

Case Study: Comparison Of The Effects Of Immediate Feedback And Delayed Feedback On Reading Comprehension Among Chinese English Learners

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Abstract: *This study aims to investigate the effect of using two types of feedback (immediate and delayed) in motivating Chinese students to improve English reading proficiency in the university level. Data was collected from 18 Chinese EFL learners over a 12-week period. The results of this study show the effects of immediate feedback and delayed feedback on reading comprehension among Chinese EFL learners. It can be found that under the immediate feedback, all students can quickly absorb feedback from teachers and actively participate in the interaction with teachers. In subsequent interviews, they also confirmed that their comprehension of sentences and passage had improved significantly, and also their reading speed. In the delayed feedback classroom, it is reported that delayed feedback lead to forgetting and a lack of attention. In addition, the majority of the respondents believed immediate feedback on reading comprehension is more effective and they also preferred immediate feedback over delayed feedback.*

Key Words: *Feedback, reading comprehension, Language learning*

1. INTRODUCTION

In the context of second language teaching and learning, reading is the primary source of English input, and it accounts for a large proportion of English courses in Chinese universities. In China, although teachers and students attach great importance to English reading, the actual reading teaching is not optimistic and the students' reading capacity is far from satisfactory (Cheng & Dörnyei, 2007; Li & Wang, 2010). Due to the lack of effective feedback activities to help students improve their reading ability, Chinese EFL learners have a moderate interest in reading comprehension. According to Vygotsky's social constructivism theory (Vygotsky, 1978), teacher could apply the method of scaffolding by providing feedback while the students encounter new problems in their learning. There are several studies that have convinced the effective of feedback in ESL (English as a

Second Language) teaching (Clariana, 1999; Quinn, 2014; S. Samuels & Wu, 2003). However, it is still controversial that which type of feedback can help students learning a foreign language more effectively.

English language has achieved a particularly high status in China and its role is considered more significant than that of any other foreign language (Hu, 2002b, 2005). Although Chinese society needs more English professionals who can communicate in English and more students want to improve their English, the process is not very successful considering the time and energy spent in it (Gan et al., 2004). Most undergraduates who study English cannot use English without any facilities. One possible answer for this issue is extensive reading. According to the procedures of many University in China, teachers should attract their own students to the materials of the current textbook in reading namely "Extensive Reading". Chinese EFL learners need to be provided feedback effectively to be motivated to read and to help them in better learning in reading comprehension.

This study aims to investigate the effect of providing immediate and delayed feedback in motivating Chinese EFL (English as a Foreign Language) learners to improve English reading comprehension in the classroom setting. Dempsey and Wager (1988) proposed the operational definitions of immediate feedback: "Feedback was given either immediately after each response, or immediately after an entire test was completed." Any delay between the response and the receipt of the feedback is delayed feedback, but the delay in terms of time could be seconds, minutes, hours, days, or even weeks (Smits et al., 2008). One-week delay is chosen in the current study due to the fact that there are only two reading classes will be arranged together per week in most Chinese universities. And It is hoped that this study will provide some inspiration to other EFL learners and educators. The research questions of this study are:

1. What kind of feedback time (immediate feedback or delayed feedback) Chinese EFL learners prefer in reading comprehension?
2. How does immediate and delayed feedback affect the reading comprehension of Chinese EFL learners?

2. LITERATURE REVIEW

In recent years, scholars pay more and more attention to the classroom teaching and research of extensive reading. It is found that reading has a significant impact on academic performance (Hunter & Titze, 2009; Day & Bamford, 2000). Reading can enable students to have extensive vocabulary, syntax, and other languages, thus enriching their application in the target language. Therefore, in the extensive reading class, teachers play an important role in providing effective feedback to improve students' reading comprehension ability.

The time of feedback had been noticed since 1920's (Petrina, 2004) and many researchers started to take the time of immediate versus delayed feedback into account. Researchers stressed the importance of providing feedback to student responses in a timely manner, so that students could apply the feedback immediately to the activity. But overall, the studies on feedback timing were limited before the 1960s and most studies tend to draw a conclusion that immediate feedback is more effective for learning (Pressey, 1926, 1932). From later 1960s, lots of researchers started to investigate the effects of immediate and delayed feedback on learning (Bown, 2004; Clariana, 1999; Jurma & Froelich, 1984).

However, the research on the differences of immediate and delayed feedback on students' reading comprehension is very limited. Only two studies which investigate different feedback time on reading comprehension were found. Guthrie (1971) investigated the motivational effect of timing feedback on reading. The results showed that under different feedback conditions (immediate feedback and delayed feedback), students' emotional responses to reading tasks were different. The purpose of the above relevant study was to explore the immediate and delayed feedback on reading-related factor (motivation). Samuels and Wu (2003) examined the effect of feedback timing on reading performance, the goal was to explore whether the timing feedback would affect students' reading performance that guided students to improve their reading proficiency finally. The study evaluated the effects of immediate versus delayed feedback on sentence and passage comprehension, as well as reading speed. The quasi-experimental study was done to evaluate immediate versus delayed feedback on reading performance. However, to investigate the effect of feedback timing on reading related factors, the effect of different time of feedback on students' reading was first necessary to study.

3. MATERIALS AND METHODS

3.1 Design

This research procedure includes three phases which are the preparation phase, the experiment phase and the data analysis phase. In the first phase, the study began with preparation. The researcher screened the potential participants and randomly divided the participants into 2 groups (Experimental group A, Experimental group B). The participants in the Experimental group A received immediate feedback. while the participants in the Experimental group B received delayed feedback. Each group contains 9 participants with different age and gender. Then during the three-month course, students participate in extensive reading class. After the short pre-reading task, students were given multiple-choice reading comprehension exercises which they were asked to finish. The estimated time for each exercise was thirty minutes. And then two groups of participants received different feedback methods. In the group of Experimental A, participants received immediate feedback. The class teacher achieved it during their testing reading comprehension immediately after the completion of their tests. In the group of Experimental B, participants did not receive the feedback after their answering all the tests section and they could receive delay feedback in one hour after the completion of their answering. Participants were provided by the specific feedback in different time that can be used for answering the right choices in relating to the extensive reading context. Teacher can help students to correct their errors in the tests and teach them some reading.

In current study, the data is gathered from the interview with students and the researcher's observation notes. Qualitative approach is chosen because it allows understanding of classroom practices and leads to an in-depth exploration of the classroom interaction. To answer the research questions, two types of instruments are used in this study: (1) observation, (2) semi-structured interview. Data from the observation help understand how the feedback timing affect participants' reading ability and understand how the interaction in the reading class occur through watching their behavior. Classroom observation are conducted simultaneously during the whole experiment process. After the reading activities, students are interviewed to understand their perspectives and experiences on the reading feedback intervention. In the third phase, all the data from the students' reading tests, interviews and teacher's observation notes are analyzed.

3.2 Participants

The participants of the current study are undergraduate students who had similar background in the faculty of foreign language in Fuyang Normal University in the southeast of China. Eighteen English majors were selected which involves 15 females and 3 males, with age in 18-20. They were selected in terms of their ages (average 19 years old), formal exposure to English in primary school and secondary school (average 10 years). Subjects in the study were limited to students who were in the Freshman year for the academic year (2020-2021). All of them were on a full-time student status. These students just passed the college entrance examination in China and were in the second semester in college. All of these participants were coded from p1 to p18.

3.3 Data Analyses

In the current study, once the data is collected through interviews and classroom observations, their data were recorded by the researcher to compare and analysis. Firstly, the recorded interview content is recorded word by word in advance, and the researcher will start transcribing the audio and video tapes of the classroom observation to make the data easier to analyze. To be familiar with the information provided, the researcher read the transcripts and listened to the tapes more than once to reduce the missing data. When all the data are prepared well, this study employs NVivo12 to analyze the qualitative data. Qualitative data analysis through NVivo can significantly improve the research quality and make the results more professional.

These interviews and observations are transcribed into texts and stored as classified files. The next step is to import the files which the researcher intends to analyze into the application in NVivo 12. Because qualitative data is text-based, the key to analyze is the coding process. Code is usually attached to large chunks of words, phrases, sentences, or whole paragraphs (Weber, 1990). Coding and analyzing data around themes are important parts in qualitative research. NVivo labels these storage containers as “nodes”. The researcher and the auditor code the data while reading the text, classify the nodes containing specific concepts or categories, and then divide them into appropriate nodes and sub-nodes according to meaning and theme. All the information is then organized into an appropriate classification system. Once the data is organized, researcher understand and interpret all the information, and ultimately interpret it. In the process of analysis and explanation, students’ behavioral themes in the observation process and their reactions to the interview should be searched according to the research questions. Through the analysis of qualitative data, the research question can be answered. The processes of data collection and analysis are shown in Figure 3.1.

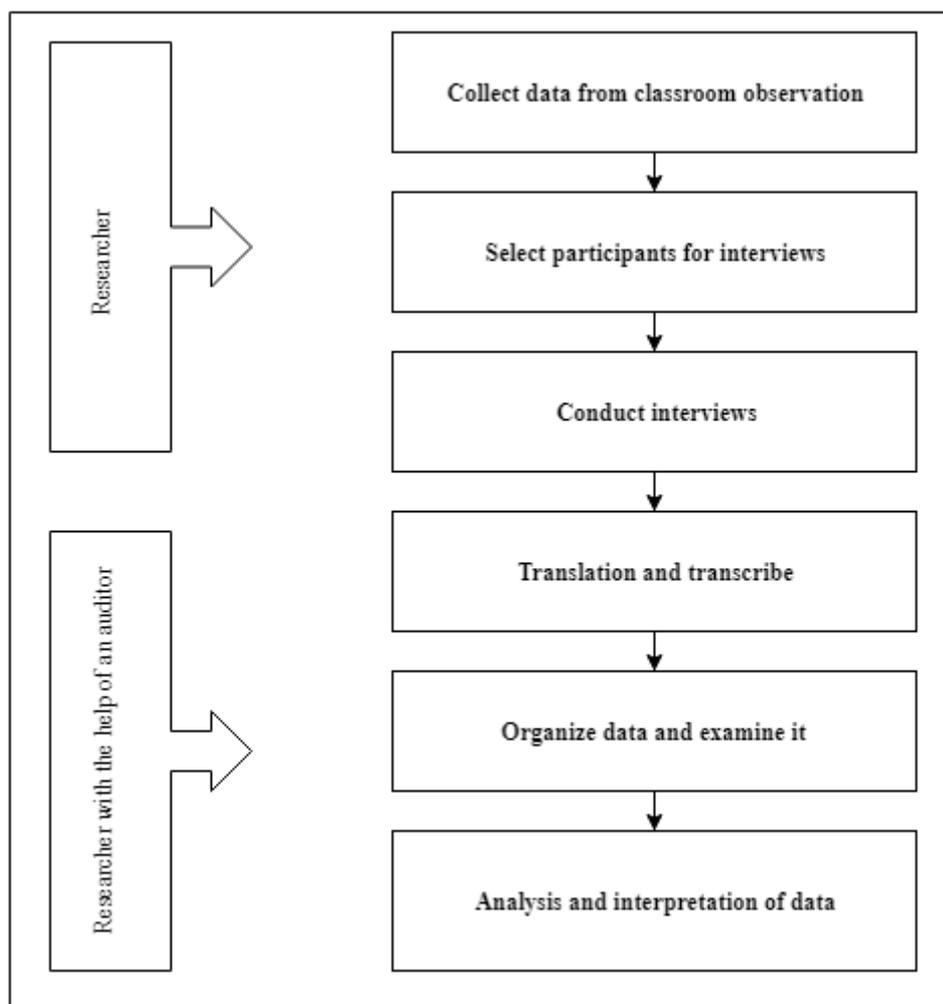


Figure 3.1: Flowchart of Data Collection and Analysis

4. RESULTS

4.1 Data Findings of Classroom Observation

Data from the observation section were collected through the observation sheet and video recording. The researcher took notes of any details with respect to reading behaviors, reading feedback, reading strategies and performance of students and teacher. The findings were then categorized and analyzed on the basis of emerging themes. These processes of analyzing data were practiced using the following steps: preparation and familiarity with the data, interpreting the data (developing codes, categories and concepts), and verifying and representing the data (Denscombe, 2007).

4.1.1 Students' Reading performance under Immediate Feedback

In part of the intervention, the researcher used the same methods and reading activities, but providing feedback in different time in different classes. After videotaping and observing the classes' activities, the study tried to evaluate the students' performances in interactive reading activities. It was observed that students were facilitated to involve in testing process and reading activities under immediate feedback condition. And high-quality

interaction patterns emerged in the immediate feedback class.

a. Students were facilitated to involve in reading activities

Providing with immediate feedback after each reading exercise, students can identify their errors directly. In order to perform better in the reading exercises, they were observed to complete the process with great concentration. And in the following elaborative feedback, students are delighted to identify which question is answered incorrectly and change their answer accordingly. Furthermore, they were observed to be very familiar with the feedback content, so they can quickly locate the relevant paragraphs in the reading text for the incorrect answers. Later, when the teacher explained these questions further, it was observed that most of them nodded and took notes, indicating that they quickly received and absorbed the relevant knowledge. When the teacher gave feedback, students attempt to join in the reading activities to find out the corresponding reading strategies to improve their reading performance.

b. Positive interaction patterns emerged in the immediate feedback class

As one of the earliest interaction systems, Bales' Interaction Process Analysis (IPA) model provides insight into group interaction processes (Keyton, 2003). In Bales' model, demonstrations of solidarity, tension release, and agreement constitute positive socio-emotional reactions, while disagreement, showing tension, and antagonism are negative socio-emotional reactions. Students in the immediate feedback class showed considerably less negative socio-emotional behaviors and more positive socio-emotional behaviors, such as agreement, relax questions and discussions, etc.

The members in the immediate feedback class were observed active, outgoing, and talkative. And they interact positively in the reading activities. The students spent most of their time on task-related problems, and almost none on negative socio-emotional problems. They showed the willing to share information, discuss alternatives and seek agreement with their classmates. Further examples of language describing a shared experience as students worked together are highlighted by the inclusion of words such as "We" and "Let us". In summary, therefore, the transcripts include several of the features that have been associated with positive and quality interaction between teacher and students, and between students and students. From observation by the researcher of all data collection sessions in the study, all students were seen interacting with their teacher or partners. However, as language obstacle, most students interacted in their first language.

4.1.2 Students' Reading Performance under Delayed Feedback

In the delayed feedback class, the teacher provides delayed feedback to students one week after each reading exercise. Consistent with immediate feedback, teacher feedback includes guidance on test content and related reading skills. It was observed that students show a lack of interest in self-thinking and corrective behaviors when receiving delayed feedback.

a. Students show a lack of interest in self-thinking and corrective behaviors

In delayed feedback condition, a common observation in reading classes is that students often write the correct answers directly on the paper from teacher feedback without actually considering why their own answers are different or incorrect. For example, it was

observed teaching in the Activity 2 “the shadowland of dreams”. Having told the correct answers from teacher, some students asked the teacher why this is the right choice. However, when the teacher gave corrective feedback and ask class to think about the question in the text, many students began to wander. There was no attempt to self-correct all errors, having received the delayed feedback, and some students considered their task is over by the time they finish the test. These students are accustomed to being passive in the class, relying on their teachers to read, translate and explain the text to them. As transcript showed below, teacher was trying to get students to read and think independently, but these students were, unsurprisingly, expecting the teacher to do the work.

b. First language was used to help Students recall and participate in reading activities

Utilizing the L1 was a frequently observed behavior in delayed feedback class that teacher tried to help all the students recall their reading process and encourage them to join in the following reading activities. It is worth noting that those students with high proficiency level still performed well in the class. In the delayed feedback class, they can recall the content of the exam in time and focus on receiving teacher feedback. But for the majority of students at lower levels, they run into some difficulties and need the help of first language. For instance, after a week, the students showed that they were unfamiliar with the reading material and the reading process at that time. And when the teacher provided feedback, the student accessed their L1, using it as a strategy to help comprehend the text. It seems likely that the readers used this strategy to overcome the limitation of reading comprehension such as word recognition bearing in mind the linguistic variations between the two languages, some of which was solved by using the dictionary when the teacher stands on the platform to give feedback. At the same time, for many students cannot remember the reading text in time, teachers also started to use the first language to help students recall the reading material, which takes up part of the class time. However, when the teacher began to discuss the title of the text in the students’ L1, and used examples related to the topic from their everyday life, the students started to enjoy and interact with the lesson activities.

4.2 Data Findings and Interpretation of the Semi-structured Interviews

Data from the semi-structured interviews section were collected with 18 participants, guided by a semi-structured questionnaire. The interviews were first analyzed using the broad content areas of the semi-structured interview protocol. They were then coded inductively to identify sub-codes, which provided a nuanced picture of students’ perspectives on the influence of immediate Feedback and delayed feedback on reading comprehension.

4.2.1 Students’ Perspectives on the Influence of Immediate Feedback on Reading comprehension

This section revealed the students’ perspectives on the influence of immediate feedback on reading comprehension. Students’ perspectives on feedback condition are presented. Five major factors were stated by interviewees regarding the influence of immediate feedback on reading comprehension performance, including “effective and instant”, “focus on the result”, “deepen impressive”, “increase interests” and “no time for reflection”.

Respondents were then asked to describe their reactions which was observed in the immediate feedback class, such as “nodded their heads”, “took notes” and “respond to teacher’s questions actively”. They tried to recall the scene and describe it in detail:

P2: 'The feedback can help us correct mistakes in time and learn to use appropriate reading strategies to avoid mistakes next time, so that we can make progress.'

P6: 'yes, I remember exactly how I chose my answers. When the teacher gave us immediate feedback after the test, both the correct and the wrong responses were still fresh in memory, so I could get the feedback immediately and remember it clearly.'

These interviewees (i.e., P2&P6) shared their experiences when they received immediate feedback after tests. They considered various factors related to their reading experience that may improve their reading performance, including “fresh in memory” and “correct mistakes in time”. They also confirmed that their comprehension of sentences and passage had improved significantly, and also their reading speed.

However, some students also mentioned some potentially bad effects of immediate feedback, saying “If teachers provide feedback too quickly, students will have no time for reflection, which may hinder their self-correction.” “I think immediate feedback will block students’ exploration and thinking, and it is not conducive to memory retention.”

4.2.2 Students’ Perspectives on the Influence of Delayed Feedback on Reading comprehension

As presented above, students were provided with feedback after a week in the delayed feedback condition. This section revealed the students’ perspectives on the influence of delayed feedback on reading comprehension. Five major factors were stated by interviewees regarding the influence of immediate feedback on reading comprehension performance, including “reflect and review”, “improve students’ learning initiative”, “long-term memory” and “lose attention”. When respondents were asked to describe their reactions to the delayed feedback which they received during the reading class. They stated their experiences and described their perspectives as following:

P10: In my opinion, delayed feedback can help students review and deepen their understanding of the knowledge. If students can take the initiative to reflect on the exam and correct the wrong questions by themselves.

P17: Delayed feedback is more conducive to long-term memory. After a week, we may forget some content. Through delayed feedback from teachers, we will review these knowledges and be more impressed.

P12: Although I agree that delayed feedback is better for long-term memory and can also enhance students' learning initiative. But I don't think many students will take the initiative to review. A delay in feedback will only make people lose interest in the reading. A week is too long and everything will get out of hand.

According to interviewees, most of the interviewees agreed on the importance of delayed feedback on reading comprehension and they also shared their perspectives on advantages of delayed feedback. They argued that delayed feedback is better for long-term memory and can leave time for reflection and review. However, some of interviewees hold the view that delayed feedback can play a better role requires students to take the initiative to reflect. These perspectives they shared were also consistent with the behaviors they were observed in the classroom: a lack of interest in self-thinking and corrective behaviors.

When asked the reasons of using L1 in class, P13 stated in the discussions that: “English is not our language, so we have to use Chinese. Maybe when we understand teacher

feedback in our L1, we can read in the L2.” The need for L1 in class also fits students with the views of P18 and P14.

P14: We cannot learn without our L1. It is important, this is our mother tongue, and we should use it as a reference. So that we can recall the knowledge what we learned a week ago and absorb the teacher feedback.

It appears that FL readers switch to their L1 when they have forgotten what they received in delayed feedback. In this case, it may be easier for the reader to restate or understand the delayed feedback content from the teacher, which interacts with background knowledge to understand the text in the target language. Students’ interpretations of their classroom behavior and reactions help explain why the first language is used in the delayed feedback class.

4.2.3 Students’ Preference for Feedback Time

In the interview, participants were also asked about their preferred feedback time (immediate feedback or delayed feedback). This part further investigates whether students have different preference on feedback timing. So, it will be clear that which kind of feedback teachers should provide to help students to improve their L2 reading performance.

The responses showed that most of interviewees had positive attitudes toward immediate and delayed feedback. No matter higher or lower proficiency students believed immediate and delayed feedback are beneficial for them to improve their reading performance and have further motivation to continue their reading. Further, these students appreciated positive effects of their experiential reading on creating positive reading habits, background knowledge, and mastering reading strategies. Given the important role of immediate and delayed feedback in enhancing their reading performance, students in both groups expressed their choice of two feedback times and how they think it can stimulate readers’ motivation and interest in reading.

According to interviewees, most of the interviewees (72%) believed immediate feedback on reading comprehension is effective and they also expressed a preference for immediate feedback from their teachers. And they talked about why they preferred immediate feedback in the interviews. Most of the students agreed that feedback should start after the tests to correct their mistakes immediately. “Feedback should be timely so that we can quickly identify our problems and correct them. The deficiency should be highlighted and give suggestions to improve, without leaving the student hang in there not knowing any option.” (P5). They indicated that immediate feedback would be acceptable if it is delivered with a solution to encourage the student to work on the problem. “During the practical session we receive immediate feedback that help us dramatically; when my teacher gives me her feedback and provide me a solution to improve step by step. So, I think successful feedback depends on its timeliness as well as constructivism of feedback.” (P3) Moreover, P5’s comment indicates that she benefited from immediate feedback especially during reading strategies-based sessions. They agreed that they preferred immediate feedback providing directly in the same session because it can gain the students’ attention. The students still have a clear memory and a strong desire to receive feedback from teachers, so they will pay close attention to teacher feedback and actively participate in the class.

On the other hand, also few students preferred delayed feedback (22%) to immediate feedback. They mentioned that if teacher feedback can be postponed to the next weekend, the session time is enough and teachers can provide feedback in detail after long observation.

And students can also have more time to reflect on their own problems and construct their knowledge. “No one can always supervise and help us. We need to think and reflect on ourselves first. When the teacher gives us the delayed feedback after self-correction, we all know what the problems are, and then teacher can provide more detailed and effective feedback based on these places. In this way we can understand it better and confirm everything through the teachers’ explanation.”

And two of the participants (P11, P18) stressed on the significance of continuous delayed feedback to all the students and not to be limited to the next week, but at any time regarding the students’ performance, such as a personal advice or comment on students’ behavior on a test, or an evaluation at the end of the semester. “It is very important that delayed feedback should be continuous, not just after a week or at the end of the year. In addition, different forms of feedback, whether oral and written, provide more varied and continuous delayed feedback, making student progress very noticeable.” (P14) These results further indicate that delayed feedback, as preferred by students, should be more detailed, more targeted and more consistent. “The content of immediate feedback is limited and broad, as teacher was not clear with the deficiency of students. The teachers’ feedback should be continuous and more targeted. They should observe the needs of the students in subsequent classes and provide continuous feedback based on the observations.” Only one of the participants (6%) have no preference for immediate or delayed feedback. He believed that the improvement of reading ability still depends on his own efforts.

5. DISCUSSION

5.1 Discussion on Immediate Feedback and Delayed Feedback on Reading comprehension

Based on the results of this study, immediate feedback and delayed feedback were effective in improving students’ reading achievement and comprehension performance. Students’ reading performance under both conditions (immediate feedback and delayed feedback)

In immediate feedback condition, students showed that they were facilitated to involve in testing process and reading activities. And positive interaction patterns emerged in the immediate feedback class. Regarding the participants' perspectives on immediate feedback in semi-structured interviews, the factors that had a positive impact on reading comprehension were “fresh in memory” and “promote retention of learned information”. Furthermore, they shared in the interview that immediate feedback can “boost their confidence and arose their interest”. This finding is consistent with previous research demonstrating that immediate feedback (i.e., supplied as soon as a student has responded to a question or completed an assessment exercise) promotes retention of learned information. Dihoff et al. (2003) assert that a test procedure that does not employ immediate feedback is likely to foster misconception rather than further learning. One of their studies reported that immediate feedback, coupled with an answer-until-correct format in unit tests, promoted the “most learning and retention, facilitated the most involvement in the testing process, and corrected the most inaccurate assumptions” (Dihoff et al., 2003). Taylor et al. (2002) also found in their study that skilled teachers used immediate feedback to elicit higher levels of pupil engagement, preferred coaching to telling when interacting with pupils, and involved pupils in more high-level thinking related to reading. In their case, learners are not passive but actively engaged in the lesson. They argued that the teacher can, through frequent feedback and close observation of children’s reading behaviors, develop insight into their reading processes. By using that information, the teacher can structure instructional activities

to provide young readers the experiences they need to develop as strategic readers.

According to the finding of interviews, some interviewees argue that delayed feedback is better for long-term memory and allow time for reflection and review. A possible conjecture behind the current finding is that students who receive immediate feedback do not have much time for self-correction and independent thinking due to the instant feedback on the test content. This finding is consistent with several past studies. A study by Webb et al. (1994) indicated that delayed feedback was superior to immediate feedback in allowing a greater probability for more correct responses on a delayed final exam. However, they also discovered that this may not have been due to the likelihood of students either remembering or forgetting an initial response, but rather because of the tendency on the part of learners in the delayed feedback group to study the feedback for longer periods of time. By taking additional time to study, the students learned the material well enough to identify the correct answer on the final exam regardless of their performance on earlier unit tests.

However, lots of students in their interviews believed that delayed feedback lead to forgetting and a lack of attention. These perspectives they shared were also consistent with the behaviors they were observed in the classroom. In the delayed feedback classroom observation, students were found to have little interest in self-thinking and corrective behaviors. Furthermore, first language was employed to help students recall and participate in reading activities. This finding is contrary to previous research demonstrating that delayed feedback (i.e., feedback withheld for a period of time after the student's completion of an assessment exercise) was superior to immediate feedback. Advocates of delayed feedback believe that it is more effective than immediate feedback because of the delay retention effect (DRE), a phenomenon in which learners who have feedback delayed for some period of time purportedly recall significantly more than subjects who receive feedback immediately following a learning assessment activity (Kulhavy, 1977; Schroth & Lund, 1993; Swindell & Walls, 1993). How much learners use the feedback they receive may explain some of the discrepancies between the results of the various studies mentioned above.

5.2 *Discussion on Students' Feedback Time Preference*

The findings showed that most of interviewees had positive attitudes toward immediate and delayed feedback. Students believed immediate and delayed feedback are beneficial for them to improve their reading performance and have further motivation to continue their reading. And the interviews data revealed that most of the students preferred immediate feedback to delayed feedback. Indeed, the views of these students are in agreement with those of Samuels and Wu (2001), who evaluated the effects of immediate versus delayed feedback on sentence and passage comprehension, as well as reading speed. The researcher found that students in the immediate feedback condition performed significantly superior on measures of passage comprehension and composite comprehension. In this study, through classroom observation, it can be found that under the immediate feedback, all students can quickly absorb feedback from teachers and actively participate in the interaction with teachers. In subsequent interviews, they also confirmed that their comprehension of sentences and passage had improved significantly, and also their reading speed.

Alkhaldeh (2012) maintained that lack of concentration is one of the major reasons of poor reading comprehension. Similarly, in the study of Hamdan et al. (2017), an interviewee shared that one of the problems while reading is maintaining the concentration which consequently affected his reading comprehension outcome. Furthermore, it affirmed

that a significant segment of concentration is needed to decode and process a text. For delayed feedback, it has the advantage of leaving students more time for self-reflection and review. Teacher feedback can help them consolidate the knowledge and form long-term memories. However, for students with low level and poor self-discipline, this advantage is not reflected, but makes them lack of attention. In other words, students' degree of concentration depends on the time of feedback. In addition, more interaction in the classroom under immediate feedback may also help stimulate the interest of students and help them focus on the teacher feedback while delayed feedback classes lack this kind of interaction to help them join the class.

6. IMPLICATIONS

Although the present study contributed to examine the effects of immediate feedback and delayed feedback on Reading comprehension among Chinese English learners, there are also limitations that need to be addressed in future studies. The major criticism could be directed at the relatively small sample size of the study, which was restricted to a group of Chinese international students in one single university. Thus, the research findings reported here may not be generalizable. More research with a larger sample size needs to be done to verify whether and in what way the immediate feedback and delayed feedback had effect on Chinese EFL learners' reading comprehension. In addition, this study only conducted qualitative research on students' perspectives and preferences for the two feedback methods. In future studies, qualitative and quantitative methods can be mixed to compare students' reading achievements in pretest and posttest. The data obtained by different methods can improve the validity of the results and conclusions (Creswell & Plano, 2007; Barchard & Pace, 2011). At last, since all the students were randomized to the immediate feedback versus the delayed feedback group in the present study, without discussing the participants' demographic factors or their English proficiency. In the future research, demographic factors and students' English ability can be used as the basis for grouping and cross-comparison research.

7. CONCLUSIONS

The present study investigated the effect of "the immediate feedback" and "the delayed feedback" on "reading comprehension". On the basis of the findings and discussion of the present study, the following closing remarks can be drawn. Interviewees' responses provided insightful knowledge regarding the effect of the immediate feedback and delayed feedback on reading comprehension among Chinese EFL learners. The results of this study reported how the immediate feedback and delayed feedback have an effect on reading comprehension among Chinese EFL learners: a) Through classroom observation, it can be found that under the immediate feedback, all students can quickly absorb feedback from teachers and actively participate in the interaction with teachers. In subsequent interviews, they also confirmed that their comprehension of sentences and passage had improved significantly, and also their reading speed. b) In the delayed feedback classroom observation, students were found to have little interest in self-thinking and corrective behaviors. They pointed that delayed feedback lead to forgetting and a lack of attention. In addition, most of the interviewees believed immediate feedback on reading comprehension is more effective and they also expressed a preference for immediate feedback to delayed feedback.

The above-mentioned outcomes have offered significant insights into the role played by "immediate feedback" and "delayed feedback" in improving the "reading comprehension" of the Chinese EFL learners. The findings of this research may inspire future researchers to

conduct research involving these variables in other contexts.

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REFERENCES

- [1]. Alkhalwaldeh, A. (2012). High School Students' Challenges in English Reading Comprehension in Amman Second Directorate of Education. *Journal of Instructional Psychology*, 39.
- [2]. Barchard, K. A., & Pace, L. A. (2011). Preventing human error: The impact of data entry methods on data accuracy and statistical results. *Computers in Human Behavior*, 27(5), 1834-1839.
- [3]. Bown, A. (2004). The Usefulness of Guided Feedback in a WebBased IELTS Reading Programme for Arab Learners. *Unpublished M. Ed dissertation of the University of Manchester*.
- [4]. Cheng, H.-F., & Dörnyei, Z. (2007). The use of motivational strategies in language instruction: The case of EFL teaching in Taiwan. *International Journal of Innovation in Language Learning and Teaching*, 1(1), 153-174 .
- [5]. Clariana, R. B. (1999). Differential Memory Effects for Immediate and Delayed Feedback: A Delta Rule Explanation of Feedback Timing Effects, *Association for Educational Communications and Technology Annual Convention*. Houston, TX.
- [6]. Creswell, J. W., Hanson, W. E., Clark Plano, V. L., & Morales, A. (2007). Qualitative research designs: Selection and implementation. *The counseling psychologist*, 35(2), 236-264.
- [7]. Day, R. R., & Bamford, J. (2000). Reading reluctant readers. University of Hawai'i *Working Papers in English as a Second Language* 18 (2).
- [8]. Dempsey, J. V., & Wager, S. U. (1988). A taxonomy for the timing of feedback in computer-based instruction. *Educational Technology*, 28(10), 20-25.
- [9]. Denscombe, M. (2007). *The good research guide for small-scale social research projects*. (3rd ed.). New York: McGraw-Hill.
- [10]. Dihoff, R. E., Brosvic, G. M., & Epstein, M. L. (2003). The role of feedback during academic testing: The delay retention effect revisited. *The Psychological Record*, 53(4), 533-548.
- [11]. Gan, Z., Humphreys, G., & Hamp-Lyons, L. (2004). Understanding successful and unsuccessful EFL students in Chinese universities. *The Modern Language Journal*, 88(2), 229-244 .
- [12]. Guthrie, J. T. (1971). *Motivational Effects of Feedback in Reading*. The Johns Hopkins University.
- [13]. Hamdan, N. A., Mohamad, M., & Shaharuddin, S. (2017). Hypermedia Reading Materials: Undergraduate Perceptions and Features Affecting Their Reading Comprehension. *Electronic Journal of E-learning*, 15(2), 116-125.

- [14]. Hu, G. (2002b). Recent important developments in secondary English-language teaching in the People's Republic of China. *Language Culture and Curriculum*, 15(1), 30-49 .
- [15]. Hunter, E. J., & Titze, I. R. (2009). Quantifying vocal fatigue recovery: Dynamic vocal recovery trajectories after a vocal loading exercise. *Annals of Otology, Rhinology & Laryngology*, 118(6), 449-460.
- [16]. Jurma, W. E., & Froelich, D. L. (1984). Effects of immediate instructor feedback on group discussion participants. *Central States Speech Journal*, 35(3), 178–186.
- [17]. Keyton, J., & Stallworth, V. (2003). On the verge of collaboration: Interaction processes versus group outcomes. *Group communication in context: Studies of bona fide groups*, 2, 235-260.
- [18]. Kulhavy, R. W. (1977). Feedback in written instruction. *Review of educational research*, 47(2), 211-232.
- [19]. Kulik, J. A., & Kulik, C.-L. C. (1988). Timing of feedback and verbal learning. *Review of educational research*, 58(1), 79-97.
- [20]. Li, Y., & Wang, C. (2010). An empirical study of reading self-efficacy and the use of reading strategies in the Chinese EFL context. *Asian EFL Journal*, 12(2), 144-162.
- [21]. Petrina, S. (2004). Sidney Pressey and the automation of education, 1924-1934. *Technology and Culture*, 45(2), 305-330.
- [22]. Pressey, S. L. (1926). A simple device for teaching, testing, and research in learning. *School and Society*, 23, 373-376.
- [23]. Pressey, S. L. (1932). A third and fourth contribution toward the coming" industrial revolution" in education. *School & Society*, 36(934), pp. 669-672.
- [24]. Quinn, P. (2014). *Delayed versus immediate corrective feedback on orally produced passive errors in English*. Unpublished ph.D. dissertation. University of Toronto.
- [25]. Samuels, S., & Wu, Y. (2003). *The effects of immediate feedback on reading achievement*. Unpublished manuscript, University of Minnesota, Minneapolis.
- [26]. Schroth, M. L., & Lund, E. (1993). Role of delay of feedback on subsequent pattern recognition transfer tasks. *Contemporary Educational Psychology*, 18(1), 15-22.
- [27]. Smits, M. H., Boon, J., Sluijsmans, D. M., & Van Gog, T. (2008). Content and timing of feedback in a web-based learning environment: effects on learning as a function of prior knowledge. *Interactive Learning Environments*, 16(2), 183-193.
- [28]. Swindell, L. K., & Walls, W. F. (1993). Response confidence and the delay retention effect. *Contemporary Educational Psychology*, 18(3), 363-375.
- [29]. Taylor, B. M., Peterson, D. S., Pearson, P. D., & Rodriguez, M. C. (2002). Looking inside classrooms: Reflecting on the " how" as well as the " what" in effective reading instruction. *The reading teacher*, 56(3), 270-279.
- [30]. Vygotsky, L. (1978). Interaction between learning and development. *Readings on the development of children*, 23(3), 34-41.
- [31]. Webb, J. M., Stock, W. A., & McCarthy, M. T. (1994). The effects of feedback timing on learning facts: The role of response confidence. *Contemporary Educational Psychology*, 19(3), 251-265.
- [32]. Weber, R. P. (1990). Basic content analysis (2nd ed.). *Thousand Oaks, CA, US: Sage Publications*.