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Research on the Status Quo and Countermeasures of Geography Online Learning for Middle School Students under the Environment of "Internet + Education"

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Abstract: Under the environment of "Internet + Education", the author describes and analyzes the online geography learning activities of junior high school students according to the actual teaching and learning, and conducts a practical study on the current situation of online geography learning of junior high school students by using the questionnaire survey method and junior high school students of Q Middle School in Beijing as the research object. Finally, corresponding countermeasures are proposed from the perspectives of both teachers and junior high school students, to improve the effect of online geography learning for junior high school students and guarantee the quality of online teaching.

Keywords: Middle School Students; Geography; Online Learning.

1. Research Methods

1.1. Research Problem

This paper attempts to explore the current status of online geography learning for middle school students as a whole. This study focuses on the following four questions.

(1) How long do middle school students study geography online every day?

(2) What are the main contents and forms of middle school students' geography online learning?

(3) What is the effect of online geography learning for middle school students?

(4) What are the reasons for middle school students' difficulties in learning geography online?

1.2. Research Target

This study was conducted in the form of a questionnaire survey, and the subjects of the study were junior high school students in Q Middle School. In order to improve the accuracy of the questionnaire and obtain more accurate findings, the authors randomly selected 300 junior high school students from three grades to participate in the questionnaire survey, and 100 junior high school students from each of the three grades participated.

1.3. Research Content

The research of this paper focuses on the current situation of online geography learning for middle school students. According to the questionnaire survey, the study can be divided into the length of online geography learning, the main contents and forms of online geography learning, the effect of online geography learning, and the reasons for the problems of online geography learning and countermeasures. To summarize, the authors conducted an online survey in Q junior high school in Beijing, and received 300 questionnaires on Questionstar, with 300 valid questionnaires.

2. Status and Causes

2.1. Status

2.1.1. Short Time to Learn Geography Online for Middle School Students

The length of online learning is one of the important signs of the current status of online geography learning for junior high school students. According to Figure 1, 63% of junior high school students study geography online for less than half an hour a day, which indicates that this part of junior high school students only watch microclass videos and related materials, and this part of junior high school students should clarify the learning objectives and determine the learning tasks; 26% of junior high school students study geography online for between half an hour and one hour a day; 7% of junior high school students study geography online for between one hour and one and half hours a day, and this part of junior high school students have better time control; 4% of junior high school students study geography online for between 1.5 hours and 2 hours a day. Between 1 hour and 1.5 hours, this part of junior high school students have better time control; 4% of junior high school students study geography online between 1.5 hours and 2 hours per day, this part of junior high school students should control the time and make a good time allocation schedule for each subject in case of insufficient time to study other subjects.

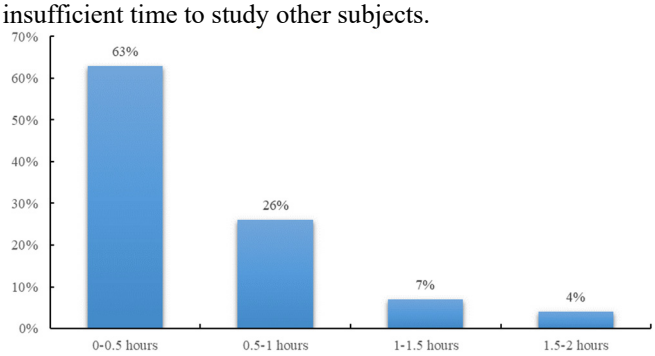


Figure 1. Hours per day middle school students study geography online

2.1.2. Online Geography Learning for Middle School Students is Rich in Content and Single Format

In terms of the content of geography online learning for junior high school students, Figure 2 reflects that 70% of junior high school students think that geography online learning content is relatively rich. At present, the geography online learning content for junior high school students is mainly based on microteaching videos, and the junior high school students are assisted with learning task sheets, guidebooks for junior high school students and class assignments, and the junior high school students can also go online at any time to access the required knowledge. These learning contents are convenient for junior high school students to learn geography more deeply.

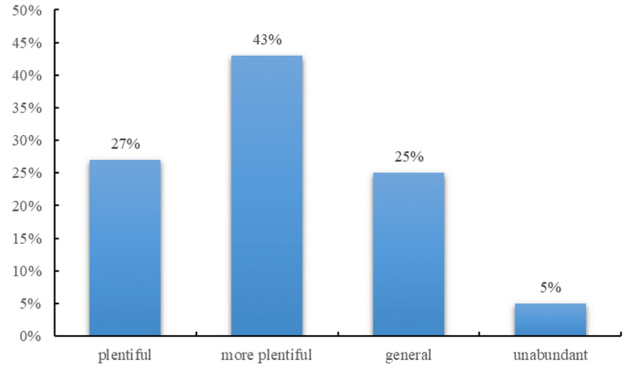


Figure 2. Are the key components of online geography learning for middle school students rich in content

In terms of the online learning forms of geography for junior high school students, most junior high school students thought that the learning forms of watching microclasses and other resources independently were too single. According to Figure 3, 81% of junior high school students chose online Q&A, 62% chose group interactive inquiry, 52% chose video, audio and other learning resources, and 31% chose classroom assignments and tests. On the one hand, junior high school students said that they spent too much time at home during the epidemic, and building a group interactive inquiry platform provides junior high school students with opportunities for cooperative dialog, and reduces the sense of loneliness and anxiety of studying at home. On the other hand, the teacher's online Q&A can provide timely answers and evaluations on the learning situation and exploration process of each group, which is more conducive to junior high school students' in-depth learning and further understanding and consolidation of knowledge.

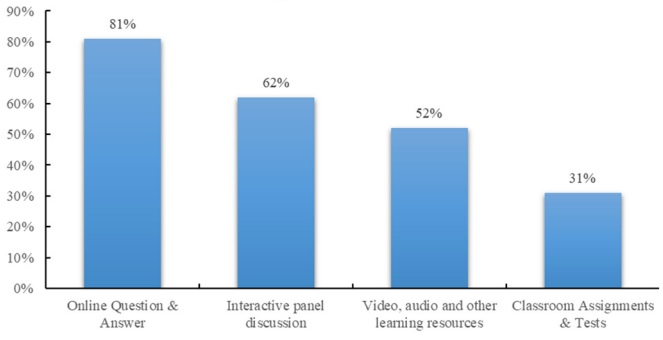


Figure 3. Formats of online geography learning that middle schoolers expect more

2.1.3. Lack of Clarity About the Effectiveness of Online Geography Learning for Middle School Students

In terms of the effect of geography online learning for junior high school students, Figure 4 reflects that 15% of junior high school students believe that the effect of geography online learning is significant, this part of junior high school students believe that online geography learning stimulates learning interest, enriches learning content, improves the level of geographic thinking, and enhances junior high school students' geographic literacy. 34% of junior high school students believe that geography online learning has an effect, but the effect is not obvious. 46% of junior high school students believe that geography online learning effects It is not clear, this part of the junior high school students think that every day to watch a little micro-lesson video, do some classroom homework, not after the teaching test and other means, do not dare to determine whether they in the end to improve. 5% of junior high school students think that geography online learning is completely ineffective, this part of the junior high school students said that they do not like to learn geography online, think that learning geography online is not very useful, or the learning ability is limited, or do not have the habit of online learning. As a whole, the effect of online geography learning for middle school students is not very clear.

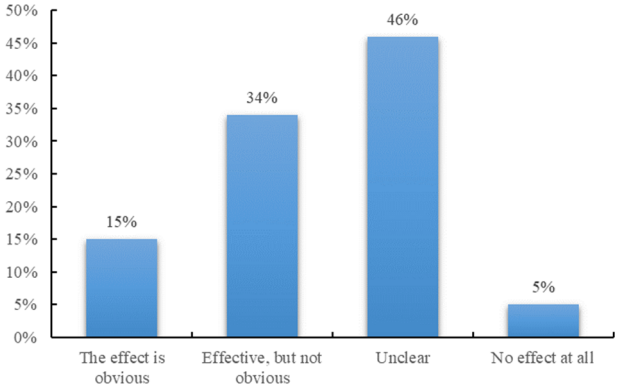


Figure 4. Effectiveness of online geography learning for middle school students

2.2. Causes

Figure 5 reflects the causes of geography e-learning problems of junior high school students in the environment of "stopping classes and not stopping school", including the low learning efficiency and concentration of junior high school students in geography e-learning, the inability of junior high school students in geography e-learning to teach students according to their aptitude, the lack of geography classroom atmosphere in geography e-learning, and the lack of interest in geography courses in geography e-learning for junior high school students.

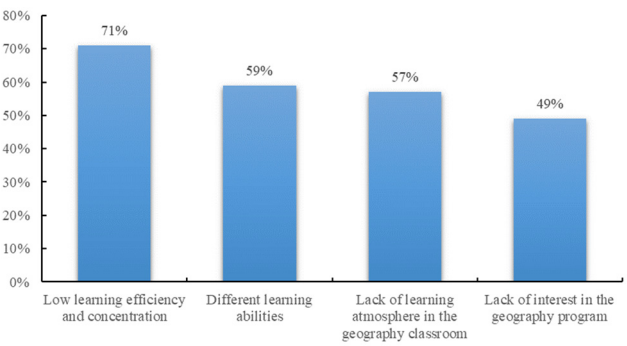


Figure 5. Causes of Online Geography Learning Problems for Middle School Students

2.2.1. Middle School Students are not Efficient and Focused in Geography Online

The biggest reason that affects the effectiveness of online learning is the low learning efficiency and concentration of middle school students. The class teacher and the classroom teacher in the traditional classroom can establish a class management system to build class authority and stabilize class order. This dual management model works for most middle school students. However, at present, there is no mature management mode for geography online learning for junior high school students, which leads to junior high school students being too lax. At the same time, the environment of home learning is more complex, and there are more external influences, which all lead to low learning efficiency and concentration of the vast majority of junior high school students. Therefore, whether to combine the characteristics of junior high school geography subject to improve the learning efficiency and concentration of junior high school students is the key to online learning.

2.2.2. Online Geography Learning for Middle School Students Can't be Tailored to Their Needs

During the first two weeks of the online geography study for middle school students, middle school students follow the "home study" suggested schedule. The online geography study for junior high school students is rich in content, including encyclopedic geography knowledge and thematic review. However, junior high school students have different thinking ability, reflective ability and independence, some are familiar with geographic knowledge points, some are strong in geospatial thinking, and some are strong in map learning, which leads to greater individual differences among junior high school students. Teachers should provide geographic knowledge and other learning resources that are suitable for junior high school students' own experience level, which can satisfy junior high school students to consolidate their knowledge and broaden their horizons, so that junior high school students can maintain their love for geography. Therefore, whether teachers can take junior high school students' actual situation and individual differences into account is an important part of the success of online geography learning in junior high school.

2.2.3. Online Geography Learning for Middle School Students Lacks a Geography Classroom Learning Atmosphere

Classroom learning atmosphere affects middle school students' geography online learning effect. The traditional classroom has a classroom teacher to regulate the learning atmosphere, which can promote the majority of junior high school students to expand geography thinking, promote the emotional exchange between the two sides, and stimulate the learning potential. At present, because of the lack of classroom learning atmosphere in geography online learning for junior high school students, some junior high school students are distracted, small movements, dozing off or even not learning. This seriously affects the effect of online learning. Therefore, teachers should think about how to combine the characteristics of junior high school geography subject to mobilize junior high school students' learning enthusiasm, how to regulate the classroom atmosphere of junior high school students' geography online learning.

2.2.4. Lack of Interest in Online Geography Courses for Middle School Students

Online learning mainly relies on junior high school students' independent learning, so it is crucial to stimulate junior high school students' interest in learning. According to the survey, most junior high school students think that the current geography content is messy and only mechanically provides textbook knowledge and learning videos, which seriously undermines junior high school students' interest in learning. Middle school students said that more interesting geography knowledge can be added to make the geography learning process more enjoyable. Therefore, teachers need to think about how to increase the fun of online teaching classroom and improve the effect and teaching quality of geography online learning for middle school students.

3. Countermeasures

In the special period of fighting against the epidemic, although we have to use online teaching, compared with the traditional mode, it allows junior high school students to have more free learning time, more open learning space, more diversified learning methods, and allows teachers to have a smarter management system. At the same time, the authors found that there are still some junior high school students who have some problems in the process of geography online learning. For this reason, the authors put forward corresponding countermeasures from the perspectives of both teachers and junior high school students.

3.1. For Teachers

3.1.1. Middle School Students are Not Efficient and Focused in Geography Online

Geography is a discipline that studies the geographic environment and the interrelationship between human activities and the geographic environment. It has a wide range of research scope, rich research methods, comprehensive and regional basic characteristics [1]. Taking the content of the first grade of junior high school in the Chinese map edition as an example, it explains eight major contents: the earth and map, China's territory and population, complex and diverse natural environment, natural resources and economic development, local cultural characteristics and tourism, recognizing regional characteristics and comparing regional differences. It can be seen that the study of middle school geography is rich in content, including the spatial distribution of geographic things, regional characteristics and differences, the concept of sustainable development and human-land coordination. Therefore, teachers should fully grasp the characteristics of junior high school geography subject and promote the ability of junior high school students to improve their geography core literacy in the process of geography online learning.

According to the previous analysis, the form of geography online learning for junior high school students is relatively single. Therefore, it is necessary to play to take advantage of microcourses and other curriculum resources. Microcourse is a combination of resources such as micro-video as the main presentation, and micro-objectives, micro-teaching plan, micro-lesson plans, micro-exercises, etc., which are designed and developed for a certain knowledge point or teaching link to serve the teacher's teaching process and the students' independent learning in the combination of resource packages [2]. The most crucial thing about making microcourses is that they should be junior high school students-oriented, and at the same time, they should be integrated with interesting knowledge. Teachers can recommend that junior high school students with strong learning ability carry out home

geography small experiments and other practical content, to promote the more balanced development of junior high school students' intellectual and non-intellectual factors, and better realize the geography online learning for junior high school students. Teachers can also recommend to junior high school students thinking map and other learning tools, suggesting that they are complicated junior high school geography knowledge for combing and summarizing, forming a systematic understanding.

3.1.2. Online Geography Learning for Middle School Students Can't be Tailored to Their Needs

First, junior high school students are required to personalize their learning. Through the previous analysis, the different learning abilities of junior high school students lead to different effects of online geography learning for junior high school students. Therefore, it is suggested that teachers can release different levels and quantities of teaching resources according to the actual level of junior high school students, and take care of each junior high school student through personalized teaching content and learning methods. Again, junior high school students are required to conduct group online interactive inquiry. According to the questionnaire survey, it is known that junior high school students can reduce the loneliness and anxiety of home study by building a group interactive inquiry platform. By doing so, junior high school students can either focus on the questions raised by the teacher and come up with answers and doubts; or they can answer each other's new questions encountered in personalized learning. In this session, teachers can get questions with discussion implications and prepare for teachers' online Q&A. At the same time, teachers should put forward more stringent learning requirements than usual: junior high school students have to study micro-teaching videos, read study guides and extension tasks, and complete class assignments. This task-driven approach motivates junior high school students that they must take geography online learning seriously. Teachers should also collect and organize junior high school students' questions in a timely manner to ensure that every junior high school student's submitted content receives attention and feedback, so that junior high school students feel that they are being paid attention to and valued, thus improving junior high school students' learning efficiency and concentration.

3.1.3. Increased Investment in Teaching and Learning to Serve Students Wholeheartedly

First, combing and selecting representative questions asked by middle school students to prepare for online Q&A. Teachers select the common questions raised by middle school students. On this basis, the relevant geographic issues that are discussed in depth. This can not only answer students' questions, but also enhance the sense of classroom atmosphere and bring teachers and students closer to each other. Secondly, for junior high school students who are a little behind in geography, teachers should provide individual counseling, actively develop their potential, and believe that they are only junior high school students who are temporarily behind in learning, so as to improve the learning ability of different types of junior high school students.

3.2. For Junior High School Students

3.2.1. Middle School Students Should Develop an Awareness of Online Geography Learning

The environment of "Internet + Education" makes junior high school students have to learn geography online, although the learning process is constantly problematic, but it is enough to make junior high school students think about the opportunities and challenges that modern information technology brings to their own learning. In the era of rapid development of information technology, every junior high school student can connect their needs and interests with the network[3]. Therefore, middle school students should have a strong sense of using the Internet to learn geography online. Middle school students should actively experience the characteristics of geography online learning, actively absorb the advantages of geography online learning, so as to improve the efficiency and concentration of middle school students' geography online learning.

3.2.2. Middle School Students Should Develop a Detailed Geography Study Plan

In the "Internet + education" environment, junior high school students should make a clear study plan. The more reasonable the plan, the stronger the execution, the closer to success. It is recommended that students spend 30 minutes studying the micro-teaching resource kit, and then 45 minutes studying the World Wide Web materials and maps. Only a plan can propel one forward, thus increasing the efficiency and focus of online geography learning for middle school students.

3.2.3. Middle School Students Should have Exact Learning Actions

"Internet + education" environment, junior high school students should take the initiative to learn geography. Middle school geography knowledge is complicated, it is recommended that middle school students read a geography textbook every day, do a good job of checking and filling in the gaps in the notes, you can refer to atlases, supporting materials, workbooks and other independent study, so as to improve the efficiency of the geography of junior high school students to learn online and focus.

At present, "Internet + education" environment, junior high school students geography online learning is still facing many problems, but the solution is always more than the difficulty. One of the most important lessons is that, whether it is a traditional classroom or an online classroom, it is necessary to unify the regularity and flexibility of middle school geography teaching. Teachers, starting from the characteristics of the subject of geography in junior high school, should appropriately increase teaching inputs in online question and answer sessions, personalized learning, group interaction and inquiry, and individual tutoring by teachers, as well as flexibly supervise, organize, and guide junior high school students, in order to improve the effect of online geography learning for junior high school students, and to ensure that online geography learning for junior high school students and the quality of classroom teaching are substantially equivalent.

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