Experimental Study of Primary School Students' Independent Reading Based on the Network Teaching Platform

TANG Hui, XU Min

Central China Normal University, Wuhan, China

The development of information technology, especially the rise of online teaching platforms, has changed the way people read and the methods they use. Under this influence, primary school students' independent reading has also been changed. However, due to limited self-control and understanding, primary school students face certain difficulties when using online teaching platforms for independent reading. Advantages and disadvantages of distance learning based on the network teaching platform were summarized in this paper. A one-year experiment study was carried out on our school fifth-grade students in independent reading using WeChat campus platform considering their current situation and existing problems of independent reading. In experiment study an independent reading mode was introduced. The results show that this reading mode can significantly improve students' independent reading ability.

Keywords: Independent reading, Primary school student, Network teaching platform, Experimental study

Introduction

Reading is a personalized behaviour for students, and reading teaching is a process of dialogue among students, teachers, textbook editors, and texts. Independent learning plays a very important role in reading, and learners with strong independent learning abilities also have higher reading abilities (Thiede, Anderson, & Therriault, 2003). Zimmerman (2002) believes that independent learning is a process in which learners set their own learning goals and plans, continuously monitor and adjust their own learning processes, choose and use various strategies to adjust their learning behaviours, and effectively use material and social resources in the learning environment to achieve learning goals. Independent reading is an embodiment of independent learning during the reading process.

Due to the development of information technology, remote education teaching based on online teaching platforms has entered people's lives. Currently, online teaching platforms have become an important education resource, such as open universities, Jones Online University, learning spaces, Blackboard platforms, Moodle platforms, etc. Online teaching platforms have become the direction of future education development. Sadeghi (2019) summarized the research on distance education, stated the advantages and disadvantages of distance learning, and gave suggestions for improving distance education. He pointed out that in distance education, teachers should upload sufficient learning and testing resources and provide more support to students (Sadeghi, 2019). Biwer et al. (2021) conducted a questionnaire survey on the resource management strategies and

TANG Hui, Ph.D., Faculty of Artificial Intelligence Education, Central China Normal University, Wuhan, China.
XU Min, Professor, Faculty of Artificial Intelligence Education, Central China Normal University, Wuhan, China.

emergency distance learning adaptation abilities of 1,800 university students and pointed out that emergency distance learning makes it difficult for university students to regulate their attention, effort, and time, and they also lack motivation. Moreover, students need to invest more time and energy in self-study. Although remote education based on online teaching platforms has brought many advantages, it also has many disadvantages.

Advantages of distance education include the flexible learning time and location (Nagrale, 2013), low learning costs (Bijeesh, 2017), no commuting required (Nagrale, 2013), flexible choices (Brown, 2017), saving learning time (Bijeesh, 2017), and the ability to earn money while learning (Brown, 2017). However, disadvantages of distance education include the easy distraction (Nagrale, 2013; Bijeesh, 2017; Brown, 2017), high technical requirements (Brown, 2017), less interaction among classmates (Dyrud, 2000; Hara, 2000), difficulty in maintaining contact with mentors (Hutt, 2017), online degrees being unacceptable for employment (Nagrale, 2013), and inability to regulate attention (Biwer, 2021). To overcome these disadvantages, students need to have strong learning autonomy (Jacobs, Renandya, & Power, 2016; Firat, 2016). For primary school students, independent reading based on the network teaching platform is more difficult due to its less motivation, low self-control ability, and low ability to choose reading resources. To overcome these disadvantages, researchers need to conduct more research.

This article first analyses the current situation and existing problems of primary school students in our school using the WeChat campus platform for independent reading. Based on the existing problems, an independent reading mode is introduced, and a one-year experimental study is conducted on our school's fifth-grade students using this reading mode. After one year, the students' independent reading situation is rechecked. The results show that this reading mode can effectively improve students' independent reading ability.

The Current Situation and Existing Problems of Independent Reading Using the WeChat Campus Platform in Our School

In order to understand the current situation of independent reading among primary school students in our school using the WeChat campus platform, we randomly selected 100 fifth-grade students for a questionnaire survey. Figure 1 shows the content and results of the survey. As shown in Figure 1, there are six questions in the questionnaire, including four aspects: reading methods, reading awareness, reading motivation, and reading resources. Based on the results of the questionnaire, we summarized four problems for independent reading using the WeChat campus platform in our school.

Independent Reading Methods Are Relatively Simple

In the "Reading methods" question, 40% of students choose to read-only without writing, 35% choose to outline the key points, 15% choose to label the key points, and only 10% choose to take reading notes. Students' reading methods are relatively simple, with the majority focusing on not taking notes or simply outlining the key points.

Students' Awareness of Independent Reading Is Relatively Weak

In the "Do you adjust your reading behaviour while reading?" question, about 75% of students do not have a reading goal before reading. Only 25% of students can adjust their reading behaviour during reading and summarize and reflect on it. This indicates that students' awareness of independent reading is relatively weak without help.

Students' Motivation for Independent Reading Is Relatively Insufficient

In the "Do you like reading?" question, about 20% of students love reading, about 25% like it, about 45%

are neutral, and about 10% do not like it. When asked "When do you reading", 30% of students read because they like it, 35% of students read because their teachers require it, and 35% of students read because their parents require it. Students have a positive attitude towards reading, but their motivation for reading needs to be improved.

Students' Resources for Independent Reading Are Relatively Lacking

In the "Do you subscribe to newspapers or educational magazines?" question, only 20% of students have been subscribing to newspapers and studying magazines, 25% of children have subscribed before, and 55% of children have never subscribed. While, in the "How many extracurricular books do you have?" question, 68% of students have less than 50 extracurricular books, 22% of students have less than 100 extracurricular books, and 10% of students have more than 100 extracurricular books. Therefore, there are relatively few resources available for students' independent reading.
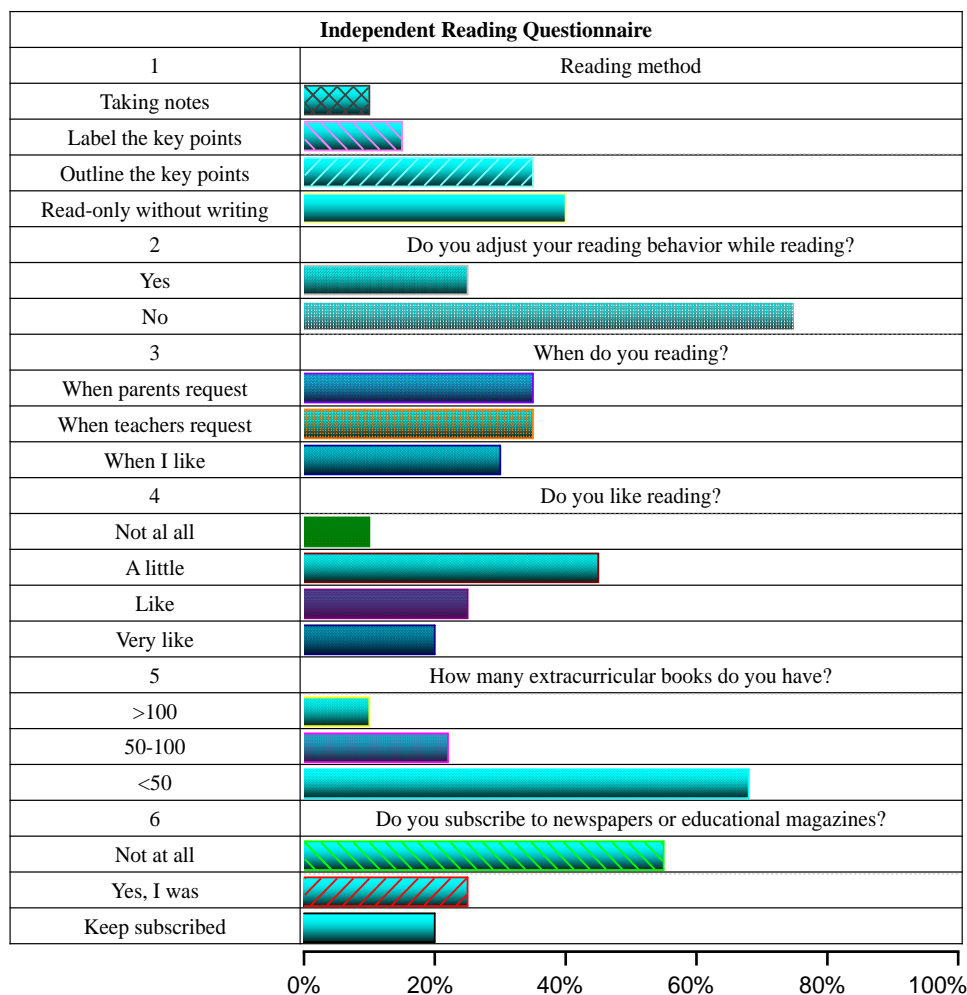
Independent Reading Questionnaire	
1	Reading method
Taking notes	
Label the key points	
Outline the key points	
Read-only without writing	
2	Do you adjust your reading behavior while reading?
Yes	
No	
3	When do you reading?
When parents request	
When teachers request	
When I like	
4	Do you like reading?
Not al all	
A little	
Like	
Very like	
5	How many extracurricular books do you have?
>100	
50-100	
<50	
6	Do you subscribe to newspapers or educational magazines?
Not at all	
Yes, I was	
Keep subscribed	

Figure 1. Independent reading questionnaire and corresponding results.

Pre-reading-Plan-Reading-Evaluation Reading Mode

To improve our school's students' independent reading ability based on online teaching platforms, we introduce a Pre-reading-Plan-Read-Evaluate (PPRE) reading mode (see Figure 2). This reading mode is divided into four stages: The first stage is the pre-reading resource preparation stage, where reading resources are

designed and provided based on the students' learning dynamics, excellent reading materials are selected, and reading guidelines are published; the second stage is the reading planning stage, where students analyse their current reading level, select suitable reading resources, determine reading goals, and plan reading time; the third stage is the student reading adjustment stage, where the platform records students' independent reading data, and timely feedback on reading situations, and teachers and students provide reading guidance. Students can perform self-adjustments based on feedback; and the fourth stage is the evaluation and update after reading stage, which mainly includes the results check after reading, teacher, self, and peer evaluations, as well as reading dynamic updates.

It should be notice that, this independent mode was selected based on our current situation and existing problems of independent reading using the WeChat campus platform in our school. The pre-reading resource preparation can help to selected excellent reading materials for the primary school students and give their guides for the reading. This could also rich the learning resources. In the reading planning, the network teaching platform and the teachers can help the primary school students select reading resources and identify reading goals as well as plan the reading time. During the reading, the network teaching platform can record the students' reading data and feedback to the student, help them to improve their reading methods. What is more, in the reading and evaluation stage, both class mates and teachers can interactive with the student, give their suggestions, appreciations, as well as communications. This will help the students improve their reading awareness and motivations.
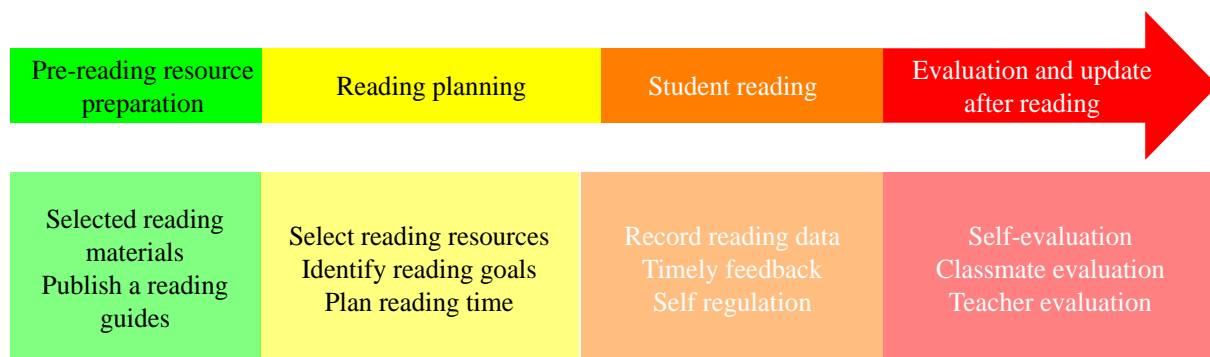

Figure 2. PPRE reading mode.

Results and Discussion

During the study, we optimized the online teaching platform and conducted comparative research on students' motivation in independent reading, awareness of independent reading, and methods of independent reading using the questionnaire in Figure 1. This questionnaire was also used to evaluate the students' independent reading in the middle of the experimental study. The corresponding results are shown in Figure 3, where the data during the study were obtained after six months of research. From the figure, students underwent significant changes after one year of research.

Independent Reading Methods Has Been Improved

Through a questionnaire survey of students, it was found that students had more and easier access to independent reading resources on the online teaching platform. Before the study, only 20% of students had access to independent reading resources, which increased to 68% during the middle of the study. After the study, the

percentage grew to 91%. Before the study, students lacked independent reading resources and could not read without relevant resources. After the study, most students could obtain independent reading resources, making reading much easier. This could be contributed to the improvement of their reading motivation as well as the excellent resources selected by the network teaching platform and the teachers.

Students' Motivation in Independent Reading Improved

The online teaching platform can do its best to meet students' needs for independent reading achievement, help them build confidence, rely on their own efforts to complete tasks, gain satisfaction from knowledge, and experience the joy of success. Students can maintain a strong interest in learning during the process of independent reading, stimulate their internal learning needs, and enable each student to learn how to learn, achieving the goal of willing to learn, enjoying learning, being able to learn, and learning well.
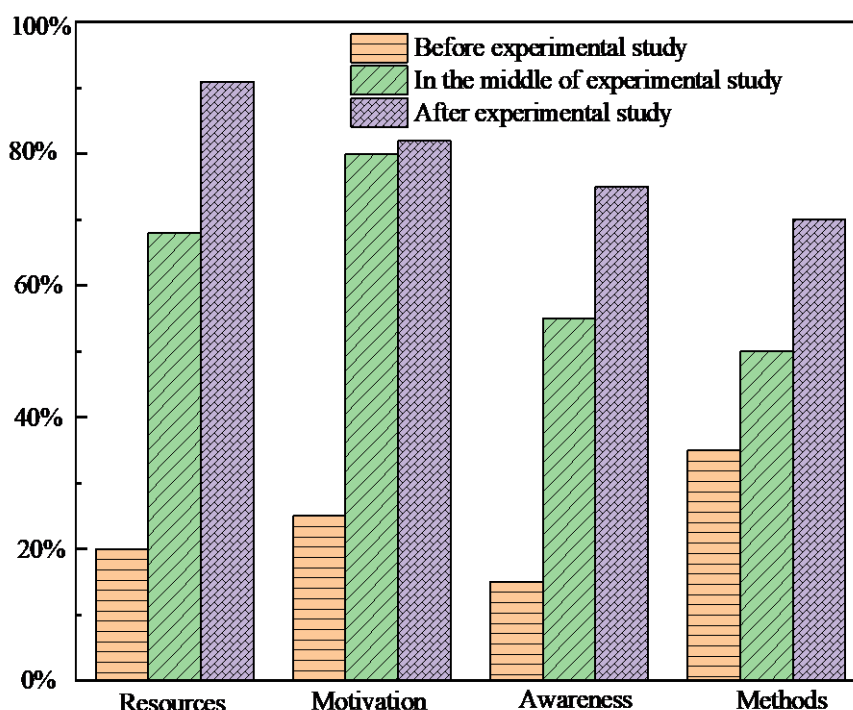

Figure 3. Reading resources, reading motivations, reading awareness, and reading methods comparison before, in the middle, and after the experimental study.

Students' Awareness of Independent Reading Has Been Improved

Students' awareness of independent reading has been significantly improved after the experimental study compared with that before the study. After the experimental study, students set reading goals, monitor their reading behaviour, identify reading problems, adjust their reading strategies, and develop the habit of independent reading. These are the concrete performance of the improvement of reading awareness. It is necessary for students to spend more time, thoughts, and efforts in the process of reading. Good reading habits will be their lifelong wealth and will have a significant impact on improving their ability to read independently.

The Methods of Independent Reading for Students Have Become Diversified

Before the experimental study, the reading methods the students used in independent reading are "read-only without writing" and "outline the key points". However, after experimental study, the reading methods the

students used in independent reading have become more diversified, such as, "skimming", "careful reading", and "summary method". Moreover, they can choose appropriate reading methods according to their own learning needs.

Due to the limited research time and research conditions, the research subjects of this study were limited to students in one grade of the same school, and the sample size was small. In addition, teachers and parents also play a crucial role in students' independent reading on the online teaching platform. As observers or guides, more suggestions and countermeasures can be summarized from the perspectives of teachers and parents. It is hoped that further research can be conducted in these areas in the future.

Conclusion

Considering the disadvantages of distance learning based on the network teaching platform, a PPRE independent reading mode was introduced in our one-year experiment study based on fifth-grade students in independent reading using WeChat campus platform. It was shown that this reading mode can significantly improve students' reading motivation, reading awareness, as well as reading methods. In addition, the students' reading resources were also improved after experimental study. We believe this PPRE independent reading mode can also be used in students in other grade and schools. And more theorical and experimental studies should be down on the independent reading using network teaching platform in the future.

References

Bijeesh, N. A. (2017). Advantages and disadvantages of distance learning. Retrieved from http://www.indiaeducation.net/online-education/articles/advantages-and disadvantages-of-distancelearning.html

Biwer, F., Wiradhany, W., Oude Egbrink, M., Hospers, H., Wasenitz, S., Jansen, W., & De Bruin, A. (2021). Changes and adaptations: How university students self-regulate their online learning during the COVID-19 pandemic. *Frontiers in Psychology, 12*, 642593.

Brown, C. (2017). Advantages and disadvantages of distance learning. Retrieved from https://www.eztalks.com/elearning/advantages-and-disadvantages-of-distance-learning.html

Dyrud, M. A. (2000). The third wave: A position paper. *Business Communication Quarterly, 63*(3), 81-93.

Firat, M. (2016). Measuring the e-learning autonomy of distance education students. *Open Praxis, 8*(3), 191-201.

Hara, N. (2000). Student distress in a web-based distance education course. *Information, Communication & Society, 3*(4), 557-579.

Hutt, M. (2017). Top 10 disadvantages of distance learning. Retrieved from https://www.eztalks.com/elearning/top-10-disadvantages-of-distance-learning.html

Jacobs, G. M., Renandya, W. A., & Power, M. (2016). *Simple, powerful strategies for student centered learning*. Berlin: Springer International Publishing.

Nagrale, P. (2013). Advantages and disadvantages of distance education. Retrieved from https://surejob.in/advantages-anddisadvantages-of-distance-education.html

Sadeghi, M. (2019). A shift from classroom to distance learning: Advantages and limitations. *International Journal of Research in English Education, 4*(1), 80-88.

Thiede, K. W., Anderson, M., & Therriault, D. (2003). Accuracy of metacognitive monitoring affects learning of texts. *Journal of Educational Psychology, 95*(1), 66-73.

Xu, B., Chen, N. S., & Chen, G. (2020). Effects of teacher role on student engagement in WeChat-based online discussion learning. *Computers & Education, 157*, 103956.

Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory Into Practice, 41*(2), 64-70.