redesign of an English language course using a flipped classroom approach. *Tesol Quarterly*, 51(1), 180-192. doi: 10.1002/tesq.328
- Khezrlou, S., Ellis, R., & Sadeghi, K. (2017). Effects of computer-assisted glosses on EFL learners' vocabulary acquisition and reading comprehension in three learning conditions. *System*, 65, 104-116. doi: 10.1016/j.system.2017.01.009
- Landry, T.R. (2016). Blurring Boundaries: Notes on Ethnography and the Holy Hustlers of Botswana-Richard Werbner, director. Holy Hustlers. 2009. 53 minutes. English subtitles. United Kingdom. International Centre for Contemporary Cultural Research, School of Social Sciences, University of Manchester. No price reported.-Richard Werbner, director. Counterpoint One. 2011. 37 minutes. United Kingdom. Royal Anthropological Institute. No price reported.-Richard Werbner, director. Counterpoint Botswana. 2011. 45 minutes. United African Studies Review, 59(3), 311-315.
- Lindsay, E.K., & Creswell, J.D. (2017). Mechanisms of mindfulness training: Monitor and Acceptance Theory (MAT). *Clinical Psychology Review*, *51*, 48-59. doi: 10.1016/j. cpr.2016.10.011
- Pellicer-Sanchez, A. (2016). Incidental L2 vocabulary acquisition from and while reading: An eye-tracking study. *Studies in Second Language Acquisition*, *38*(1), 97-130. doi: 10.1017/S0272263115000224
- Peters, E., & Webb, S. (2018). Incidental vocabulary acquisition through viewing L2 television and factors that affect learning. *Studies in Second Language Acquisition*, 40(3), 551-577. doi: 10.1017/S0272263117000407
- Romine, W.L., Walter, E.M., Bosse, E., & Todd, A.N. (2017). Understanding patterns of evolution acceptance—a new implementation of the Measure of Acceptance of the Theory of Evolution (MATE) with Midwestern university students. *Journal of Research in Science Teaching*, 54(5), 642-671. doi: 0.1002/tea.21380
- Sabouri, H., Zohrabi, M., & Osbouei, Z.K. (2015). The impact of watching English subtitled movies in vocabulary learning in different genders of Iranian EFL learners. *International Journal on Studies in English Language and Literature*, 3(2), 110-125.
- Shi, X., & Zhu, J. (2016). Modification of a gap acceptance theory model of roundabouts' capacities. *In CICTP 2016* (pp. 1655-1662).

- Suk, N. (2017). The effects of extensive reading on reading comprehension, reading rate, and vocabulary acquisition. *Reading Research Quarterly*, *52*(1), 73-89. doi: 10.1002/rrq.152
- Thordardottir, E. (2019). Amount trumps timing in bilingual vocabulary acquisition: effects of input in simultaneous and sequential school-age bilinguals. *International Journal of Bilingualism*, 23(1), 236-255. doi: 10.1177/1367006917722418
- Venkatesh, V., Thong, J.Y., & Xu, X. (2016). Unified theory of acceptance and use of technology: A synthesis and the road ahead. *Journal of the Association for Information Systems*, 17(5), 328-376. doi: 10.17705/1jais.00428.
- Vulchanova, M., Aurstad, L.M., Kvitnes, I.E., & Eshuis, H. (2015). As naturalistic as it gets: subtitles in the English classroom in Norway. Frontiers in psychology, 5, 1510. doi: 10.3389/fpsyg.2014.01510
- Wu, J. (2016). Design and Realization of Computer Assisted English Teaching Software based on Big Data Corpus Management. *Revista Ibérica de Sistemas e Tecnologias de Informação*, (E13), 311.
- Yamchi, R., & Kumar, V. (2016). Comparison of Iranian Monolingual and Bilingual EFL Students' Listening Comprehension in Terms of Watching English Movie with Latinized Persian Subtitles. *English Language Teaching*, 9(5), 65-76.
- Zuiderwijk, A., Janssen, M., & Dwivedi, Y.K. (2015). Acceptance and use predictors of open data technologies: Drawing upon the unified theory of acceptance and use of technology. *Government information quarterly*, 32(4), 429-440. doi: 10.1016/j. giq.2015.09.005