

Application of Augmented Reality in the Teaching of English in Early Childhood Education

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ABSTRACT

Recent developments in the field of education have shown that AR technology is used to construct various teaching scenarios, related from scientific aspects, such as molecules and atoms in the microscopic world, space and the solar system in the cosmic world, or mathematical aspects, such as the construction of three-dimensional graphics, the establishment of coordinates, etc. all of which are greatly improve students' learning experience and efficiency. The motivation for this research is the recent development of AR technology, which has been widely used in education, including in English education. For this reason, as the main character of education, the receptors and the main character associates, that is, students, teachers and students' parents, it is very necessary to understand and contact this technology. This study aims to determine the role of AR technology and its trends in early childhood English education. The methods used in this study are questionnaire survey and interview. This study shows that through the use of technology, namely AR related learning programs, the process of learning English by young children becomes more interested, more efficient, and with higher concentration. This can be concluded from the results of the questionnaire survey and the interview conclusion. Therefore, the effectiveness of AR application in early childhood English education. AR is an effective way to help develop English language skills in young children's English learning.

Keywords: *Augmented Reality, English, Early childhood education.*

1. INTRODUCTION

The characteristics of modern society are the invention, development and popularization of various new technologies. This is to allow more people to use these technologies easily and effectively, so as to maximize the convenience and effectiveness of life. This phenomenon is also emerging in the field of education, leading to classroom reforms around the world, constantly creating new possibilities for teaching. Augmented reality is the most attractive emerging technology, and it is believed that it can be highly applied to education and has great development potential in the future [1].

Augmented Reality (AR), is a relatively new technology that enables the integration of real-world and virtual information content, it will originally in the space of the real world more difficult to experience entity information in computer science and technology, based on the implementation of the simulation processing, overlay the virtual information content effective application in the real world, and in the process can be

perceived by the human senses, to realize the sensory experience of transcending reality.

In the process of literature search, it is found that there are few studies on the application of AR in early childhood English education[2]. Although most people are optimistic about the introduction and application of this technology in early childhood education [3]. The most consistent study available so far was conducted in a public school in Spain. The experiment divided three to five year old into a control group and an experimental group, and compared AR instruction with a traditional form of instruction. Finally, the experimental results showed that students in the experimental group had higher learning motivation, and the use of AR in teaching promoted more positive emotional and social relationships among students[4].

The purpose of this paper is to explore the influence of AR in children's English teaching and its future development, to maximize its positive impact on teaching.

2. RESEARCH DESIGN

As the subject of this study is education, the questionnaire is mainly targeted at three groups, namely, teachers (teaching subjects), parents (people most directly related to the taught subjects) and students (taught subjects). These three groups should be the audiences most directly related to the integration of emerging science and technology education.

This questionnaire is mainly divided into three parts: the identity of the interviewees, their understanding of AR early childhood English education and their views on the future development prospects of AR early childhood English education.

The questionnaire was distributed in the form of a network survey, in which the survey objects were screened and the eligible objects were filled in the questionnaire respectively. Since the submit button of the web page only allows the completed questionnaire to be submitted, the collected data is theoretically valid. The total sample size is 234, and it is estimated that after excluding invalid samples, there are about 200 valid samples. Among them, 136 were parents, 20 were teachers and 78 were students.

3. ANALYSIS

In the sample, 136 were parents, 20 were teachers and 78 were students.

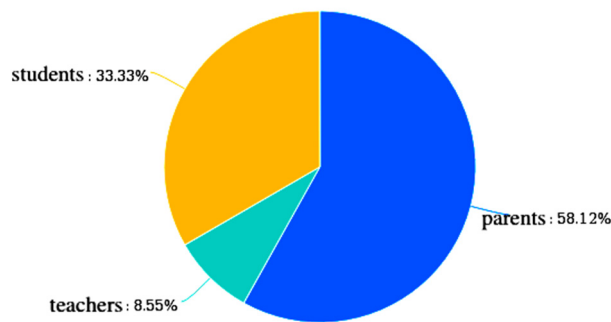


Figure1: Identity distribution of respondents

3.1 Understanding and attitude

Among the 234 interviewed, 23 people are very familiar with AR education, accounting for only 9.83%

of the total number; 147 people, accounting for 62.82%, had heard about AR education but did not know much about it. 64 people have never heard of AR education, accounting for 27.35%.

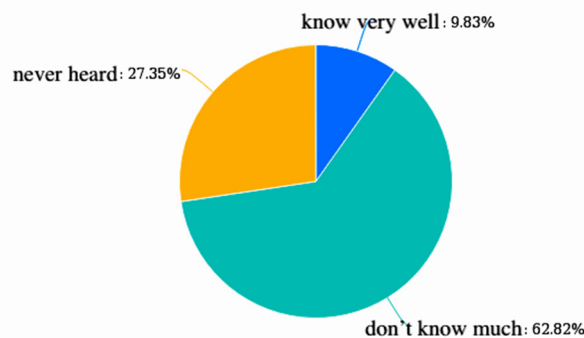


Figure 2: Understanding distribution of respondents

The results show that 107 out of 234 people think AR is very helpful to the development of English education

for children (45.73); 123 (52.56%) thought it was not necessarily helpful; Four said it did not help (1.71%).

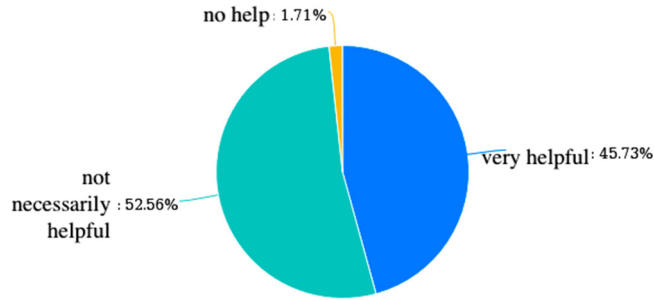


Figure 3: The distribution of respondents' thoughts on AR education prospect

3.2 Current situation of AR English education

Among the 234 people surveyed, only 57 people have children around them who have been exposed to the AR

English education teaching mode, accounting for only 24.36%; the number of people who have not been in contact is 177 people, accounting for 75.64%.

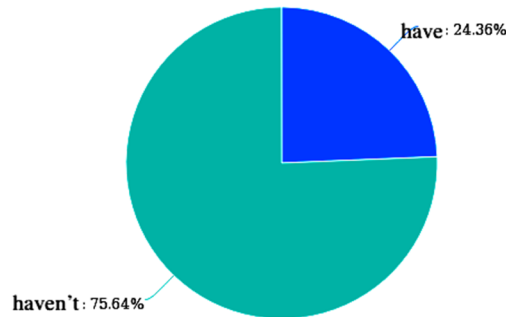


Figure 4 Distribution of students if they have studied before

Among the 57 people with children who have received AR English education, 18 children are 0-6 years old, accounting for 31.58%; 30 children are 7-12 years

old, accounting for 52.63%; The age ranged from 13 to 18 years old, accounting for 10.53%; 3 children were older than 18 years old, accounting for 5.26%.

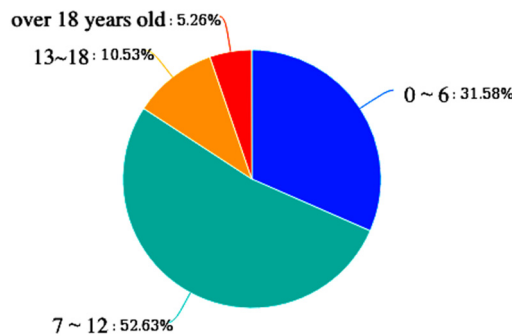


Figure 5 Student age distribution

3.3 Opinions on AR

Among the 234 people, 84 think AR can effectively help improve children's grades in early childhood English

education, accounting for 35.9%; most people (138 people) think the effect is ordinary, accounting for 58.97%; only 12 people think it has no effect, accounted for 5.13%.

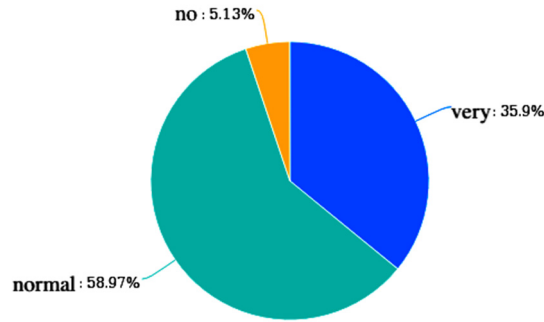


Figure 6 The distribution of opinions on AR

In the sample, more than half of the people (126 people) believe that AR can greatly improve children's learning enthusiasm, accounting for 53.85%; 101 people

think that the effect is ordinary, accounting for 43.16%; 7 people think that it has no effect, accounting for 2.99%.

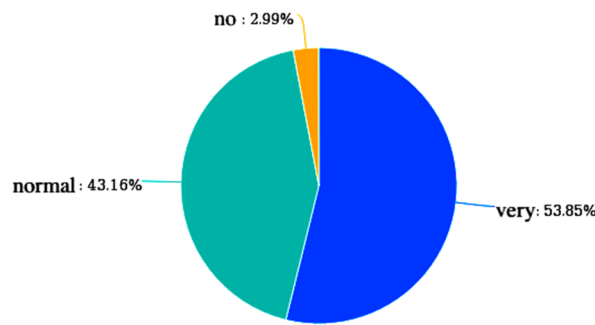


Figure 7 The distribution of opinions on AR

Among the 234 people, the vast majority (158 people) are very willing to let their children or students try to use AR to help English learning, accounting for 67.52%; 73

people do not care about it, accounting for 31.2%; only 3 people are unwilling to let their children or students try AR English education, accounting for 1.28%.

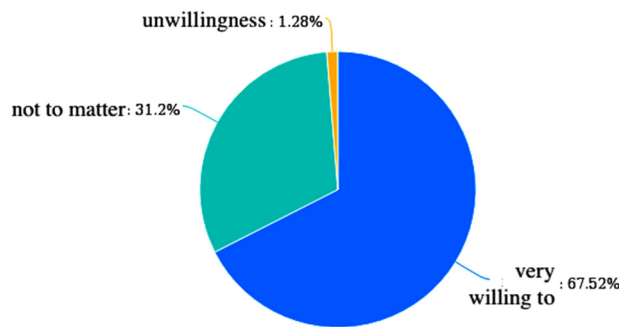


Figure 8 The distribution of willingness to learn

193 people think that AR can improve the interest of classrooms in early childhood English education, 113 people think that it can improve students' concentration

in learning, 156 people think that AR teaching increases students' sense of substitution, and 23 people think that there are other benefits.

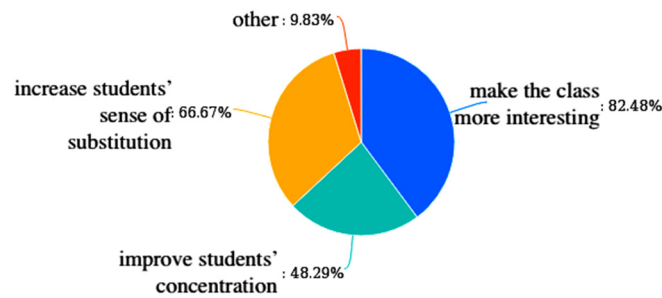


Figure 9 The advantages of AR teaching

The results of the questionnaire survey found that among the groups directly related to AR preschool English education, most people have only heard about this education model but do not understand it, and many people are skeptical of this new teaching model. In life, very few children are exposed to this form of teaching, and most of them are between 7 and 12 years old, that is, primary school. Although more than half of people do not believe that AR can help children improve their grades, a small number of people are hopeful that AR can help them improve their grades. When it comes to whether AR can improve children's enthusiasm for learning, more than half of them agree with it. The vast majority of the respondents are willing to let their children or students try this type of educational teaching in the future. They believe that the advantages of AR teaching are mainly reflected in the improvement of the interest of the classroom, which allows children to focus more on the classroom and makes the classroom more interesting. Children's sense of participation in learning has been improved.

4. CONCLUSION

In the research on the application of AR early childhood English education, it is found through investigation that this kind of education model has not been fully developed in China at present, and many people have never even heard of it. However, after understanding the relevant background, most people are willing to try such a new teaching model and hold a positive attitude towards it. Most people can agree that AR education can improve children's enthusiasm for learning, but whether it can improve children's actual learning level still needs research and observation. In addition, the importance of content developed using AR in the field of early childhood education and English language teaching is also relevant for future experiments. Especially for teachers, if they really want to incorporate AR into the classroom, determining which subjects are more suitable for effectively carrying out this work should be explored in more depth in the future. When the positive role of AR is identified in the future, and before it applies to teaching classrooms, a set of guidelines

should be developed so that its introduction as part of their teaching methods will not cause major changes. On the other hand, a more explicit discussion of the R&D provision of related technical resources should take place.

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