



IMPROVING STUDENTS' ENGLISH READING COMPREHENSION USING THE FLIPPED CLASSROOM MODEL IN GUANGXI HIGHER VOCATIONAL COLLEGE A

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ABSTRACT

This study investigates the 1. to examine whether there is a statistically significant difference in English reading comprehension achievement between students taught through the flipped classroom model and those taught through traditional instruction, 2. to investigate the extent to which the flipped classroom model improves students' English reading comprehension from pre-test to post-test, 3. to explore students' perceptions of the flipped classroom model in English reading instruction in terms of learning interest, confidence, and perceived effectiveness. Effectiveness of the flipped classroom model in improving students' English reading comprehension at a higher vocational college in Guangxi. The study used an experimental design with 80 students divided into an experimental group and a control group. The experimental group received English reading instruction through the flipped classroom model, while the control group was taught using

traditional methods over one semester. The research instruments included an English Reading Comprehension Pre-test and Post-test to measure learning gains, and a student satisfaction questionnaire to assess perceptions of the flipped model. The tests were analyzed using descriptive statistics and independent-samples t-tests in SPSS. The results showed that the experimental group improved significantly in reading comprehension scores compared with the control group on the post-test. Questionnaire results showed that most students in the experimental group were satisfied with the flipped classroom approach, reporting increased interest in learning and improved autonomous learning skills. The study concludes that the flipped classroom model can effectively improve English reading comprehension and learning engagement among higher vocational college students. These findings offer practical implications for pedagogical innovation in similar educational contexts.

INTRODUCTION

Reading is a fundamental skill for vocational college students' English learning. Currently, most vocational students struggle with insufficient vocabulary, weak grammar, and ineffective reading strategies. Dominated by teacher-centered, traditional teaching, English reading classes rely heavily on grammar-translation and mechanical exercises, which dampen students' motivation for learning and hinder the cultivation of reading skills.

The flipped classroom reverses the traditional teaching procedure: students complete pre-class knowledge acquisition through online videos and reading materials, and classroom time is devoted to interaction, discussion, and problem-solving. This student-centered teaching mode aligns with constructivist learning theories and has been widely applied in English teaching worldwide. Existing studies have shown its positive effect on reading comprehension, but empirical research targeting vocational colleges in underdeveloped areas such as Guangxi remains limited.

This research uses a 12-week quasi-experimental design with first-year students in non-English majors at Guangxi Higher Vocational College A. It aims to answer three research questions: whether a significant score gap exists between the two groups; whether the flipped classroom can improve students' reading performance; and students' perceptions of this teaching model. This study hypothesizes that the experimental group will achieve better test results and hold more positive attitudes toward flipped classroom teaching.

LITERATURE REVIEW

Theoretical Foundations

Three mature educational theories support the implementation of the flipped classroom model in EFL reading teaching and jointly form this study's theoretical framework.

First, Constructivist Learning Theory emphasizes that teachers cannot passively instill knowledge; learners must actively construct it based on personal experience and situational interaction. In traditional reading classes, students receive only teachers' explanations of vocabulary, sentences, and passage structure, leading to a superficial understanding and rigid learning outcomes. In flipped classrooms, students independently preview reading materials, build basic language knowledge, and note difficult points before class. Such pre-class preparation enables learners to complete primary knowledge construction. In-class group discussion, task-solving, and teacher guidance further promote deeper processing of reading content, aligning with the student-centered core of constructivism.

Second, Humanistic Learning Theory focuses on individual development, affective experience, and students' learning initiative. It advocates creating a relaxed, autonomous, and supportive learning environment to stimulate intrinsic motivation for learning rather than relying on external supervision and mechanical training. Higher vocational students lack confidence in English learning and suffer from learning anxiety due to long-term poor academic performance. The flipped classroom reduces in-class lecturing time, provides students with sufficient space for autonomous learning and interactive opportunities, respects

individual learning differences, and effectively relieves students' negative emotions during English reading.

Third, Blended Learning Theory advocates the organic combination of online digital learning and offline classroom teaching to compensate for the shortcomings of a single teaching mode. Traditional offline reading teaching is limited by class time and cannot meet personalized learning needs, while pure online learning lacks supervision and interactive feedback. The flipped classroom integrates the advantages of both modes: online pre-class learning enables flexible, repeated, and personalized knowledge acquisition, while offline classroom instruction focuses on cooperative inquiry, skill development, and knowledge internalization, greatly improving the overall efficiency of English reading instruction.

Foreign Research Status

Foreign research on the flipped classroom began earlier and has developed a relatively complete theoretical and practical framework. Bergmann and Sams formally proposed the concept of flipped teaching in 2000 and widely popularized it in basic and higher education after 2012. In EFL teaching, foreign scholars have conducted numerous empirical studies on the implementation of flipped classrooms.

Many international studies have shown that flipped learning can effectively improve students' reading comprehension, reading strategies, and the quality of their language thinking. Kasmains and Riswanto (2024) conducted a one-semester experiment on EFL college students. They found that flipped classroom teaching significantly improved students' ability to grasp article themes, analyze logical relationships, and infer deep meanings. Phuntsho (2022) noted that flipped teaching helps shift students' passive reading habits and cultivate active reading strategies such as skimming, scanning, and intensive reading. In addition, a meta-analysis by Ahmed and Indurkha (2022) found that flipped classrooms have a significant positive effect on English vocabulary accumulation and long-term retention of reading ability.

Existing foreign studies have fully verified the effectiveness of the flipped classroom in language teaching. However, most research focuses on undergraduates or middle school students with a relatively solid foundation in English. Few targeted studies have examined vocational college students with weak foundations, limited learning initiative, and pronounced individual differences.

Domestic Research Status

In China, with the continuous promotion of college English teaching reform and information-based education, the flipped classroom has been widely applied in college English courses in recent years. Many studies have shown that flipped teaching can optimize the English classroom ecology, improve students' autonomous learning, and enhance comprehensive language application.

In English reading instruction, domestic scholars have explored flipped-classroom applications, instructional design, and practical effects. Li (2022) noted that flipped reading instruction can overcome the limitations of traditional teacher-centered indoctrination and

effectively enhance students' reading engagement and classroom interaction. Chen and Wang (2023) conducted a quasi-experimental study on college EFL reading teaching. They verified that the flipped classroom has significant advantages in improving students' reading scores and reading-thinking abilities.

FINDINGS

Effectiveness of Flipped Classroom on Reading Comprehension.

	N	Mean	Std. Deviation	Std. Error
Mean				
Experimental Class	40	28.20	5.039	.797
Control Class	40	24.40	5.027	.795

Levene's Test for Equality of Variances			t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	.013	.908	3.376	78	.001	3.800	1.125	1.559	6.041
Equal variances not assumed			3.376	78.000	.001	3.800	1.125	1.559	6.041

Comparison of the Pre-Test and the Post-Test

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre-test	23.15	40	6.546	1.035
	Post-test	28.20	40	5.039	.797

Comparison of the Pre-test and the Post-test

		N	Correlation	Sig.
Pair 1	Pre-test & Post-test	40	.888	.000

Comparison of the Pre-test and the Post-test

Paired Differences						
		Std. Error Mean	95% Confidence Interval of the Difference	t	df	Sig. (2-tailed)
Mean	Std. Deviation					

					Lower	Upper			
Pair	Pre-test -	-5.050	3.105	.491	-6.043	-4.057	-10.288	39	.000
1	Post-test								

The post-test descriptive statistics show the experimental group achieved a mean score of 28.20 (SD=5.039), significantly higher than the control group's 24.40 (SD=5.027). Independent-samples t-test results confirm a statistically significant difference between the two groups ($t = 3.376$, $df = 78$, $p = 0.001 < 0.05$), supporting Hypothesis 1. For the experimental group, paired samples t-test reveals a significant improvement from pre-test ($M=23.15$, $SD=6.546$) to post-test ($M=28.20$, $SD=5.039$), with a mean difference of 5.05 points ($t=-10.288$, $df=39$, $p=0.000<0.05$), and a high correlation between pre-test and post-test scores ($r=0.888$, $p=0.000$), verifying Hypothesis 2. 68% of students in the experimental group scored above 25 in the post-test, compared with only 35% in the pre-test, indicating systematic progress in skimming, scanning, and information analysis skills.

Students' Perceptions of the Flipped Classroom

Cronbach's Alpha		N	
0.826		20	
KOM	Bartlett	P	
0.753	322.736	0.000	

The satisfaction questionnaire demonstrates high reliability (Cronbach's $\alpha = 0.826 > 0.7$) and validity (KMO = 0.753, Bartlett's test $p = 0.000 < 0.05$). The average scores of all five dimensions exceed 4.0/5: overall satisfaction with the flipped classroom ($M = 4.12$), recognition of the teaching model ($M = 4.08$), evaluation of classroom activities ($M = 4.23$), perception of the reading learning process ($M = 4.05$), and feedback on autonomous learning ($M = 4.18$). Over 85% of students agreed that the model increased their willingness to preview and reading interest, confirming Hypothesis 3.

DISCUSSION

These findings are consistent with other studies conducted in the United States and abroad on flipped classes, which have shown that a student-centered instructional approach, such as flipped classes, can be an effective way to enhance vocational college students' English reading comprehension.

To begin with, the flipped learning classes are consistent with the premises of constructivist learning. Students build knowledge at first on their own during the pre-class phase and, afterward, engage with it through in-class group discussions, collaboration, and teacher feedback. This model effectively reduces the passivity of lecture-only instruction in

typical classrooms and enables students to engage in higher-level cognitive processing (Bergmann and Sams, 2012).

Second, the experimental group's post-test scores and satisfaction show similar benefits to those reported by Chen et al. (2014). In their research, they showed that flipped classrooms enhance students' learning initiative and engagement, making them especially appropriate for language courses. This conclusion is also supported by the experimental data in this study, which showed significant improvement in specific reading skills, such as skimming, scanning, and detailed understanding.

Third, in the context of vocational education, this research confirms that, as Li (2022) argues, flipped classrooms help address the traditional drawbacks of vocational students: limited English proficiency and low motivation. During the experiment, participating students not only showed significant improvement in their scores but also positive changes in their learning attitudes and classroom performance. It was also observed that students became very active and engaged in posing questions, sharing views, and taking part in deep classroom conversations by using the learning content before the classes. This result aligns with Hong (2016), who states that flipped classes lead to better classroom engagement among vocational college students and better learning conditions.

Regarding learning experience and satisfaction, the Questionnaire results also showed that students strongly approved of the flipped classroom model. This aligns with Kong (2014), who notes that flipped classes enhance students' learning and critical thinking skills by involving varied activities and peer social interaction.

CONCLUSION

This study verifies that the flipped classroom model outperforms traditional instruction in improving vocational students' English reading comprehension, with measurable gains in both test scores and skill mastery. Beyond cognitive improvement, the model reshapes students' learning behaviors, enhancing awareness of autonomous learning, classroom participation, and learning confidence. Students generally hold positive attitudes toward the model, indicating strong adaptability for promotion in similar vocational education contexts.

The study provides practical implications for teaching reform: 1) pre-class materials should be tailored to vocational students' proficiency levels and career needs; 2) in-class activities should prioritize task-based interaction and strategy guidance; 3) teachers need systematic training in digital teaching competency to support model implementation. Limitations include the single-institution sample and the short intervention duration; future research could expand to multi-institutional samples, adopt mixed-methods approaches combining qualitative data (interviews, classroom observation), and explore the model's effects on other language skills.

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