

## A FLIPPED CLASS ON ENHANCING EFL ACADEMIC VOCABULARY ACQUISITION FOR NON-ENGLISH MAJOR COLLEGE STUDENTS

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### ABSTRACT

This study develops a flipped class aimed at enhancing academic vocabulary acquisition among EFL non-English major college students in China, utilizing the ADDIE instructional design framework, which encompasses Analysis, Design, Development, Implementation, and Evaluation. In the Needs Analysis phase, 85 students from an international programme completed a 4-point Likert scale questionnaire to identify vocabulary learning needs. During the Design and Development phases, 26 voluntarily participating students employed mind map techniques alongside the flipped class approach to enhance vocabulary instruction. In the Implementation and Evaluation phases, students participated in the flipped class and provided feedback through a semi-closed questionnaire to assess the teaching method's effectiveness. The findings reveal that 98.72% of students rated their vocabulary proficiency as average or poor, highlighting a significant need for targeted instruction. Students attached significance to dimensions such as meaning (mean=3.44) and pronunciation (mean=3.24), while they valued aspects like connotation (mean=3.08) to some extent, indicating gaps in current teaching practices. Also, this research demonstrates the detailed ways of peer interaction and structured learning to meet students' study needs. In the end, 96% of students expressed that the flipped class effectively enhanced their academic vocabulary acquisition. For future studies, researchers could extend practice duration, and explore more potential ways to take full advantages of the vocabulary cards made by students.

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### INTRODUCTION

With advancements in technology and pedagogical research, the need for innovative and effective teaching strategies in tertiary education has grown significantly. It is worth noting that the flipped class has gained attention for its ability to enhance student engagement and promote active learning by transferring traditional lecture-based instruction to a model where students prepare materials before class and engage in interactive activities during class. This method has shown a positive momentum across

various disciplines, particularly in improving learning outcomes through personalised and interactive learning experiences (Lage et al., 2000; Han 2022). Vocabulary acquisition, particularly for non-English major students in English as a Foreign Language (EFL) settings, poses unique challenges. Mastery of academic vocabulary is especially essential for comprehension and academic success, yet many students have difficulties in acquiring vocabulary due to ineffective learning strategies and the lack of targeted instructional support (Nation, 2001; Coxhead, 2000). The Vocabulary Knowledge Theory (VKT) offers a valuable view for understanding the diverse knowledge of vocabulary and inspires instructional approaches that address these specific challenges (McCarten, 2007).

Despite the benefits of the flipped class and VKT, there remains a significant gap in research focuses on integration to support academic vocabulary development. Existing studies have explored general applications of the flipped class in language learning, but few have delved into how to tailor this way of teaching to meet the vocabulary learning needs for non- English students in China. This research aims to fill this gap by investigating the effectiveness of integrating the flipped class with insights from VKT, to enhance academic vocabulary learning for college students who are struggling academically. The primary objective of this study is to develop a flipped class approach that addresses the specific vocabulary needs of non-English major EFL learners, thereby contributing to improved educational outcomes and greater study experience. To achieve this, the research will focus on three key questions:

1. What EFL vocabulary dimensions do non-English major college students in China perceive as essential needs?
2. How can the researcher design the flipped class to meet students' needs?
3. What is the students' feedback on the effectiveness of this flipped class?

In addressing these questions, this study seeks to provide valuable insights into how integrated pedagogical methods can improve vocabulary acquisition, ultimately contributing to enhanced teaching practices in higher education. The next section will review relevant literature on the flipped class, academic vocabulary acquisition and VKT, followed by the methodology used in this study. The subsequent section will discuss the findings, and the last section will conclude with recommendations for educators and implications for future research.

## **LITERATURE REVIEW**

The following explores instructional strategies in higher education, focusing on the flipped class and its role in EFL academic vocabulary acquisition. Although the study on the flipped class has made contributions in promoting active learning and improving student outcomes, there is limited research on its effectiveness in improving academic vocabulary, particularly for non-English major learners. The following will elaborate the review studies on flipped class application, academic vocabulary acquisition and vocabulary knowledge theory.

### **Flipped Class Applications**

Studies on flipped class applications has showed its momentum in deeper learning and greater student engagement (Bishop & Verleger, 2013), making it become more outstanding compared to traditional teacher-led lectures. Instead, the flip class nowadays emphasises in problem-solving, peer teaching, and discussions. In 2000, Jonathan Baker's (2000) introduced the "classroom flip" concept further opened pathways for research into enhancing student engagement and learning outcomes. In 2012, Bergmann and Sams (2012) systematically initiated the theory, practice, and implementation of the flipped class, marking a transition from practical experiences to a theoretical framework. Zainuddin (2018) also carried out a comparison of the gamified flipped classes with the non-gamified ones. While the former classes promoted students' competence, autonomy and relatedness, the end assessments of the classes indicated that students were able to achieve even higher levels of motivation and achievement thanks to the features of the gamified environment. Fathi and Rihimi (2022) then studied the effects of the flipped class on EFL students' writing performance in terms of complexity, accuracy and fluency. Quasi-experimental research methods used by these educators demonstrated the effectiveness of flipping the classroom in boosting students' EFL writing skills and contributed into the understanding of the EFL writing context. Thus, In order to gain the full potential of said class session within EFL environment. Anusia and Muniisvaran's (2023) work on meta-analysis of 24 empirical studies in the regime from 2017 to 2023, pointed out that more interactive and engaging activities are required within the classroom, such as the students' engagement in dialogues and group work. More than that, 2024 academic paper of Gong and other scholars focused on Science, Technology, Engineering, and Mathematics (STEM) education and argued that the pedagogical approach of flipping the classroom is successful when a harmonious

integration of self-study, classroom instruction and post-class activities is effectively implemented.

Similarly, Baig & Yadegaridehkordi (2023) believed that the flipped class could increase teacher-student interaction by allowing more time for discussions, group activities, and personalised support. It also recommended critical thinking, teamwork, and problem-solving. Despite these findings, a gap persists in understanding how the flipped class can specifically enhance vocabulary acquisition, particularly among non-English major EFL learners in China.

### **Academic Vocabulary Acquisition**

Mastery of vocabulary is essential for university students as it forms the foundation for comprehension, communication, and academic success (Nation, 2001; Coxhead, 2000; Schmitt, 2008). In college, academic vocabulary is significantly vital due to its established correlation with academic achievement (Nagy & Townsend, 2012)

Academic vocabulary are specific words and phrases that are important for understanding and discussing subjects in tertiary education contexts (Hiebert & Lubliner 2008). Mastery of vocabulary is essential for university students as it forms the foundation for comprehension, communication, and academic success (Nation, 2001; Coxhead, 2000; Schmitt, 2008). Nevertheless, acquiring academic vocabulary is a long-term challenge, requiring sustained input, effective strategies, and strong connections to academic reading comprehension (Ankawi, 2022). Non-English major students, in particular, face significant difficulties in this area. Knežević et al. (2020) identified a gap in research concerning the practical application of flipped classes within the English for Academic Purposes (EAP) context. Hence, the concern of this paper is to present possible measures to improve academic lexical in the context of the flipped class.

### **Vocabulary Knowledge Theory**

VKT is generalisation of the measurement which accounts for various aspects of vocabulary knowledge. This was elaborated by McCarten (2007), based on Richards (1976) and Nation (2001), and offered aids to the classroom teachers on comprehensibly and systematically dealing with the matters of vocabulary. N. Schmitt and D. Schmitt (2020) also extended the research on this concept and Patel et al. in their search for vocabulary instructional techniques delved into both the theory and the practice of the phenomenon. In 2021, to make the teaching more exciting and animated, Zou et al. strengthened the

computer-assisted language learning VKT in exploring how technology can foster vocabulary attainment and retention. In the following year, aiming at obtaining the ideas concerning the restrictive dimensions of vocabulary knowledge which had been the gap in research, Zhang et al. broadened this study on the connection of vocabulary knowledge and comprehension. Lastly, Junaid et al. (2023) conducted some studies on teaching techniques that focused on amentaion and enhancement of vocabulary degree and size and argued the effectiveness of specific ways of teaching.

However, it is equally important to emphasize that there is an absence of information in the existing literature on how technology and interactive methods can be wed in such a way that students acquire new academic vocabulary. As a result, this study will attempt to fill these gaps by combining the VKT based flipped classroom with the need to create an environment that enhances engagement and active participation in the learning of academic vocabulary. The findings of this study will offer practical, evidence-based strategies for educators, contributing to an effective EFL learning experience in China's colleges.

## **RESEARCH METHODS**

The following sections will discuss the methods of this research, focusing on research design, research instruments, reliability and validity, research location and participants, and data collection and analysis.

### **Research Design**

This study employs the ADDIE instructional design (Gagne et al., 2005) to structure a flipped class aimed at enhancing vocabulary retention among non-English major students, dividing the process into three key stages: Needs Analysis, Design and Development, and Implementation and Evaluation.

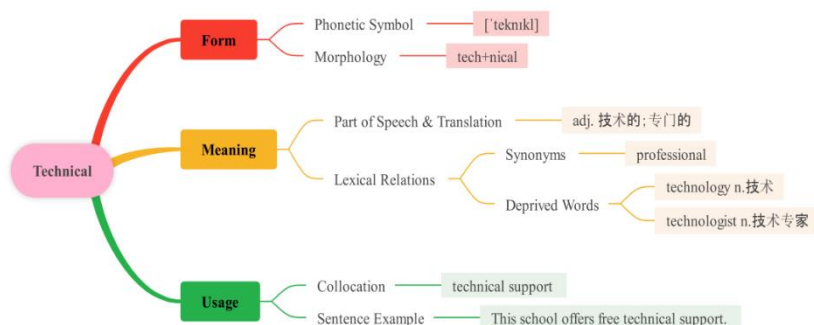
#### ***a. Needs Analysis***

First of all, the following shows the process of Needs Analysis: as an EFL teacher, the researcher often engaged in conversations with both students and teachers, which revealed concerns about inadequate academic vocabulary. To further identify the major dimensions of students' vocabulary needs in EFL, the researcher selected 85 non-English major students who have enrolled in an international academic study program to ensure the urgent practical need for academic vocabulary study. Then the researcher conducted an online 4-Likert scale questionnaire to find out the vocabulary study needs.

Firstly, the meaning of a word involves understanding what the word represents. Secondly, pronunciation and spelling are critical for correct usage. Thirdly, understanding word parts such as prefixes, suffixes, and roots is essential. The grammatical behavior of a word involves knowing its word class and typical patterns. Collocation refers to common word pairings. The register dimension involves understanding the context or field of usage. Additionally, association encompasses related words, such as synonyms and antonyms. Connotation addresses the emotional implications or additional meanings a word might carry. Finally, frequency deals with how commonly a word is used.

***b. Design and Development***

Second, the following presents the process of Design and Development: all participants have enrolled in an international programme designed for those planning to study abroad, highlighting their urgent need to learn academic English. Therefore, it is valuable to explore effective ways to learn academic words. Before the classes, the teacher distributes the Academic Word List (AWL) from Coxhead (2000). The AWL is highly regarded for helping English language learners, researchers, and educators improve academic English proficiency by including words frequently used across various academic disciplines and contexts (Nation, 2001). Initially, before the flipped class, the researcher organizes one class into five groups and enables them to indicate their familiarity with these words by marking those they recognize. Subsequently, the researcher selects 26 most frequently unrecognized academic words to create the vocabulary lists for the following study. In addition, the teacher assigns homework in the form of a mind map, based on the vocabulary burden of a word (Nation, 2005). In this way, it highlights the specific aspects that influence students' understanding and usage of vocabulary and provides crucial dimensions of vocabulary identified and provides an example of a word card using a mind map (Figure 1). Which also covers nearly main aspects of the word dimensions. This homework is available on an online platform called Xuexitong, which provides clear instructions, requirements, and examples.



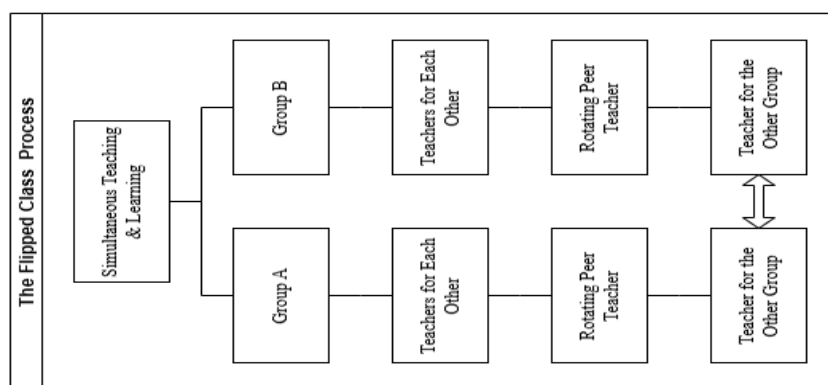
**Figure 1. The vocabulary card example of a mind map based on vocabulary burden of a word (Nation 2005)**

As is shown from the above, this study’s mind map design directly reflects the key dimensions of VKT and Learning Burden. This component of “Form” includes the phonetic symbol (/teknɪkl/) and morphology (tech + nical), and aligns with other words’ dimensions. It specifically addresses spoken and written forms and word parts. These elements can help learners recognise the spoken form, accurately pronounce the word, and identify familiar affixes. The “Meaning” component, represented by part of speech & Chinese translation (adj. 技术的) and lexical relations in Chinese (technology n., 技术). This section covers understanding the meanings of the word and its lexical relationships. It aids learners in grasping the concept and referents, identifying relationships with similar forms, and recognising associations with the word. The “Usage” component, which includes collocation (technical support) and a sentence example (This school offers free technical support), focusing on grammatical functions and collocations. Thus, prompting students to understand how the word fits into predictable grammatical patterns and offers practical, real-world examples that reduce the cognitive load of using the word in context.

Bergmann and Sams (2012 ) emphasizes that both teachers and students have essential roles in creating a dynamic and interactive learning environment, where the teacher acts as a guide and the students take an active role in their education. The essence of flipped learning lies not in interactions during pre-task planning, but in the autonomy that students gain while studying content independently, followed by their active engagement with that content during class time (Mehring, 2018). It is necessary to enrich student engagement and deepen their understanding of the material through interactive group interactions during the newly designed flipped class.

**c. Implementation and Evaluation.**

Ultimately, the following presents the process of Implementation and Evaluation: as shown in figure 2, it illustrates that the teacher first organises students into two groups, each consisting of 13 students, labelled Group A and Group B. Then, the teacher divides the whole class into three rounds to maximise vocabulary learning by having students act as peer teachers within their groups, rotate pairs for broader teaching interactions, and exchange vocabulary knowledge between groups through designated representatives.



**Figure 2. The Flipped Class Process**

The teacher divides the class into two groups of 13 students each, labelled Group A and Group B. In the first round, students in Group A pair up with a peer student in their group. For instance, Student 1 (Teacher) teaches Student 2 (Teacher) and vice versa. They exchange vocabulary cards and teach each other, effectively acting as peer teachers. This arrangement ensures that each student learns the vocabulary through interaction and explanations from their partner. Meanwhile, Group B follows the same process concurrently with Group A. In the second round of peer teaching, students in Group A pair up differently and repeat the teaching and card exchange process. For example, Student 1 (Teacher) teaches Student 3 (Teacher) and exchanges cards, while Student 2 (Teacher) teaches Student 4 (Teacher). This continues until every student has taught and exchanged cards with each other in Group A, ensuring comprehensive recognition of all vocabulary words. Group B similarly engages in this process at the same time. In the third round, a representative from each group takes the vocabulary cards learned by their group and teaches them to the other group. For example, a representative from Group A teaches Group B all vocabulary cards they have learned, while a representative from Group B teaches Group A the vocabulary cards from their group. This method

allows students to engage in multiple rounds of learning within their group before teaching the other group. To gather feedback after implementing the flipped classroom using mind maps, the researcher designs a semi-closed questionnaire to capture insights on strengths and areas for improvement. Tools such as Wenjuanxing facilitate easy distribution while ensuring anonymity to encourage honest responses. By emphasizing the importance of this feedback, the researcher aims to enhance future learning experiences.

To sum up, this study offers a structured approach to teaching vocabulary that combines new teaching methods with careful preparation and evaluation, with the expectation to tackle the challenges of academic vocabulary acquisition in EFL settings.

### **Research Instruments**

This study meticulously designs the instruments to align with each phase of the ADDIE model, ensuring a thorough evaluation of vocabulary needs and the effectiveness of instructional strategies.

In the phase of Needs Analysis, the researchers utilized a questionnaire adapted from VKT to identify EFL students' vocabulary challenges.

The 4-point Likert scale questionnaire examines different aspects of vocabulary knowledge which include content/meaning, pronunciation, spelling, word parts, collocation, and frequency. It seeks to obtain a concise picture of students' different orientations towards academic vocabulary, which would serve as a basis for the design of word-focused interventions. In the Design and Development stage, participants choose from AWL (Coxhead, 2000) those words that have not been used frequently by the selected population. In the Implementation and Evaluation stage, teachers give out semi-closed questionnaires derived from user/emotion-based evaluations of learning experiences and user experience questionnaires after the teaching of a flipped class. This questionnaire contains closed-ended questions seeking students' satisfaction and engagement levels. It also consists of open-ended questions focusing on and eliciting feedback as to the opinions of the strengths and weaknesses that some respondents may possess.

### **Reliability and Validity**

The construct of the questionnaire is reliable and valid as it is adapted from VKT from McCarten (2007), a combination of Richards (1976) and Nation (2001). It lays a robust basis for assessing vocabulary learning details. In addition, AWL applied in this study

ensures the words assigned as pre-class assignment and in-class interactive materials relevant and valuable. Subsequently, the researcher intends to get the actual feedback from students' experience of this class with the assistance of questionnaire adapted from User Experience Questionnaire (UEQ) (Schrepp, 2015). The UEQ is a validated tool for measuring user experience across various dimensions, including efficacy. With all the information mentioned above, the instruments in this study holds high reliability and validity.

### **Research Location and Participants**

WZBC is an ideal site for this research for many reasons. Its students from different backgrounds makes it possible for non-English major learners to experience academic vocabulary learning through a variety of experiences, while the nature of the school embraces creative teaching techniques that allow for the flipped classroom method. The school provides adequate supporting facilities along with essential tools and the materials to facilitate vocabulary instruction and peer teaching. In addition, WZBC promotes a conducive environment for learning, where all students are actively involved in the learning process, which is important for the success of peer-teaching programs.

Its educational objectives are consistent with acquiring vocabulary and academic achievement in relation to the study. The effective, world-renowned educational program in WZBC, has facilitated more than two thousand students to advance their education in high-ranking universities abroad. This high standard not only enhances academic vocabulary learning but also prepares the students for higher levels of work. From this diverse group, the researcher randomly picked out 85 non-English major participants from the international programme, with 79 of them being valid conditions representing various fields of study. Out of these, 26 students in the international program class participated in the next phase, out of which 25 responses demonstrated that students were ready to embrace and actively participate in the structured flipped class activities within their group. Therefore, WZBC essentially offers a favorable space to learn about vocabulary acquisition in a context of flipped classrooms. Its high academic standards, creative teaching and advanced facilities promote successful teaching and learning. Additionally, the participants' diverse backgrounds and excitement for organized activities add value to the research and offer insightful information about language acquisition. The goal of this research is to advance academic vocabulary understanding while enhancing the methods used to instruct EFL non-English major students who are struggling.

## **Data Collection and Data Analysis**

The iterative method of gathering and analyzing data in this study greatly increased the efficacy of vocabulary-learning exercises. To determine the vocabulary learning needs of the pupils, this study gathered a wide range of data. Using an online 4-point Likert scale questionnaire, it first collected quantitative data with the goal of identifying particular needs in relation to meaning, pronunciation, grammatical behavior, collocation, and frequency. Secondly, participants selected 26 often unrecognised words for further inquiry, providing qualitative insights into their knowledge with academic language. In order to further elucidate the students' comprehension and engagement with the vocabulary information, the researcher also issued homework that required them to make mind maps on several word dimensions. This all-encompassing method made it possible to evaluate students' vocabulary learning experiences in great detail. For data analysis, the researcher applied quantitative analysis to the initial questionnaire results, using descriptive statistics to identify trends in vocabulary learning needs. The researcher then employed thematic analysis for the qualitative feedback from the semi-closed questionnaire, identifying recurring themes related to the effectiveness of the instructional strategies and student engagement. This combination of methods provided comprehensive and representative data that reflected the students' experiences and perspectives.

## **RESULTS AND DISCUSSIONS**

### **Results**

Based on the latest questionnaire results, it is evident that 98.72% of students rated their vocabulary as average or poor, with 62.82% considering their vocabulary learning to be average and 35.9% rating it as very poor. Correspondingly, 67.95% of students expressed significant dissatisfaction with their vocabulary, while only 9 students reported being very satisfied, highlighting a concerning trend. Notably, 26.92% of students showed little interest in their vocabulary size, indicating a lack of engagement in vocabulary learning among this group. These findings suggest that educators should prioritise strategies to enhance vocabulary instruction and foster students' interest in vocabulary development, particularly addressing the areas where students feel most challenged. Engaging teaching methods and targeted support may help to improve students' perceptions and performance in vocabulary learning.

## Key Dimensions of Students' Vocabulary Needs

This study clearly identifies the vocabulary dimensions that students consider urgent needs, such as meaning and associations, addressing the first question of this research. The table presents the results of 4-point Likert scale questionnaire assessing students' perceptions of the importance of various vocabulary learning dimensions for enhancing their vocabulary skills. In this questionnaire (rated from 1 to 4), results exceeding a score of 3 across all dimensions indicate that participants hold a positive view of various aspects of vocabulary learning. Dimensions such as meaning (Mean=3.44), pronunciation and spelling (Mean=3.24), grammatical behaviour (Mean=3.22), and frequency (Mean=3.23) are seen as valuable in vocabulary acquisition. These elements, especially meaning, are considered essential for effective language use. However, dimensions like roots and affixes (Mean=3.15), collocation (Mean=3.19), register (Mean=3.15), and connotation (Mean=3.08) are undervalued, suggesting potential struggles with vocabulary expansion. This points to a need for educators to address these overlooked areas to enhance students' vocabulary proficiency and contextual language application.

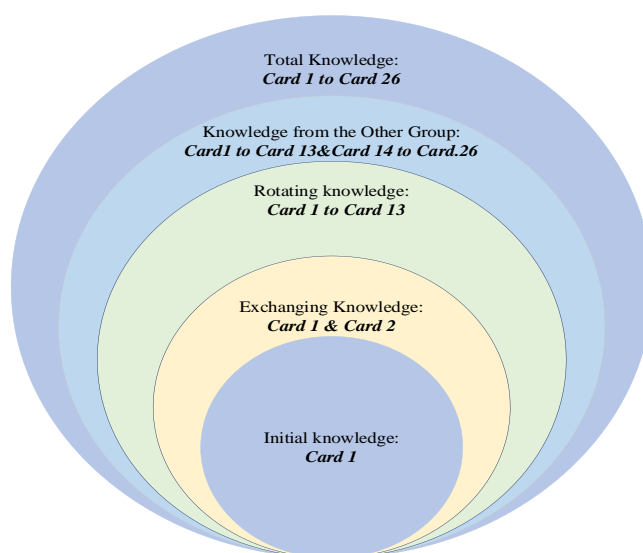
**Table 1.** Results of the preferences of words' dimensions

<i>Item\Option</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>Mean</i>
1. Meaning	4 (5.13%)	6 (7.69%)	20 (25.64%)	48 (61.54%)	3.44
2. Pronunciation and Spelling	5 (6.41%)	10 (12.82%)	24 (30.77%)	39 (50%)	3.24
3. Word Parts	6 (7.69%)	12 (15.38%)	24 (30.77%)	36 (46.15%)	3.15
4. Grammatical Behavior	4 (5.13%)	9 (11.54%)	31 (39.74%)	34 (43.59%)	3.22
5. Collocation	4 (5.13%)	9 (11.54%)	33 (42.31%)	32 (41.03%)	3.19
6. Register	4 (5.13%)	9 (11.54%)	36 (46.15%)	29 (37.18%)	3.15
7. Association	4 (5.13%)	11 (14.1%)	29 (37.18%)	34 (43.59%)	3.19
8. Connotation	5 (6.41%)	10 (12.82%)	37 (47.44%)	26 (33.33%)	3.08
9. Frequency	4 (5.13%)	9 (11.54%)	30 (38.46%)	35 (44.87%)	3.23
Subtotal	40 (5.7%)	85 (12.11%)	264 (37.61%)	313 (44.59%)	3.21

The data provide several insights for teachers regarding vocabulary instruction. First, since students highly value understanding word meanings and associations, educators should prioritize these areas in their curriculum. Incorporating activities that deepen students' comprehension of vocabulary, such as semantic mapping or context-based learning, can be beneficial. Additionally, given the importance of pronunciation and spelling, teachers might consider integrating phonics and spelling exercises into lessons. Lastly, recognizing that students feel a strong need for vocabulary improvement, educators should encourage students to actively engage with vocabulary by exploring its different dimensions, fostering a more holistic approach to vocabulary acquisition.

### The Innovative Ways of Learning New Words

What's more, this research demonstrates how the flipped class approach meets study needs through peer interaction and structured learning, responding to the second question of this study. The figure illustrates the process of how the learner gains word knowledge in this flipped class. Taking Student 1's vocabulary knowledge learning during the three rounds of teaching as an example, Firstly, Student 1 is equipped with own vocabulary knowledge of Card 1 vocabulary after self-learning before the class. Secondly, during the first round of being "Teacher for Each Other" activity, Student 1 exchanges knowledge with peers. Thirdly, in the second round of rotating peer teachers, student 1 acquires knowledge from all the vocabulary cards within their group, ranging from vocabulary of Card 1 to Card 13. Finally, in the third round of acting as the teacher for the other group, Student 1 gains the vocabulary knowledge of all members from the other group, covering Card 14 to Card 26. Consequently, Student 1 ultimately obtains all vocabulary knowledge spanning from vocabulary of Card 1 to Card 26.



**Figure 3. The Innovative Vocabulary Learning Progress in the Flipped Class**

### The Effectiveness of This Class

Finally, the positive feedback and strong willingness of students to learn indicate the effectiveness of this innovative flipped class, answering the third question. A remarkable 96% of students reported that the flipped class significantly improved their vocabulary retention. Similarly, all students, except one, expressed that using mind mapping for vocabulary learning was highly effective. Moreover, 92% of students believed that the combination of pre-class preparation, in-class explanation, and peer-sharing enhanced their

ability to retain academic vocabulary. Additionally, 88% preferred this active learning experience over traditional passive methods. This sentiment is reflected in the language used in the feedback, where 71.9% of responses were positive, highlighting the class's usefulness, ease, and engagement. Only 9.4% of the feedback was negative, with a small number of students struggling with retention or finding the class average. The remaining 18.7% of responses were neutral or focused on constructive suggestions for improvement.

To sum up, the findings of this research identify the key vocabulary needs of non-English major EFL learners. In addition, this flipped class approach, incorporating peer interaction and structured activities, effectively supports vocabulary learning. What's more, student feedback reflects the success of the flipped class in improving vocabulary retention and engagement.

## **Discussion**

The results of this study mentioned above provide several insights into students' vocabulary learning and the effectiveness of innovative teaching methods.

Initially, on one hand, the analysis of students' preferences of various word learning dimensions clarifies current study needs. High ratings for aspects such as meaning, pronunciation, spelling, grammatical behaviour, and frequency indicate that students recognise the importance of these areas for effective language use. These findings in line with studies that identify meaning as central to vocabulary acquisition, highlighting its role in developing communicative competence (Akmal & Mulia, 2020). On the other hand, lower ratings like roots and affixes, collocation, register, and connotation show areas where students face challenges (Dardjito et al., 2023). This is also an indication of the teaching needs to instruct these aspects of knowledge. To be more specific, educators should include both the recognised and overlooked dimensions in class teaching to enhance vocabulary development.

Furthermore, this study's implementation of the flipped classroom strategy gave students a fresh opportunity to support their acquisition of academic language. Students can engage in interactive and collaborative vocabulary acquisition through the use of flipped classes. This creative class coincides with studies on cooperative learning, suggesting that peer contact can boost language learning by establishing a dynamic, participative environment (Mohd Kasim et al., 2022). Furthermore, students' comprehension is reinforced through alternating between teaching and learning, which is consistent with constructivist and social learning theories (Devira, 2020; Setiawan &

Wiedarti, 2020). Overall, the comments show that increasing students' vocabulary retention and engagement through the use of flipped classes is a very successful strategy. The majority of students recognize that using mind mapping techniques and peer engagement can help them retain academic vocabulary in an active and pleasant way.

## CONCLUSION AND RECOMMENDATIONS

This study identifies language acquisition gaps among non-English major college students in China and shows how mind maps, along with the newly-designed flipped class approach, might assist solve these issues. Although the majority of students are not satisfied with vocabulary learning, they have a great desire to enhance their academic vocabulary, indicating a discrepancy between their motivation and self-evaluation. This makes a more interesting vocabulary teaching and a more interactive learning environment in flipped classes a necessity. Positive evaluations of students' participation and retention of the vocabulary show that there are further potential opportunities to investigate cutting-edge techniques for instructing academic vocabulary.

However, some pupils are still not happy with the pre-class activities and classroom dynamics. According to these pupils, peer pressure may put more pressure on studying than does teacher supervision. Teachers can solve this problem by creating more varied teaching resources that lighten the load on students and encourage them to participate actively in their education. In order to lower students' anxiety and increase participation, teachers could also devise more interesting interactive exercises. Even though this study sheds light on how well the flipped classroom approach works for students learning academic vocabulary, there are still questions and gaps that need to be addressed. To find any discrepancies, future studies could examine how well non-majoring in English and majoring in English acquire vocabulary. Furthermore, it is advantageous to investigate more creative approaches in the flipped classroom to maximise EFL vocabulary learning efficacy.

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