

Incidental Acquisition and Intentional Learning in Second Language Acquisition

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ABSTRACT

Vocabulary is one of the most paramount importance in the second language (L2) learning and teaching process. The main purpose of this paper is to compare the effects of two L2 learning methods (incidental acquisition and intentional learning) on China's high school students who are learning English as a foreign language. The research applied both quantitative and qualitative methods. 5 target English idioms were selected as the learning material. 80 high school students were chosen and divided into two groups. They either watched video clips containing the 5 idioms as incidental acquisition approach or recited the 5 idioms directly as an intentional learning approach. Both groups were given 3 tests: 10 minutes after the input, 2 days, and 7 days later. An interview survey was conducted one week later after the last test, 3 students from each group participated in the interview. The results of the tests show that the incidental acquisition group outperformed the intentional learning group in general. Still, too much irrelevant information in the incidental input may distract the learners' attention and decrease vocabulary learning efficiency. The interview findings indicate that high school students prefer the incidental acquisition method, which requires less pressure and effort, though the intentional learning method provides higher retention rates. The research reveals that learning L2 incidentally from watching informative video clips can be very effective for high school L2 learners. However, considering China's highly pressured exam-oriented high school study reality, intentional learning should still be the dominating method to assure efficiency.

Keywords: *Incidental Acquisition, Intentional Learning, Idiom's Learning, Efficiency, Retention.*

1. INTRODUCTION

In this article, the researchers observed the learning process of Chinese high school students acquiring idioms in two ways, incidental vocabulary acquisition and intentional vocabulary acquisition, to analyse how incidental acquisition and intentional learning influence their study and explore what way is more effective for Chinese students learning English. The reason why idioms are conducted as the research tool in the experiment is that idiom is considered as a part of the multi-word unit, and learning idioms could be of great importance and difficulty for English learners, especially high school students who require themselves to memorize vocabulary for a long time to pass exams. In this article, the researchers recorded and compared the performance of 80 students acquiring English idioms and tried to inspire English learners, teachers, and

policymakers to find more suitable teaching and learning ways.

2. LITERATURE REVIEW

L2 word learning is the basic and essential part of the language learning process for English second language learners to achieve proficiency. Singleton points out that, since the early 1980s, the amount of attention to L2 lexicon acquisition has increased significantly by researchers [1]. Word learning can be defined according to different approaches from various aspects, and this paper focuses on the distinction of two opposite learning methods: incidental acquisition and intentional learning.

2.1. Incidental Vocabulary Acquisition

Incidental learning can be deemed as unintended or unplanned learning. Ellis defines that incidental vocabulary acquisition as “with the meaning of a new word being acquired totally unconsciously as a result of abstraction from repeated exposures in a range of activated contexts” [2]. Similarly, Richards & Schmidt points out that incidental learning is the process of learning something while actually trying to learn other things without such intention [3]. According to Gass, the L2 learner can effortlessly acquire knowledge from an informative context [4]. As Hulstijn notes, “incidental vocabulary learning refers to the learning of vocabulary as the by-product of any activity not explicitly geared to vocabulary learning, with intentional vocabulary learning referring to any activity aiming at committing lexical information to memory” [5].

It is “almost universally accepted in SLA” that input plays a fundamental role in developing a linguistic system by L2 learners [6].

In his input hypothesis, Krashen introduces that incidental acquisition of vocabulary takes place naturally by providing the learner with comprehensible input [7]. Gass defines that incidental vocabulary acquisition happens “as a by-product of other cognitive exercises (e. g., reading/listening) involving comprehension” [4].

2.2. Intentional Vocabulary Learning

On the contrary, intentional learning is generally regarded as learning that is conducted by plans and is purpose-oriented. According to Robinson, “intentional vocabulary learning refers to any activity aiming to commit lexical information to memory” [8]. Bereiter and Scardamalia note that they use the term intentional learning “to refer to cognitive processes that have to learn as a goal rather than an incidental outcome” [9]. Intentional learning focuses on the conscious awareness of learning. It involves the efforts and cognitive consciousness of the L2 learners in the learning process.

“Whether intentional learning occurs is likely to depend on both situational and intrinsic factors – on what the situation affords in goal-attainment opportunities and on what the student’s mental resources are for attaining those goals.” [9].

When it comes to SLA, numerous studies about comparing these two approaches on L2 learning have been conducted on different aspects of language, such as vocabulary, grammar, etc. As Craik and Eysenck point out, incidental acquisition and intentional learning can be distinguished in whether the instruction before the learning warns the learners about the retention assessment after the learning [10, 11]. Since the beginning of the twentieth century, researches about these two different approaches of vocabulary learning

have been conducted for the purpose of psychology and pedagogy.

Watkins proposed that incidental learning can be regarded as the accessory product of the other activities and almost happens in kinds of situations, such as daily communication even the formal study process [12]. From Watkins's perspective, he thought that incidental learning could eliminate the restriction of course design, which means different levels can learn the study content of the study. Indeed, Watkins had constructed a model that shows the study process of incidental learning. Through this model, incidental learning can seem like a closed-loop, and all the stages revolve around the main work and interact with each other to acquire the additional content. Yorks and Kasl also have been developed whole-person learning to assess what kinds of knowledge can be acquired via incidental learning. This theory integrates the feeling and emotion with the perceptions of incidental learning and makes them become the basic component of the study.

Specifically, the acquisition of incidental knowledge can be reflected by expressive knowledge, which is like the experienced-based study form. In addition, Hart and Risley had conducted a series of studies to evaluate the effectiveness of incidental vocabulary learning via three different vocabularies—nouns, adjectives, and compound sentences [13]. They found that incidental learning relates to the using frequency of language, especially for the pre-schoolers [13]. Hence, it seems that incidental learning plays an important role in unconventional learning.

Ahmad experimented with evaluating these two study methods' effectiveness to test which learning method is more effective, especially vocabulary learning, which was almost led by intentional learning [13]. The research was based on 20 students who have the same academic ability. Then they were divided into two groups randomly to study 50 new words via intentional and incidental learning, respectively. To compare the experiment groups, it shows that the students in the incidental learning can learn the vocabulary better than deliberate study. Indeed, Hulstijn and Laufer also think that the learner can remember the vocabulary more deeply through incidental learning and further can apply it in a different situation. Whereas intention learning may lead to rote memorization that ignores the perception knowledge. However, some scholars argue that incidental learning may result in inaccurate vocabulary learning [14]. The nation also proposed that intention learning can help the learner gain the words more efficiently and further can expand the learner’s vocabulary rapidly cause its’ goal-directed.

Hence, to further explore incidental learning and intentional learning, this project will focus on the different learning effectiveness of these two methods.

3. METHODOLOGY

The researchers conducted quantitative research and qualitative research to explore the effectiveness of incidental vocabulary learning and intentional vocabulary learning.

3.1. Quantitative research

3.1.1. Participants

80 high school students were selected as the subjects, who were equally divided into Group A and Group B. The research was conducted at the end of their second term of the 11th grade. At that time, they were approximately 18 years old, the periods they had learned English were all over 8 years, and their lexicon was over 2000 words.

Table 1. Populations in Different Score Interval in Quantitative Research

| Score Interval | Group A | Group B |
|----------------|---------|---------|
| Below 70 | 10 | 12 |
| 70-90 | 23 | 22 |
| Above 90 | 7 | 6 |

Note: the full mark of the daily score interval is 150

According to Table 1, Group A and Group B were combined with 40 participants, scoring below 70, from 70 to 90, and above 90 in their daily performance.

3.1.2 Research procedure

Before launching the experiment, the researchers considered idioms could be a dilemma for the high school students according to their teaching and learning experience, so they selected 5 idioms: 1) Bee in one's bonnet; 2) Little bird tells me; 3) Eat like a bird; 4) Butterflies in one's stomach; 5) Doggie bag.

The researchers chose the five ones as a testing tool because there are five characteristics that an idiom should need to be consisted of, and they all meet the standards. It is shown from Carter & McCarthy that the core characteristic of the idiom is non-compositionality, referring to the meaning of an idiom as not a combination of literal meanings of each word unit [15]. The second characteristic is Common recognition, which means idioms are deliveries that people in a community recognize and are familiar with Moon [16]. Fixity means that the word unit is fixed, while some regard the compositions of an idiom cannot change in any condition, while others allow some changes. For example, they can be moved, replaced, added, or deleted to a certain extent

[17]. Grant & Bauer regard a multi-word unit should also have a function of Metaphor [18]. The five features, especially the last one, could be quite hard for the students to conquer.

Table 2. Characteristics of the 5 Idioms

| Idioms | Characteristi c 1 | Characteristi c 2 | Characteristi c 3 | Characteri stic 4 |
|------------------------------|----------------------|----------------------|----------------------|----------------------|
| Bee in one's bonnet | √ | √ | | √ |
| Little bird tells me | √ | √ | √ | √ |
| Eat like a bird | √ | √ | √ | √ |
| Butterflies in one's stomach | | √ | | √ |
| Doggie bag | √ | √ | √ | √ |

Note: √ means the character that the idiom occupies

In table 2, it is needed to notify that three of the word unites are fixed except that the first idiom can also be delivered as “Have bees in the head”, and the fourth could be “get butterflies”, which is appropriate for the experiment.

Before launching the first experiment, one of the researchers made a teaching video consisting of the 5 idioms, including relevant clips, pictures, paraphrasing, and conversation shows, and showed it to the participants in the class.

In the quantitative research, researchers compared two groups of Chinese high school students.

Group A was shown a teaching video made by one of the researchers, but without knowing they are in an experiment or being asked to memorize the meanings. And then, the researcher asked them to guess and memorize the meanings of the idioms.

Group B was provided with the idioms and the Chinese meanings on a blackboard and asked to remember the word units simultaneously.

The populations who remembered the meanings were recorded respectively before the experiment in class (6th July 2021) and at 3 times after they are watching the video: after 10 minutes (6th July 2021), 2 days (8th July 2021), and 7 days (14th July 2021). The ways to test whether the students grasped the meanings were to ask

them individually to write down the Chinese meanings on paper and then handed their answers on to the researcher in 10 mins, and the numbers of each idiom in an online chat box in 2 and 7 days. The data were all recorded by the researchers.

3.2. Qualitative Research

3.2.1. Participants

There were a total of 6 students participating in the following interview, who were representatives selected from the 80 ones in the first experiment.

Table 3. Populations in Different Score Interval in Qualitative Research

| Daily Score Interval | Participants of Group A | Participants of Group B |
|----------------------|-------------------------|-------------------------|
| 50-70 | 1 | 1 |
| 70-90 | 1 | 1 |
| 90-110 | 1 | 1 |

Table 3 shows that Group A and Group B participants in the qualitative research were respectively 3 teenagers, who were scoring from 50 to 70, from 70 to 90, and from 90 to 110 in their daily performance.

3.2.2. Research procedure

Researchers launched an online interview about the subjects' feelings after incidental learning and intentional learning in the qualitative research.

The interview questions are as follows:

Q1. Which idioms do you still remember meanings? Can you paraphrase their meanings to me?

Q2. Which idiom impresses you most? Why?

Q3. Can you make an English sentence with it? For example?

Q4. Do you like to remember idioms by watching teaching videos or reciting? Why?

Q5. How is the importance of learning idioms in your English study? (Very important/important/neutral/less important/not at all)

4. RESULTS

4.1. Quantitative Research

The performance of Group A is shown in Table 1.2.1, which was recorded four times: before watching the video, and after watching the video in 10 minutes, in 2 days, and in 7 days.

Table 4. Group A- The Respective Populations at 4 Times

| Idiom No. | Idioms | Before | In 10 mins | In 2 days | In 7 days |
|-----------|------------------------------|--------|------------|-----------|-----------|
| 1 | Bee in one's bonnet | 0 | 7 | 11 | 6 |
| 2 | A bird tells me | 0 | 15 | 21 | 19 |
| 3 | Eat like a bird | 0 | 17 | 22 | 19 |
| 4 | Butterflies in one's stomach | 0 | 24 | 19 | 18 |
| 5 | Doggie bag | 0 | 30 | 21 | 18 |

It can be seen in table 4 that the performance of Group B before the Chinese meanings of the English idioms is clearly shown on the blackboard in class and after during the same period.

Table 5. Group B- The Respective Populations at 3 Times

| Idiom No. | Idioms | Before | In 10 mins | In 2 days | In 7 days |
|-----------|------------------------------|--------|------------|-----------|-----------|
| 1 | Bee in one's bonnet | 0 | 4 | 5 | 7 |
| 2 | Bird tells me | 0 | 10 | 20 | 14 |
| 3 | Eat like a bird | 0 | 21 | 21 | 11 |
| 4 | Butterflies in one's stomach | 0 | 13 | 17 | 11 |
| 5 | Doggie bag | 0 | 21 | 23 | 12 |

The populations of Group A and Group B showed in table 5 are illustrated in the above charts. It is obviously known that before the experiment launched, the numbers of students who know the meanings of the idioms are zero. At the same time, those are increased at different levels after the experiment.

Table 6. A Comparison between Group A and Group B in 10 Minutes

| Comparison | Idiom 1 | Idiom 2 | Idiom 3 | Idiom 4 | Idiom 5 |
|------------|---------|---------|---------|---------|---------|
| Group A | 7 | 15 | 17 | 24 | 30 |
| Group B | 4 | 10 | 21 | 13 | 21 |
| Winner | Group 1 | Group 1 | Group 2 | Group 1 | Group 1 |

Table 7. A Comparison between Group A and Group B in 2 Days

| Comparison | Idiom 1 | Idiom 2 | Idiom 3 | Idiom 4 | Idiom 5 |
|------------|---------|---------|---------|---------|---------|
| Group A | 11 | 21 | 22 | 19 | 21 |
| Group B | 5 | 20 | 21 | 17 | 23 |
| Winner | Group 1 | Group 1 | Group 1 | Group 1 | Group 2 |

Table 8. A Comparison between Group A and Group B in 7 Days

| Comparison | Idiom 1 | Idiom 2 | Idiom 3 | Idiom 4 | Idiom 5 |
|------------|---------|---------|---------|---------|---------|
| Group A | 6 | 19 | 19 | 18 | 18 |
| Group B | 7 | 14 | 11 | 11 | 12 |
| Winner | Group 2 | Group 1 | Group 1 | Group 1 | Group 1 |

The above tables compare group A and group B at 3 times: in 10 minutes, in 2 days, and in 7 days after participants watching. Compared to the data, Group A generally performs better than Group B except Idiom 3 “Eat like a bird” in 10 mins, Idiom 5 “Doggie bag” in 2 days, and Idiom 1 “Bee in one’s bonnet” in 7 days.

According to the data, there are the following findings:

1) Language learning based on incidental reading and listening helps high school learners to acquire better in general. Parry proved that reading relevant passages assists students in guessing new words and incidental acquisition [19, 20].

2) Incidental information should be fun, but too fascinating incidental information may distract SLL, which decreases SLA efficiency. For example, when the video clip of the first idiom, “Eat like a bird,” showed pictures of a slim female Hollywood star, it was observed that they attracted students’ attention, and even 4-5 girls were screaming with surprise and joy. But that could be a cause of distraction from the idioms, which can be seen in Idiom 3 of Table 6. Idiom 1, “Bee in one’s bonnet” was also a clip of a well-known film for teenagers. Still, the performance of Group A was worse than Group B in

Table 8, which was foreseen by the researchers because there was a voice of “wow” coming from the whole class, but rare learners took notes on their notebooks.

3) Idioms under a certain extent of teaching and explanation can be better acquired by second language learners. For instance, the researcher enhanced the last idiom, “Doggie bag,” with a Chinese explanation after the video to help the subjects memorize, while the result was worse in Table 7.

4) Teaching video is a favorable tool for learners to acquire new vocabulary since the video in the experiment successfully caught the students of Group A. Chun & Plass, and Laufer & Hill indeed reflected that if definition and dictionary could be made into multi-media with the help of computer for learners to refer while reading, the learning results of incidental vocabulary acquisition may be better [21, 22].

In conclusion, teachers need to show the incidental information delicately and choose suitable contexts for the students, and moderately and effectively enhance the memory of the language learners. Finally, second language acquirers are also encouraged to consistently access massive incidental reading and listening in the language learning process.

4.2. Qualitative Research

After one week after the above assessments, several students from both groups were invited to complete an online interview survey regarding the two different idiom learning experiences. The purpose of the survey was to investigate the real feedback of students about the two learning methods and provide an in-depth insight into L2 learning and pedagogy.

The interview survey questions are designed to explore the efficiency, retention, semantics richness of the two learning approaches and the student’s personal preferences and motivations.

The questions are as follows:

Q1. Which idioms do you still remember meanings? Can you paraphrase their meanings to me?

Q2. Which idiom impresses you most? Why?

Q3. Can you make an English sentence with it? Can you give an example?

Q4. Do you like to remember idioms by watching teaching videos or reciting? Why?

Q5. How is the importance of learning idioms in your English study? (Very important/important/neutral/less important/not at all)

The questions were provided bilingually (Chinese and English) to encourage the students to answer questions freely, considering their age and limited

English proficiency, the questions were provided bilingually (Chinese and English). The students were allowed to answer in their native tongue. Due to the research time was in high school's summer holiday, the survey was conducted online in the form of the one-to-one interview via chatting software.

Table 9. Participants of the Interview and their English levels

| Score Interval | Participants of Group A | Participants of Group B |
|----------------|-------------------------|-------------------------|
| 60-75 | Aa | Ba |
| 75-80 | Ab | Bb |
| 85-95 | Ac | Bc |

Table 9 shows that Group A represented the incidental acquisition approach that has learned the target 5 idioms via video clips. Group B represented the intentional learning approach that has recited the same target 5 idioms in class. Six students of Group A and four students of Group B participated in the survey. To minimize the analysis variation, the researchers chose 3 students from each group and categorized them into 3 classifications according to their English levels (based on their normal English test scores).

Table 10. 5 Target Idioms and Translations Given by the Teacher

| Idiom No. | Idioms | Translation from the instructor |
|-----------|------------------------------|-------------------------------------------|
| 1 | Bee in one's bonnet | Someone has weird ideas. |
| 2 | Little bird tells me | Someone knew it a long time ago. |
| 3 | Eat like a bird | Someone is on a diet, eating very little. |
| 4 | Butterflies in one's stomach | Restless, unsettled, bothered... |
| 5 | Doggie bag | The bag to take away food |

Table 10 contains the 5 target idioms and corresponding translations instructed by the researcher in class.

Thematic analysis is used in this research to process the data collected through the interview survey. The thematic analysis is particularly useful for subjective information, such as participants' experiences, views, and opinions.

Q1. Which idioms do you still remember meanings? Can you paraphrase their meanings?

Group A:

One participant remembered and paraphrased all the 5 idioms but made a mistake on idiom No.2 (little bird told me). One participant remembered and paraphrased idiom No.4 and No.5, and one participant only remembered and paraphrased idiom No.5.

Group B:

Two participants remembered and paraphrased 4 idioms except idiom No.1. One participant remembered and paraphrased idiom No. 2,3,5.

From this comparison, we can see that all three Group A participants could not remember or paraphrase idiom No.2 correctly. While all three participants from Group B could not remember nor paraphrase idiom No.1. This may be because the video of idiom No.2 contained too much irrelevant information, distracting Group A's attention. At the same time, the meaning of idiom No.1 was too abstract for Group B to understand by recitation. Generally, Group B has remembered and paraphrased more idioms than Group A, inferring that intentional learning has better learning retention and richer semantic meaning than incidental acquisition.

Q2. Which idiom impresses you the most? Why do you think so?

Group A:

Two participants chose idiom No.5(Doggie's bag) because they considered "the image was vivid and closed to daily life". One participant chose idiom No.4(Butterflies in one's stomach) because it was beyond her expectation (she was surprised that butterflies would represent something bad in the western culture).

Group B:

All three participants chose idioms No.2(Little bird tells me) and No.3(Eat like a bird) because these idioms were literally interesting and lively, also closed to real life.

From this comparison, Group A and Group B have no difference in Q2. High school students are easily impressed by interesting and vivid information and things that are familiar to their existing cognition.

Q3. Can you make an English sentence with it? Can you give an example?

Group A:

All three participants made correct example sentences.

Group B:

Two participants made correct example sentences; one made a mistake by using idiom No.2 (Sentence made by participant Ab: Bird tells me you don't like jazz.) The

reason for this error may be because that Ab hasn't understood the actual meaning of this idiom.

Q4. Do you like to remember idioms by watching teaching videos or reciting? Why do you think so?

Group A:

All three participants have explicitly expressed affection for the video-learning method because it provided an easy, relaxed, and vivid way of learning. They felt they could remember the idioms longer than usual.

Group B:

All three participants used neutral expressions in recitation methods, such as "acceptable" and "it's okay".

From answers to this question, it can be inferred that high school students clearly prefer the learning way with more easiness and relaxation. In this way, the incidental acquisition approach, which requires less effort and pressure, could be a popular choice for teachers.

Q5. How is the importance of learning idioms in your English study? (Very important/important/neutral/less important/not at all)

Group A:

Participants Aa and Ba believed learning idioms was "important" to English study and was especially helpful to improve writing skills. Participant 1C considered learning idioms was "very import" because firstly, it could enrich the knowledge, polish the writing, and give one some cultural sense.

Group B:

Participant Ab regarded learning idioms as "very important" because it could help vocabulary memorization and daily communication. Participants Ba and Ac replied "important" because it could expand their horizons, enrich their knowledge, and also enhance their writing skills.

From the reply to this question, high school students' motivation for learning idioms is mostly practical, such as writing, communication, etc.

Generally, the findings of the interview revealed the following inferences:

The deliberately reciting group could remember and paraphrase more idioms than the video-watching group, which indicated that the intentional learning method had slightly higher retention than the incidental acquisition method. Similarly, in other research, it has been pointed out that generally, the retention rates of intentional vocabulary learning are higher than those acquired with incidental input [23].

Though watching video is a preferred learning method among high school students, the finding showed

that too much irrelevant information would distract attention and undermine learning efficiency.

The fact that is directly reciting group had difficulty remembering idioms that were too abstract to understand from the literal meanings suggested that intentional learning could not provide enough informative and illustrative information as incidental acquisition did. Similarly, Huckin and Coady argued the importance of incidental acquisition, suggesting that more vocabulary knowledge could be obtained by extensive input with guessing the meaning of unknown words [24].

5. DISCUSSION

This research explores the benefit of intentional and incidental learning for Chinese high school ESL to learn vocabulary through quantitative and qualitative methods. Further, it compares these two control groups that can provide significant guidance to Chinese second language teaching activities. Indeed, the results of quantitative and qualitative data present the opposite case. The quantitative data were collected quickly with ten mins, two days, and seven days, respectively. It shows that incidental language learning is more efficient than intentional learning, and also it proves that the study method in virtue of multimedia can attract students' learning interest. However, the quantitative data, which has been collected a week after the above assessments, show that intentional learning can help students remember more vocabulary and even gain a richer semantic use in the communication process. Hence, it means that the significance of intentional learning and incidental learning depends on the interval of time. Although incidental learning is better than intentional learning in a short period, as the memory curve changes, words learned through intentional learning will remember more profoundly than incidental learning. To sum up, the continuous effect of intentional learning is more suitable. What's more, both data types mentioned that the media used for incidental learning (e.g., videos, images) would distract students' attention. Although incidental learning is one of the students' favorable study methods, it has little significance in overall learning results.

In addition, intentional learning is more suitable for the current learning situation by combining with the Chinese educational situation. The Chinese educational model is based on exam-oriented education, which is decided by its large population. Besides, the teaching contents majority concentrate on helping students to pass all kinds of examinations, especially for the high school students who work on the national college entrance exam. And intentional learning can help students to gain new knowledge effectively and enduringly. Therefore, to develop students' second language learning, it should prioritize intentional learning and be supplemented by incidental learning to arouse students' enthusiasm.

6. CONCLUSION

This study focuses on Chinese high school students' second language learning process. It takes both incidental and intentional learning methods to explore which method is more suitable for acquiring vocabulary. Through this whole study, the high school students who have a relevant academic degree were randomly divided into two groups and given the same study material via two learning processes to compare them. A series of follow-up studies concludes that the significance of these two study methods is related to students' length of memory, and the intentional study can help students master new knowledge more proficiently. Also, under the exam-oriented Chinese talents public selection system, incidental learning seems to contribute to students' personal development. However, this study also has its limitation. More specifically, it only focused on a certain high school in a city and did not compare with other regions' high school groups. Therefore, there may be differences in regional educational resources leading to different results. However, the cross-area exploration may be limited by distance and time, which is difficult to overcome. Hence, the teaching activities in China should integrate some of the methods of incidental learning with intentional learning and further ensure the quality of education.

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