

A Quasi-Experimental Study of English Vocabulary Teaching Based on Incidental Acquisition

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Abstract

Recent years have witnessed a phenomenon that major English teachers in China have adopted the traditional teaching pattern, mechanically linking English pronunciations directly with the meaning of Chinese, which gradually dampens learners' enthusiasm. The chief purpose of this paper was to design one English vocabulary teaching lesson based on incidental acquisition. More specifically, the questions raised are, on the one hand, whether incidental vocabulary teaching imprints differences on the learning outcomes for middle school students, and, on the other hand, whether incidental acquisition results in positive feedback between teachers and students. The technique we applied was referred to as questionnaires and interviews addressed to a sample of 68 students. Focusing on the effect of incidental vocabulary acquisition, the analysis demonstrated that it could enhance students' vocabulary capacity. In addition, it was interesting to note that excellent students and average students tended to embrace the new teaching style while underachievers were on the opposite side. On this basis, it is recommended for English teachers to design English vocabulary lessons, adopting visual, auditory, oral, reading or writing training. More precisely, they should use phonics rules and patterns, holistic learning, classified vocabulary teaching, visual illustration or multimedia teaching to give lessons effectively and expand learners' vocabulary.

Keywords

Incidental Acquisition, English Vocabulary Teaching, Quasi-Experiment, Middle School

1. Introduction

At present, China's middle school education has witnessed changes and devel-

opment from the “double bases” and the “three dimensional targets” to the “key competencies”. It basically reflects the alteration from “subject-centered” to “people-oriented” integrated curriculum [1]. Earlier this spring, the *English Curriculum Standards for Compulsory Education (2022-year Edition)* clearly shows the English vocabulary competence of middle school students, such as comprehending the basic meaning of vocabulary, understanding idioms, using fixed collocations and so on. Furthermore, English learners are required to master approximately 1600 words as well as 100 to 300 idioms or fixed collocations. Great attention is attached to juniors’ understanding and flexible application of relevant vocabulary, which also means that teachers should create an interesting teaching atmosphere and practice English in real scenarios. Therefore, how to design an English vocabulary teaching lesson based on incidental acquisition is worth discussing.

1.1. Incidental Acquisition Defined

The scholars represented by Nagy point out that learners do not pay attention to vocabulary when conducting other learning tasks and activities, but acquire vocabulary knowledge [2]. In other words, learners do not focus on vocabulary, but they occasionally acquire vocabulary when they participate in learning activities. Incidental vocabulary learning is a kind of learning activity without specific learning purposes, and the main goal is to complete other tasks, communication with peers as an example [3]. In addition, scholars distinguish between “intentional learning” and “incidental vocabulary acquisition”. The former refers to students’ memorization of words deliberately, such as memorizing words by copying words or doing vocabulary exercises, while the latter means they acquire vocabulary when completing other tasks, such as reading English articles or listening to English music [4].

Based on the above discussion, incidental vocabulary acquisition can be defined as a way to promote middle school students’ abilities in listening, speaking, reading and writing. In English learning, they could improve their vocabulary level through activities designed by teachers.

1.2. Previous Foreign Research

The foreign literature data source of this paper is SCI-E, SSCI, A&HCI journals in the Web of Science core database. The last update time of the database is December 8th, 2022. The publication time of English literature is from 2009 to 2022. Moreover, the tool JabRef is used to manually remove duplicate literature, book chapters, conference abstracts, letters, book reviews, and documents that does not conform to the professional research field. Finally, 238 papers are obtained, all of which are saved in Bibtex Format and are analyzed by the Biblioshiny.

Figure 1 could directly reflect the research level and development trend of a certain field. From 2009 to 2022, the number of foreign journals has increased

dynamically on the whole, with an annual growth rate of 6.91%, maintaining a good momentum of steady growth. The peaks appear in 2017 and 2020. Based on the statistics, it can be divided into three stages: slow growth period (2008-2017), rapid growth period (2018-2020) and fluctuation period (2021-2022).

Table 1 lists the academic influence of the authors through H index, G index, TC (total number of citations) and the number of papers issued. The results showed that the top ten scholars in the academic influence of foreign incidental learning research are: Webb, S., Peters, E., Nassaji, H., Reynolds, B.L., Marschark, M., Montero, P.M., Shintani, N., Teng, M.F., Almerich, G., Choi, S. It can be seen from the data that Webb has published 9 papers from 2009 to 2022, making the greatest academic contribution among relative scholars. There is no doubt that academic achievements of scholars have consolidated the theoretical and practical basis of incidental learning research.

Table 1. Foreign high academic influential authors.

Name	Author Local Impact			TC	NP	PY_start
	h_index	g_index	m_index			
WEBB S	6	9	0.429	489	9	2009
PETERS E	5	5	0.357	286	5	2009
NASSAJI H	4	4	0.286	230	4	2009
REYNOLDS BL	4	7	0.4	59	8	2013
MARSCHARK M	3	3	0.273	86	3	2012
MONTERO PM	3	3	0.333	169	3	2014
SHINTANI N	3	3	0.273	69	3	2012
TENG MF	3	3	0.75	41	3	2019
ALMERICH G	2	2	0.667	12	2	2020
CHOI S	2	2	0.286	19	2	2016

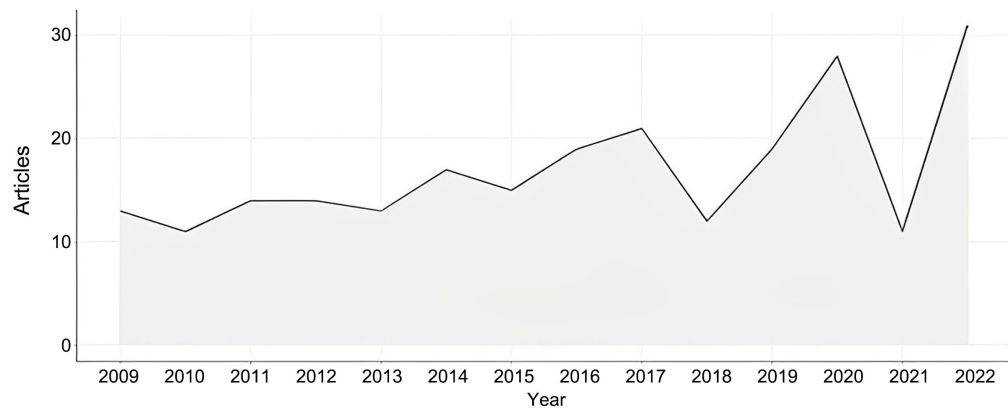


Figure 1. The number and annual distribution of foreign authoritative papers.

To conclude, the data illustrated that foreign scholars have recognized the importance of vocabulary learning earlier. Two scholars, Paribakht and Wesche, have studied the role of incidental vocabulary acquisition and advocated applying it to practice [5]. Pulido has mainly summarized three factors affecting incidental vocabulary acquisition, namely, learners' familiarity with the topic of the article, learners' visual vocabulary and their reading ability [6].

1.3. Previous Domestic Research

To further understand the trend of incidental learning, journals published by domestic scholars are analyzed. The literature is published from 2009 to 2022 in English. After the retrieval with the theme of "incidental learning", the repetitive literature, book chapters, conference abstracts, letters and book reviews that do not conform to the field are removed, and 90 papers are finally obtained.

The Wanfang Database is utilized to sort out the article, analyze the number of papers issued, frequency of citations and explore the distribution and characteristics of research achievements.

Figure 2 shows a dynamically decline of papers on the whole. Moreover, the peaks appear in 2012, 2015 and 2019. Based on the data, there are four stages: rapid growth period (2009-2012), fluctuation period (2013-2015), slow decline period (2016-2019) and stable decline period (2020-2022).

Figure 3 shows that the incidental English teaching has attracted increasing interest in various fields. In other words, the research perspective is diversified, like cognitive psychology and linguistics, which has promoted the expansion of the research scope. English teaching is for application, but it is not enough to cultivate skills in a 45-minute lesson a day [7]. Therefore, it is vital to provide enough materials to put students' knowledge into practice. Wang points out "captions have positive effects on helping with students' incidental vocabulary acquisition and retention. Chinese-English captions best facilitate incidental vocabulary acquisition, then come English captions, and lastly, Chinese captions [8]". Then, Zhi finds that the incidental acquisition teaching method is not only affected by subjective factors like readers' reading purposes, but also related to objective factors, such as time and specified reading goals [9]. In addition, teachers should design input and output reading activities based on discourse, individual and intervention factors, notably proposed by scholars Zhang. On the one hand, they control the repetition of new and old words in the text, highlighting target vocabulary and providing contextual clues and discourse knowledge. On the other hand, through a series of related problems, students are guided to understand the text and answer questions with target vocabulary. Meanwhile, they can further consolidate knowledge through pair work and group work from reading to writing [10]. More attention has been paid to English vocabulary teaching in the educational field. Also, the interdisciplinary knowledge of cognitive psychology, linguistics, meta-cognitive strategies has been applied to the research of English vocabulary teaching, which has promoted the expansion of the research scope related to vocabulary teaching.



Figure 2. The number and annual distribution of domestic authoritative papers.

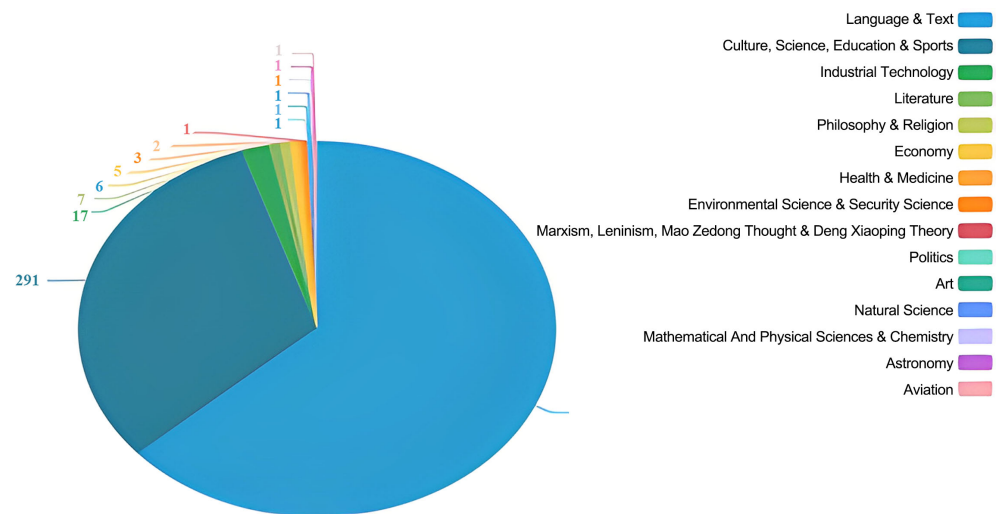


Figure 3. Distribution of research fields of domestic authoritative papers.

2. Theoretical Framework

2.1. The Theory of Depth of Processing

Craik and Lockhart put forward the theory of depth of processing. The memory trace is better described in terms of depth of processing or degree of stimulus elaboration. Deeper analysis leads to a more persistent trace [11]. Furthermore, for semantic processing, Wittrock proposes the concept of generative processing, which promotes the integration of new and old information [12]. Craik and Tulving illustrated the theory of elaboration processing on the basis of the depth of processing [13]. To convert short-term memories into longer-lasting ones, the theory explains that semantic coding is not enough and information is needed to be refined, such as context and grammar.

2.2. The Involvement Load Hypothesis

Later, Laufer and Hulstijn put forward the concept of task induced intervention on the theory of depth of processing, including three variables: need, search and evaluation [14]. Demand is divided into external and internal driving force. Search refers to the process of looking up the meaning of a new word through a dictionary or other materials. Evaluation means the process of comparing new

words with other words to determine whether the meaning of words conforms to the context. The results show that when learners with various vocabulary levels engage in learning activities, their information processing is likely to be various.

In China, Gai is the first to adopt the input hypothesis. The research mainly focuses on different reading tasks, answering questions and retelling the general idea after reading. The results show that sophomores' reading purposes have significant effects on their incidental vocabulary acquisition and compared with answering questions, retelling is more conducive [15]. Then, Yi adopts the innovative model of PDCA (Plan-Do-Check-Act), which decomposes tasks into four stages: plan, do, check and act. In addition, the research also shows that more frequently the target word appears in reading materials, the more the learner can master the usage of the word [16].

To conclude, incidental vocabulary acquisition is a complicated process affected by many factors. Existing research has revealed the complexity, but there remain gaps in this field. The first point is that the specific vocabulary teaching process is not clear. It is common that researchers conduct many experiments and seldom apply the incidental acquisition method in teaching activities. Furthermore, there is a lack of feedback from middle school teachers and students on incidental acquisition in that few researchers focus on teenagers, with much attention paid to middle and advanced learners.

3. Research Design

3.1. Research Questions

Existing research has revealed the complexity, but it also exists gaps, namely, the unclear specific vocabulary teaching process and little feedback from teachers and students. The purpose of the paper is to answer the following two questions.

- 1) What is the effect of incidental acquisition in English vocabulary teaching in a middle school? If so, are the differences significant?
- 2) What is the attitude of teachers and students towards the application of the theory in a middle school?

3.2. Subjects

With the author as the teacher, the research is conducted from September to December, 2021. The subjects are students from two classes of Grade Seven in the middle school attached to Shaoxing University. There are both 34 students from Class One and Class Two. Class One is a control class and Class Two is an experimental class. It should be noted here that both classes are taught by the same English teacher. Also, the tested students do know that they have participated in the experiment. According to the pre-test results, the English level and vocabulary capacity in the two classes are similar. Among them, it should be declared that the textbooks used are the same, which are published by People's Education Press. Meanwhile, the curriculum arrangement of the two classes is

also the same and students have English lessons four times a week. However, the teaching methods are different. In Class One, the teacher will still use the traditional teaching method, while the researcher applies incidental acquisition in Class Two.

To testify whether the learning level of students in the two classes is similar, the results of Unit One examination of students is collected and analyzed.

It can be seen from **Table 2** that at the beginning of the first semester, the average value of exam in the experimental class is 84.8235, and the control class is 85.65. The difference between them is less than 1. In addition, there is little difference between the minimum and maximum values and the standard deviation in two classes.

To further examine whether there is a significant difference between them, the independent sample T test is conducted.

In **Table 3**, the result of Levene's test for equality of variance is 0.000260, less than 0.05. Moreover, the test value of significant difference in bilateral T-test is 0.864, higher than 0.05. In addition, the average difference is 0.824. To conclude, there exists no significant difference in students' vocabulary levels, so they all correspond to the experimental standard.

Moreover, according to seventh-grade academic performances, three students are selected and interviewed. The basic information is shown in **Table 4** and **Table 5**.

Table 2. Descriptive statistics before the experiment.

	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Statistic
Scores in Class One, Grade Seven	34	22.00	100.00	85.65	19.642
Valid N (listwise)	34				
Scores in Class Two, Grade Seven	34	23.00	100.00	84.8235	19.75221
Valid N (listwise)	34				

Table 3. Independent sample t-test before the experiment.

Levene's Test for Equality of Variance		t-test for Equality of Means								
		F	Sig.	T	df	Sig (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Inter- val of the Difference	
								Lower	Upper	
Transfer Error	Equal Variance Assumed	0.000260	0.987	0.172	66	0.864	0.824	4.777	-8.715	10.362
	Equal Variance not Assumed			0.172	65.998	0.864	0.824	4.777	-8.715	10.362

N = Number of the participants; Average = Average Scores of the participants; Std = Standard Deviation; df = degree of freedom.

Table 4. Information of interviewed students.

Name (pseudonyms)	Gender	Age	English levels
Lily	Gril	13	High
Hyacinth	Boy	13	Middle
Sunflower	Boy	13	Low

Table 5. Information of an interviewed teacher.

Name (pseudonyms)	Gender	Age	Subject	Teaching age
Bai Lu	Female	41	English	Eighteen years
Xia Zhi	Female	22	English	Three months

3.3. Instruments

The VLQ (Vocabulary Learning Questionnaire) of Gu and Johnson is a key reference [17]. Moreover, based on the characteristics of the subjects and the purpose, questionnaires are designed combined with Wen's vocabulary memory skills [18]. Questionnaires are issued before and after the experiment. Each consists of ten questions reflecting three dimensions of vocabulary learning.

Furthermore, the interview is utilized to deepen the understanding of the respondents through face-to-face communication and gather relevant information about their feedback and opinions on incidental learning.

Then, tests are used. In terms of content, there are the same six question types. More specifically, it consists of a cloze test (10 points), reading comprehension questions (30 points), choosing and filling (15 points), a grammar filling test (10 points), task-based reading questions (10 points) and one writing task (25 points). In addition, effects of the method are evaluated by test scores before and after the experiment. It should be stressed that the two exams last 45 minutes and are from *Independent Efficient Practice* published by Zhejiang Education Publishing House with high validity and reliability.

3.4. Implementation Phase [Unit Two, Section A, People Education Press (PEP)]

Step1: Pre-listening (5 minutes)

Activity 1: Lead-in (2 minutes)

The visual illustration is utilized. The teacher shows her family photo and asks students to guess the relationship which is related to the topic. Furthermore, the intention is that using the family picture, she can quickly shorten the distance with students so as to stimulates their background knowledge and interest in learning English.

Activity 2: Game Time (3 minutes)

In the teaching process, phonics rules and patterns are used. The teacher shows some flashcards about family members and asks learners to read them out loud one by one. Then, these cards are put on the blackboard. After that, students are guided to discover resemblances, like "grandfather", "mother" and "father". Then, a suffix named "-er" can be highlighted, which means "person". The activity is designed to deepen their impressions on target words.

Step2: While listening (20 minutes)

Activity 3: A matching task (3 minutes)

Classified vocabulary teaching is applied. At first, students are asked to match words with people in the picture and then classify words. For instance, "core family" has "father", "mother", and "me". What is more, the purpose is that stu-

dents can become familiar with target word, which makes preparation for following activities.

Activity 4: Extensive listening (4 minutes)

Multimedia teaching is a vital way. The teacher asks students to listen and circle words they hear. The activity is designed to repeat target words, such as “parents” and “grandparents”.

Activity 5: Intensive listening (4 minutes)

Students are asked to listen again and check their answers. After that, the teacher invites several learners to give answers. It can effectively practice their listening and speaking skills. What is more, she shows these target words and sentence patterns on a vivid family tree on the blackboard with the aim of boosting memory.

Activity 6: Find out missing words (4 minutes)

The holistic learning is adopted [19]. On the PPT, the teacher shows another family photo but some key words are blobbed. After that, students should listen to the tape and find out missing words. Then, juveniles are guided to compare antonyms and synonyms like “father” and “mother”, “cousin” and “brother”. Hence, students are given chances to improve their speaking and writing skills.

Activity 7 Read and role play the conversation (5 minutes)

Learners are encouraged to practice by role-playing. They need to listen and imitate the conversation following the record. There is an intention to improve students’ English-speaking skills.

Step3: Post-listening (15 minutes)

Activity 8: Pair work (6 minutes)

The teacher instructs learners to make the conversation and practice it with their partners; then, several pairs are invited to show their performances. Its intention is to develop a sense of responsibility and friendship.

Activity 9: Group work (8 minutes)

Students are divided into groups of four and have cooperation. In each group, one student should act as an interviewer and interview the other three members by using target sentences. The rest of them are asked to draw a family photo. Then, the teacher asks several groups to show their performances. When they are performing, she can ask the audience, using target sentences, “who is she?” as an example. Furthermore, it aims to cultivate students’ listening and speaking skills.

Step4: Homework and Assignment (1 minute)

It is compulsory that learners should read the conversation twice and finish exercises in textbooks. Also, if someone has time and energy, he or she can draw a family photo and write a short conversation. The homework is assigned to meet the diversity of students’ levels and consolidate their knowledge.

4. Data Analysis

4.1. Students’ Achievements in Vocabulary Learning

According to **Table 6**, the average score of two classes is 76.82 and 75.89 respec-

tively, which are very similar. In addition, the standard deviations of these two classes are relatively close. Therefore, before the experiment, subjects have similar English vocabulary levels in general.

Table 7 shows that there is no significant difference in vocabulary level between two classes because the result of variance analysis is 0.090, higher than 0.05. Moreover, the test value of two one-side t-test is 0.884, which is also higher than 0.05. In addition, the mean difference is 0.93. In a word, it remains obvious that the vocabulary level of students is similar.

With regard to results of the pre-test, in Class One, 27 students pass the examination, at a rate of 79.41%. There are 22 students getting excellent grades, at 64.71%. In Class Two, 28 students pass the exam, occupied 82.35%. There are 23 learners who get excellent grades, constituting 67.65%. Thus, in daily learning, students pay attention to the recitation of words and related usage. However, the achievement gap is still wide. Good students can get full marks in reading questions while some learners can only guess choices blindly. Especially in the second part, someone is thoughtless and unfortunately, finds wrong supporting details for questions. A writing task is another one, which students drop many points. Some of them do not write a complete passage at all.

Table 8 lists that no students in either class get full marks. Moreover, the gap between outstanding students and underachievers in English learning is widening. The average scores of the control class and the experimental one is 72.83 and 76.77, respectively. It can be found that the score of the latter is about 3 points higher than the former. Therefore, experimental subjects have improved their vocabulary levels to some extent after the experiment.

Table 9 displays the result is 0.049, lower than 0.05. It means that there is a significant difference in test scores between two classes. Precisely, underachievers have greatly improved their performances. The data also shows that subjects have increased vocabulary levels significantly compared with control groups.

Table 6. Descriptive statistics of pre-test.

	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Statistic
Scores in Class One, Grade Seven Valid N (listwise)	34 34	14.00	100.00	76.8235	25.97665
Scores in Class Two, Grade Seven Valid N (listwise)	34 34	7.00	99.00	75.8971	26.34439

Table 7. Independent sample t-test of pre-test.

Levene's Test for Equality of Variance		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	
Transfer Error	Equal Variance Assumed	0.090	0.766	0.146	66	0.884	0.92647	6.34501	-11.74176	13.59470
	Equal Variance not Assumed			0.146	65.987	0.884	0.92647	6.34501	-11.74181	13.59475

Table 8. Descriptive statistics of post-test.

	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Statistic
Scores in Class One, Grade Seven	34	8.00	96.50	72.8382	29.08575
Valid N (listwise)	34				
Scores in Class Two, Grade Seven	34	25.00	96.00	76.7794	20.01635
Valid N (listwise)	34				

Table 9. Independent sample t-test of post-test.

Levene's Test for Equality of Variance		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
Transfer Error	Equal Variance Assumed	4.027	0.049	-0.651	66	0.517	-3.94118	6.05522	-16.03082	8.14847
	Equal Variance not Assumed			-0.651	58.531	0.518	-3.94118	6.05522	-16.05968	8.17733

With regard to outcomes, in Class One, 27 students pass the examination, at 79.41%. 22 students get excellent grades, at a rate of 64.71%. 29 students pass the exam in Class Two, accounting for 85.29%. There are 23 learners who get excellent grades, occupied 67.65%. In conclusion, after the experiment, students not only pay attention to the usage of words but also the imitation of sentence patterns. In addition, in Class Two, underachievers have a certain interest in English learning gradually. In the previous test, they often give up the writing. However, after the experiment, they try to recite words and sentences in daily life, which has a positive effect on their writing.

4.2. Feedback Results from Students in Experimental Class

Before the experiment, there are ten questions in the pre-questionnaire, which are divided into three categories. The first part is about students' daily habits and methods of learning words (Q1-Q6); and the second one investigates the difficulty students' encounter in vocabulary learning (Q7-Q8). It is followed by their understanding and attitude towards incidental vocabulary acquisition (Q9-Q10).

In **Table 10**, 94.12% of students agree that English scores are related to vocabulary. A majority of them recite words through word lists in textbooks or applications. 58.83% of learners tend to learn new words by repetition and review learned words three to four times a week. Meanwhile, 41.78% of the population hope to expand their vocabulary through various activities, like listening to English songs and watching English videos. However, it is sad to learn that almost half of them spend less than half an hour a day studying English words and learn words by rote. In addition, students are faced with the following problems: the difficulty of distinguishing polysemy, homonyms and similar words, the flexibility of the application and easily forgetting. While learning, when they come across new words, they have various solutions, such as referring to the dictio-

nary, asking for help and guessing the meaning in context. Moreover, 76.47% of students do not know much about the incidental vocabulary acquisition previously. About their future learning, 85.3% of learners are eager to adopt new methods. Furthermore, it is glad to learn that the majority of the population have positive learning attitudes.

In conclusion, a great number of students are unaware of incidental vocabulary acquisition. Therefore, it is necessary for teachers to design English vocabulary teaching lessons based on the theory.

After the experiment, there are ten questions in the post-questionnaire, which are divided into three parts. The first part is whether students have a certain understanding about incidental acquisition (Q1-Q2). The next is focusing on vocabulary learning strategies (Q3-Q7). The last part is about learners' views towards their vocabulary learning (Q8-Q10).

Table 11 shows 88.24% of students agree that incidental acquisition plays an important role in English vocabulary learning. Besides, 82.35% of them believe that they have understood the method. So, the majority can master the way of learning and reviewing words. It also displays that 79.41% of students are aware of the importance of meaning and usage of words. Somebody tries to read between lines and guess the meaning in context, which accounts for 82.35%. Meanwhile, most of them manage to recall these words unconsciously. Then, 88.24% of students approve that the closer the topic is to daily life and the better English comprehension is, the easier it is to learn new words. Besides, nearly nine out of ten learners consider their English vocabulary level will improve in future. Clearly, quite a few students can master the method of English learning.

According to **Table 12**, the reliability of the post-questionnaire is 0.860, which is between 0.8 and 0.9. It also demonstrates a high consistency in learners' achievements and responses, which reflects high reliability.

As can be seen in **Table 13**, the KMO measure of sampling is 0.874, which means the questionnaire has passed Bartlett's Test of Sphericity. It indicates that the data can reflect the majority's views with high validity.

Table 10. Statistics of pre-questionnaire.

Options Questions	A	B	C	D	E
1	70.59%	23.53%	5.88%	0.00%	0.00%
2	20.59%	26.47%	20.59%	14.71%	17.65%
3	41.18%	17.65%	20.59%	8.82%	11.76%
4	29.41%	32.36%	26.47%	11.76%	0.00%
5	17.81%	12.33%	26.03%	41.10%	2.74%
6	29.11%	29.11%	17.72%	21.52%	2.53%
7	24.62%	21.54%	21.54%	27.69%	4.62%
8	31.03%	32.76%	34.48%	1.72%	0.00%
9	2.94%	20.59%	47.06%	29.41%	0.00%
10	70.59%	14.71%	14.71%	0.00%	0.00%

Table 11. Statistics of post-questionnaire.

Options Questions	A	B	C	D	E
1	64.71%	23.53%	11.76%	0.00%	0.00%
2	58.82%	23.53%	14.71%	2.94%	0.00%
3	58.82%	32.35%	8.82%	0.00%	0.00%
4	47.06%	32.35%	20.59%	0.00%	0.00%
5	47.06%	35.29%	14.71%	2.94%	0.00%
6	58.82%	23.53%	14.71%	2.94%	0.00%
7	61.76%	23.53%	11.76%	2.94%	0.00%
8	50.00%	38.24%	11.76%	0.00%	0.00%
9	52.94%	32.35%	11.76%	2.94%	0.00%
10	55.88%	38.24%	5.88%	0.00%	0.00%

Table 12. Reliability statistics of post-questionnaire.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.859	0.860	10

Table 13. Validity statistics of post-questionnaire.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.874
Bartlett's Test of Sphericity	Approx. Chi-Square
	df
	Sig.
	153.825
	45
	0.000

4.3. Feedback Results from Interviewees

The details of interviews are as follows. Three interviewed students are selected into three different levels according to their scores in the first semester.

Q1. How do you usually learn vocabulary?

Lily, like most students, memorizes words by repeated copying. She also believes that learning English well requires perseverance. Every day, she listens to the text recording and follows it. Hyacinth usually memorizes the spelling of each English letter, and even uses homonyms to help him recall. Hard as he studies, his English score is often around 80. In addition, he often said, "writing is very difficult for me. I can't write a good article." He also tries reciting some full-mark composition; however, when the topic has nothing to do with the sentence recited, his brain goes blank. Sunflower is not interested in learning English. In daily life, he rarely spends time and energy memorizing words, which leads to poor scores in the examination. "I don't care who teaches English," he shrugged.

Q2. Do you like the current English lesson? Why or why not?

"Yes, I do," Lily said happily, "learning vocabulary in different activities is

more interesting than the former.” Hyacinth said, “I’m going to try to remember words with flashcards just like the teacher shows in class. After all, I like colorful things.” “I have no idea,” said Sunflower, shaking his head.

Q3. What is your future plan in learning English?

Lily wants to learn English by watching English Cartoons and Hyacinth is willing to remember words with pictures. Sunflower comments himself as a last-minute person. “Only a few days are enough for me to cram for English tests,” he said.

On the other hand, there are two English teachers interviewed.

Q1. How do you teach vocabulary in the middle school English textbook, PEP?

Usually, Bai Lu dictates words and short dialogues. Then, she asks students to have a peer review. After correcting the dictation, they are asked to read each word aloud and then be corrected pronunciation, with the aim of focusing on the pronunciation and Chinese meaning. “It is vital for students to master both pronunciation and Chinese meaning,” she said. In addition, Xia Zhi often teaches vocabulary by asking brain-storming questions rather than showing key words directly. During the learning process, she also asks some students to guess words’ meanings in sentences.

Q2. Do you know incidental vocabulary acquisition?

Through communication, Bai Lu has heard about the theory, but she does not know how to put it into practice. After the explanation of the author, she gets to know it and feels that it is very similar to her previous proposal. “I once told my students to label items at home in English and review them from time to time,” said Bai Lu. In her opinion, the traditional teaching method is more helpful to English teaching. Meanwhile, Xia Zhi also has heard of incidental vocabulary acquisition theory. From her point of view, it could be used in teaching, such as spelling competitions, story-retelling and other various activities.

Q3. In your view, what is the cause of the phenomenon that some students are unwilling to learn English words and thus fail their exams?

Bai Lu said, “Interest is the best teacher.” One of the major reasons is the lack of initiative in learning. “If a person does not want to study, it is useless no matter how hard parents or teachers try,” Bai Lu then added, “education is a challenging career.” Xia Zhi agreed. “Individual students lack interest in learning, which should be taken into serious consideration,” she said.

5. Conclusions and Implications

The data collected from the three-month experiment proved that incidental learning can play a beneficial role. Firstly, incidental vocabulary acquisition can be applied in five trainings: visual, auditory, oral, reading or writing training. More specifically, teachers could use phonics rules and patterns, holistic learning, classified vocabulary teaching, visual illustration or multimedia teaching in English teaching. The research showed that the incidental acquisition can assist

students to expand their vocabulary capacity. Secondly, most of the feedback from teachers and students had been overwhelmingly positive. More specifically, top students and average students tended to embrace the new style, so did teachers, while underachievers were uninterested in it.

Our findings had managerial and practical implications. On the one hand, for teachers, they were encouraged to understand incidental vocabulary acquisition and design vocabulary teaching. On the other hand, for middle school students, the study can assist them to stimulate interest in mastering vocabulary and promote vocabulary lexical competence to a certain extent.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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