

A Study on Individual Differences in University Students' English Short Video Learning Behavior and Its Implications for English Education

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대학생 영어 교육에서 짧은 동영상 학습의 개인 차이와 영어 교육적 시사점에 대한 연구

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Abstract

This study examines differences in university students' English short video learning behaviors by gender, grade, and academic performance and explored the educational implications. The study involved 219 university students as participants, using a Likert five-point scale to collect data, and statistical analysis was conducted through independent samples t-test and one-way ANOVA. The results showed that gender had no significant impact on university students' use of English short videos, highlighting the universality of short videos. Lower-grade students used short videos significantly more frequently than higher-grade students, reflecting the characteristic needs of different learning stages. Students with lower academic performance showed a significantly higher dependence on short videos than those with higher academic performance. The study recommends designing English short videos tailored to students' learning stages, with basic content for low proficiency learners and specialized content for advanced learners to support personalized learning and educational equity. Future research could further expand the sample size and cover more universities across regions to validate the generalizability of the findings.

Key words : English short videos, University students, English learning, Difference

I. Introduction

According to the “53rd Statistical Report on China’s Internet Development” released by CNNIC(2024), as of December 2023, the number of internet video users in China reached 1.067 billion, an increase of 36.13 million compared to December 2022, accounting for 97.7% of the total internet users. Among them, short video users

numbered 1.053 billion, an increase of 41.45 million compared to December 2022, accounting for 96.4% of the total internet users. Furthermore, the KCC(2024) survey on the usage of short videos domestically and internationally also shows that TikTok, as a leading short video platform, recorded 710,000 monthly active users in Korea in April, ranking second on the list of popular apps. This

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indicates that the popularity of short videos in Korea continues to rise.

With its concise and impactful nature, short video has attracted a large number of users, especially among university students, whose use of short video has gradually extended from entertainment to the field of learning. Compared with traditional learning methods, short videos provide university students with a flexible and efficient learning tool, especially in English learning, which has great potential.

In recent years, the application of short videos in English teaching has received increasing attention. Research shows that the visual, auditory, and interactive characteristics of short videos can effectively stimulate learning interest and improve language skills (Chen, 2023). However, individual differences among learners, such as gender, grade level, and academic performance, may influence their usage behavior and the effectiveness of English short videos. For instance, McKee and Ntokos (2022) found that lower-grade students tend to rely more on basic content in short videos, while higher-grade students prefer advanced learning resources. Additionally, students with lower academic performance may depend more on short videos for remedial education (Zhou, 2023). Despite this, existing research mostly focuses on the learning outcomes of short videos, with a lack of systematic exploration into the differences based on gender, grade level, and academic performance.

1. The Current Research on Short Videos in English Learning

In recent years, with the widespread use of mobile internet, short videos have gradually shifted from being entertainment tools to becoming a

medium for supplementary learning. Currently, students extensively utilize new media for EFL learning (Lee and Kim, 2014). Studies have shown that short videos have rich multimodal characteristics, which effectively stimulate learners' interest and enhance learning efficiency. For example, Indrasari's (2015) classroom action research indicated that short videos increased students' average narrative writing scores from 68.22 to 78.31, with 76.47% of students reporting a significant improvement in writing efficiency. Almurashi's (2016) study found that 85% of EFL students considered short videos engaging and believed they significantly enhanced their comprehension skills. Hasan et al.(2018) found that short videos contribute significantly to improving English learners' listening skills, pronunciation, and grammar abilities.

Unlike ESL (English as a Second Language) learners, EFL learners typically live in non-English speaking countries or regions, such as China, Korea, Japan, etc., where English is not their primary means of communication. As a result, they lack a real language immersion environment (Si, 2019). In contrast, ESL learners can experience authentic language exposure through daily social interactions, such as immigrant students living in English-speaking countries, while EFL learners rely more on classroom instruction and short videos to compensate for the absence of an immersive environment (Chen and Kang, 2023).

This difference leads to distinct functional needs for short videos: ESL learners often use them as an extension of real-world contexts, whereas EFL learners focus more on their role in systematically supplementing knowledge (Xu, 2024). Notably, in EFL settings, the "engagement" and "structured design" of short videos have been proven key factors in enhancing learning motivation (Sari et al.,

2021), while ESL research places greater emphasis on the "authenticity" and "cultural adaptability" of such content (Bajrami and Vela, 2017). This contrast highlights EFL learners' strong reliance on instructional content, providing a theoretical foundation for the design of layered learning resources.

However, although existing studies have confirmed the educational value of English short videos, their application still faces certain challenges. The quality of short video content varies, and the lack of systematic planning by learners may limit the effectiveness of short videos as a learning tool. Additionally, most studies focus primarily on the learning outcomes of English short videos, with relatively few studies examining usage patterns and the differences in how they are used.

2. The Potential and Limitations of Educational Functions of English Short Videos

The multimodal characteristics of short videos offer rich possibilities for language learning. For example, through short videos, students can observe real-life scenarios, which helps them learn the practical application of the language. Additionally, short videos have the advantages of fragmentation and flexibility, allowing learners to make use of fragmented time to learn anytime and anywhere (Hasan et al., 2018). These characteristics give short videos significant educational potential in cultivating basic language skills, such as listening and speaking.

Despite the many advantages of short videos, their limitations should not be overlooked. First, the entertainment nature of short video content may undermine its academic value, causing students to focus more on the entertainment function and neglect its learning potential. Second, the

fragmented learning approach of short videos tends to distract students' attention, negatively impacting their learning abilities and focus (Gao and Xiao, 2023). Furthermore, existing short video learning resources lack a hierarchical design, making it challenging to meet the needs of students at different learning levels.

In summary, while research on the use of English short videos in teaching and learning has increased in recent years, there remains significant research potential in this field. This is particularly true for Chinese university students, who have faced many challenges in learning English. English short videos, with their multimodal characteristics, offer university students more diversified learning approaches. However, existing research has mainly focused on the impact of short videos on learning outcomes, with a lack of systematic exploration of individual differences among learners. Therefore, this study will systematically investigate the effects of gender, grade level, and academic performance on university students' English short video learning behaviors, and provide specific educational implications for EFL teaching practice. Specifically, the study will address the following questions: 1. Are there differences in the usage behaviors of English short videos among university students with different genders, grade levels, and academic performance? 2. Based on these differences, what are the specific educational implications of using English short videos in EFL teaching?

II . Research Methods

1. Subjects

This study focuses on university students from a university in Shanxi, China. Due to resource

limitations, the study chose university students from the researcher's previous university as the research subjects to ensure the efficiency of questionnaire collection and the timeliness of data analysis. A total of 258 questionnaires were collected, and after excluding invalid responses, 219 valid questionnaires were retained, resulting in an effective response rate of 84.9%. The basic characteristics of the participants include gender, grade level, and CET-4 pass status, with the specific distribution shown in <Table 1>.

<Table 1> Basic Information of University Students

Category	Division	Frequency	Ratio
Gender	Male	108	49.3%
	Female	111	50.7%
Grade Level	1	52	23.7%
	2	59	26.9%
	3	60	27.4%
	4	48	21.9%
CET-4 Status	Pass	109	49.8%
	Fail	110	50.2%

The sample distribution of this questionnaire is relatively balanced, ensuring the reliability and representativeness of the data. The sample covers students from freshman to senior year, with a gender ratio close to 1:1 (49.3% male, 50.7% female) and a CET-4 pass rate close to 1:1 (49.8% passed, 50.2% not passed). This well reflects the diversity of the university student population, providing a solid data foundation for subsequent analysis of the impact of academic performance differences on short video learning behaviors.

2. Research Tools and Questionnaire Design

The questionnaire in this study is based on the logical process of using English short videos,

incorporating literature analysis and the opinions of three Chinese university instructors. It is divided into four dimensions with a total of 16 questions: a. usage context (4 questions): this section examines the frequency and purpose of students using short videos in different learning contexts (e.g., classroom, self-study, and after-class review); b. usage paths (4 questions): this part explores the paths or methods through which students access short video resources (e.g., social media, learning apps); c. usage preferences (4 questions): this section analyzes students' preferences for the content of short videos (e.g., entertainment, academic value, practicality); d. usage effect (4 questions): this part evaluates the impact of short video learning on students' listening skills, pronunciation, vocabulary accumulation, etc.

The questionnaire uses a Likert five-point scale, ranging from "Strongly Agree" to "Strongly Disagree," with scores assigned from 1 to 5 to facilitate quantitative analysis of students' short video learning behaviors. The reliability analysis of the questionnaire was conducted using Cronbach's α coefficient test. Reliability analysis results indicate that the overall Cronbach's α value for the scale is 0.944, with α values for each dimension exceeding 0.7, demonstrating a high level of internal consistency and reliability. The reliability test results are shown in <Table 2>.

<Table 2> Reliability Test Results

Variables	Number	Cronbach's α
usage context	4	0.820
usage paths	4	0.780
usage preferences	4	0.828
usage effects	4	0.893

3. Data Collection and Processing

The questionnaire was distributed via the Wenjuanxing platform, with all responses collected anonymously to ensure data authenticity. To explore the differences in university students' English short video learning behaviors, this study used the following data analysis methods: descriptive statistics to perform basic statistical analysis on sample characteristics such as gender, grade level, and CET-4 passing status; independent sample t-tests to examine significant differences in short video learning behavior based on gender and CET-4 passing status; and one-way ANOVA (Analysis of Variance) to analyze differences in short video learning behavior among students from different grade levels. Data processing was performed using SPSS 26.0 to ensure the scientific and accurate analysis of the data.

III. Research Results

1. Gender Differences Analysis

Independent samplet-tests revealed no significant

differences between male and female university students in their English short video learning behaviors ($t = -1.102, P = .272 > 0.05$). Specifically, there were no significant differences in the scores of males and females across the four dimensions of usage context, usage path, usage preference, and usage effect (see <Table 3>).

The research results indicate that gender does not have a significant impact on university students' English short video learning behaviors, suggesting that the application of short videos for learning remains consistent across different gender groups. This finding aligns with Li Jie's observation that educational short videos, due to their broad user adaptability, can meet the needs of learners of different genders (Li and Pan, 2023). The design of English short videos typically focuses on catering to the needs of diverse learners, which ensures their applicability is relatively consistent across gender dimensions (Chen, 2023). Furthermore, previous research has found that multimodal input, including visual and auditory elements, can effectively lower the learning threshold, allowing learners of different genders to benefit from English

<Table 3> Differences in English Short Video Usage Among University Students of Different Genders

Category	Gender	N	M	SD	t	p
usage context	Male	108	2.7639	.84612	-1.102	.272
	Female	111	2.8874	.81236		
usage paths	Male	108	2.4815	.86041	-1.719	.087
	Female	111	2.6712	.77091		
usage preferences	Male	108	2.4884	.88033	.057	.955
	Female	111	2.4820	.79752		
usage effects	Male	108	2.3056	.86152	.111	.912
	Female	111	2.2928	.84132		
Total	Male	108	2.5098	.78222	-.720	.472
	Female	111	2.5833	.72742		

Note : * p <0.05, ** p <0.01, *** p < 0.001. Same below.

short videos (Lin, 2016). Therefore, the data from this study verifies this perspective, indicating that English short videos, in terms of content creation and functional design, do not cause imbalances in the accessibility of learning resources due to gender differences. This further supports the universality of short videos as an educational tool and suggests their broad applicability across diverse learning groups.

2. Grade Differences Analysis

An analysis of variance (ANOVA) revealed significant differences in the short video learning behaviors of students from different grade levels ($p < 0.05$). Students in lower grades generally scored higher than those in higher grades across all dimensions (see <Table 4>).

The research results indicate that lower-grade students significantly use English short videos more frequently than higher-grade students. This grade difference reflects the characteristic learning needs at different stages: lower-grade students in university are typically at the initial stage of language learning, requiring engaging and foundational learning resources (Lu, 2015). The contextualization and multimodal features of short videos can effectively stimulate their interest and meet the needs for basic skill development. In contrast, higher-grade students, whose focus shifts to specialized courses, career planning, or deeper learning, tend to rely less on short videos and prefer learning resources that directly serve career development or academic needs. This behavioral shift suggests that the educational effectiveness of

<Table 4> Grade Differences Analysis Results

Category	Grade	N	M	SD	F	P
usage context	1	52	2.8942	.81702	4.776	.003
	2	59	3.1186	.67332		
	3	60	2.6625	.87796		
	4	48	2.5990	.86100		
usage paths	1	52	2.7500	.80400	7.601	.000
	2	59	2.8644	.76045		
	3	60	2.4417	.84669		
	4	48	2.2083	.70961		
usage preferences	1	52	2.6394	.83345	6.724	.000
	2	59	2.7415	.73982		
	3	60	2.4208	.87393		
	4	48	2.0833	.76550		
usage effects	1	52	2.5673	.85909	10.840	.000
	2	59	2.5847	.71711		
	3	60	2.1708	.86540		
	4	48	1.8177	.72885		
Total	1	52	2.7127	.78241	8.788	.000
	2	59	2.8273	.60600		
	3	60	2.4240	.78190		
	4	48	2.1771	.68165		

English short videos plays a prominent role in lower grades, while its impact decreases in higher grades.

3. Academic Performance Differences Analysis

The academic performance of the respondents was categorized based on whether they passed the CET-4 exam or not. The CET-4 is a nationwide standardized exam in China, with all candidates taking the exam under the same conditions. Using the pass/fail status as a criterion ensures the consistency and fairness of the results. Additionally, the pass rate of the CET-4 is often used as an important indicator to evaluate teaching effectiveness and student learning outcomes in universities. The exam has a clear passing score (typically 425 points), which divides students into those who pass and those who do not, making data analysis and statistical processing easier.

The results of an independent samples t-test based on CET-4 pass/fail status indicate significant differences in the scores across all dimensions between students who passed the CET-4 and those

who did not ($t = -6.237$, $P = .000 < 0.05$) (see <Table 5>).

The research findings indicate that students who did not pass CET-4 use English short videos significantly more than those who passed the exam. Students with higher academic performance tend to adopt deep learning approaches, whereas those with lower performance are more inclined to use surface learning strategies (Ding, 2023). Students who have not passed the CET-4 often require more foundational learning support. Short videos, with their multimodal and contextualized characteristics, can effectively reduce learning difficulty and enhance motivation through engaging content, helping to bridge gaps in language proficiency. In contrast, students who have passed the CET-4, due to stronger self-directed learning abilities and goal orientation, are more likely to opt for structured courses or advanced learning resources, relying less on short videos. This indicates that short videos, in their current design and application, are better designed to meet foundational learning needs, while their functionality in supporting deep and advanced learning remains limited.

<Table 5> Academic Performance Differences Analysis Results

Category	CET-4 Status	N	M	SD	t	p
usage context	Pass	109	2.6032	.90345	-4.101	.000
	Fail	110	3.0477	.68444		
usage paths	Pass	109	2.2844	.80613	-5.624	.000
	Fail	110	2.8682	.72766		
usage preferences	Pass	109	2.1468	.77744	-6.489	.000
	Fail	110	2.8205	.75884		
usage effects	Pass	109	1.9748	.78465	-6.069	.000
	Fail	110	2.6205	.78965		
Total	Pass	109	2.2523	.73376	-6.237	.000
	Fail	110	2.8392	.65640		

4. Educational Implications

This study, by analyzing the gender, grade, and academic performance differences in university students' English short video learning behaviors, reveals the significant role of short videos as a learning tool in English education and provides profound insights for teaching practices.

a. Universality of Short Video Resources

The research results indicate that gender does not significantly affect English short video learning behaviors, suggesting that English short video resources possess universality and broad applicability. Both male and female students can achieve similar learning outcomes from English short videos. This phenomenon validates the widespread applicability of multimodal learning tools and provides insights for the design of short video teaching resources. Developers of short videos can focus more on the content's entertainment and interactivity, without the need to distinguish between gender characteristics, thus more effectively serving diverse learner groups.

b. Different needs of students in different grades

The grade difference analysis shows that lower-grade students use English short videos significantly more frequently than higher-grade students. The higher dependency of lower-grade students on English short video learning is closely related to their learning stage. The contextual and fragmented characteristics of English short videos make them an important tool for guiding lower-grade students in developing basic language skills. Meanwhile, higher-grade students, whose focus has shifted to professional development, gradually reduce their demand for short videos. This finding reveals the differentiated functions of English short videos at different learning stages: at

the beginner stage, they serve as basic and guiding learning resources; at the advanced stage, they function as supplementary tools for deep learning. This result further supports the application of the theory of teaching students in accordance with their aptitude and provides data support for layered educational design.

c. The Role of Short Videos in Remedial Education

The analysis of score differences shows that students with lower scores perform significantly better in using English short videos compared to students with higher scores. From an educational perspective, this result validates the important role of English short videos in remedial education. The multimodal characteristics and entertainment functions of English short videos provide students with poor academic performance with an easy and efficient learning tool, particularly in vocabulary accumulation, pronunciation correction and listening training. High-achieving students tend to choose more systematic and in-depth learning resources, resulting in lower reliance on short videos. This phenomenon indicates that English short videos can effectively bridge the learning gap between students, providing strong support for promoting educational equity.

In conclusion, the value of applying short videos in English education lies not only in improving students' learning efficiency but also in its potential for personalized teaching and educational equity. The design and application of English short videos should fully consider students' individual needs and learning characteristics, providing diverse and targeted support for students at different levels. This approach can help bridge the gap for students with weaker academic performance while offering advanced

learners' additional resources for deep learning. How to further optimize the content design of English short videos to enhance their educational effectiveness is a key issue that needs to be addressed in the future.

IV. Conclusion

This study, through the survey and analysis of university students' English short video learning behavior, reveals individual differences in gender, grade, and academic performance, and explores the language education value of English short videos. Through empirical analysis, this study validates the universality of short video learning resources, which is consistent with the findings of Li and Pan (2023), particularly in terms of gender. This provides important reference for the design of multimodal language learning tools. At the same time, the study reveals the differentiated needs of students at different learning stages and academic levels towards short videos, laying the foundation for the design of tiered educational resources.

In terms of practical value, the research results provide specific guidance for English educators, short video developers, and students. For educators, they can adjust their English short video teaching strategies based on students' grade levels and academic performance; for developers, they can design more targeted, differentiated content; and for students, they can more effectively choose and utilize English short video learning resources. The study particularly emphasizes the unique role of English short videos in promoting educational equity and supporting students with lower academic performance.

Despite the significant findings, the study has

some limitations. First, the sample size is relatively small and concentrated in universities from a single region, which may affect the generalizability of the results. Second, the study did not explore the long-term effects of short video learning, which provides direction for future research. Future studies should expand the sample size and cover universities in more regions to further validate the research conclusions. Additionally, future research could adopt a longitudinal design to track the long-term impact of short video usage on English performance or its effect on the improvement of advanced language skills. Through continuous academic exploration, we will further understand and optimize the application of multimodal learning tools in language education.

In conclusion, this study provides valuable insights into the application of English short videos in EFL language education, with positive implications for promoting educational technology innovation and personalized learning. The research thoroughly analyzes the role of English short videos in language learning, offering valuable experiences for educators, developers, and learners. It holds significant value in advancing technological innovation and teaching reforms in English education.

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- Received : 26 December, 2024
 - Revised : 02 February, 2025
 - Accepted : 11 February, 2025