ONLINE LEARNING SYSTEM

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ABSTRACT

Online learning is the way of learning today, especially for students in the current epidemic situation, therefore, this research aims to develop a web-based online learning system. The web-based learning system is mainly composed of videos and third-party live broadcasts. The web-based learning system server scripting language PHP is developed, combined with front-end HTML, CSS, js and bootstrap frameworks. So this web based system helps to learn Chinese Math English and Malay.

1   INTRODUCTION

The development of modern technology and the long-term epidemic life have had a huge impact on people's daily life. Education is also one of the sectors affected by this constant evolution. The e-learning industry is providing more e-learning tools to companies, government agencies, and individuals. Today, as emerging economies try to close the education gap, the impact of e-learning is more important than ever. This combination of low cost, high convenience and accessibility has transformed e-learning into a major global educational force in the 21st century.

2   PROBLEM STATEMENT

In this era of network development,online learning has become a trend. Compared with traditional learning, network learning is not a simple training of professional peers, but a kind of information talents to adapt to the Internet era. Network education can cultivate new talents with high innovation ability and strong information ability, break through the shackles and limitations of traditional education and expand the field of timeliness of information and knowledge dissemination, and increase the development of types and means of information and knowledge.It provides a guarantee for the improvement of students' innovative thinking and innovative ability.

Due to the outbreak of COVID-19, various online learning platforms have emerged in an endless stream, in addition, we usually overlook a very important problem. Students are faced with boring learning and rigidity in the process of learning mathematics or other languages. The traditional pages of students are often easily bored. Therefore, we urgently need a perfect, flexible and easy-to-operate educational platform to provide students with different learning and training resources.

3   RESEARCH OBJECTIVE

The purpose of this study is to design a brand new online education platform for students.
" Online Learning" This system will become a platform for students to provide classes
and practice. In order to achieve this goal, a number of sub-goals need to be accomplished. These subgoals the explanation is as follows:
1. Include the flow of the application by identifying the problem statement, scope, and developing a system approach.
2. Test the developed system with the user.

4   METHODOLOGY

The waterfall model is used for " Online learning" development. The waterfall model is a sequential model that breaks down software development into different phases. The waterfall model has the following steps, as shown in Figure 4.1.
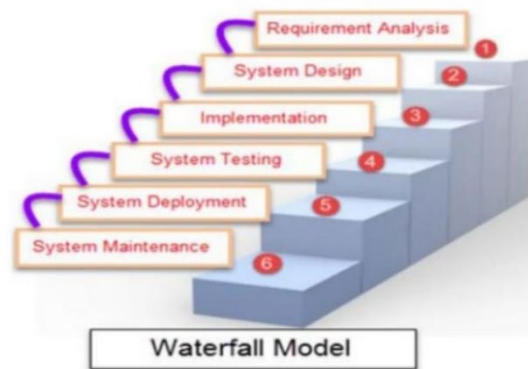
Figure4.1 Waterfall model

4.1 Planning Phase

The purpose of testing is to obtain the software quality requirements by analyzing the test results. This system belongs to the general type of application software. The user requires that each function be used normally, the system respond quickly and run stably. The purpose of this test will check whether the core module function is normal, whether the performance of the education system meets the needs of the application. This article will test the interface, function and performance of the website.

4.2 Analysis Phase

The requirements and analysis phases of the waterfall development process involve the gathering of information required for product development. All requirements are listed in the specification file.

4.3 Design Phase

This phase mainly includes the language, data layer, service or other high-level technical details of the project that are required by technical design such as programming. The work in this phase includes designing the architecture of the product and planning the system design.

4.4 Testing Phase

The core function of this learning system is to allow users to view and practice the content of course materials, do exercises, timely contact teachers and actively participate in offline activities of our group. The system can help students as a channel to expand extracurricular learning. Software testing is composed of some user experience feedback and a portion of the questionnaire.

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This website has a real-time live broadcast function, so students can enter the live broadcast room by scanning the code, After students sign up for academic exchanges, they can access the account by scanning the live QR code provided by academic activities on the website.
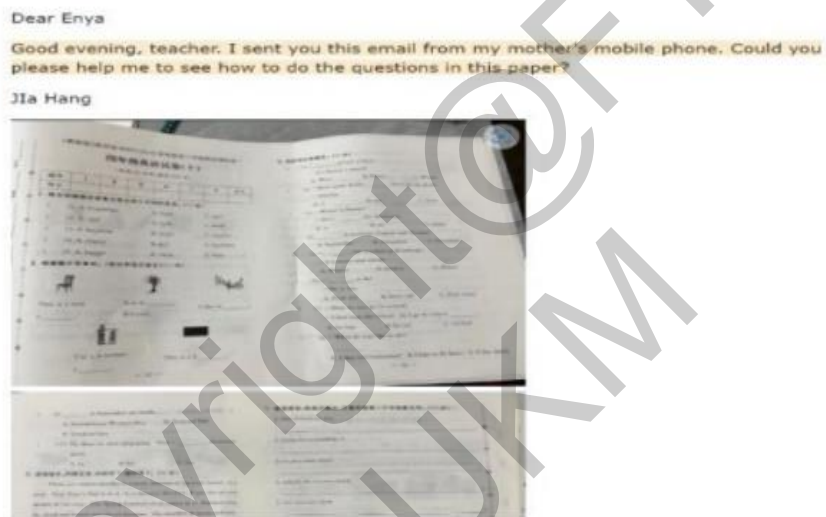
Figure 4.2 Qr code of the studio

Figure 4.3 Teachers receive pictures of students' questions

Because I am currently in China, my older brother and sister helped me with this part of the test. In order to get the functional requirements, let them email the website teacher and scan the code to enter the live room of the website. and wrote a questionnaire to get people to help me test（Figure4.4-Figure4.11）
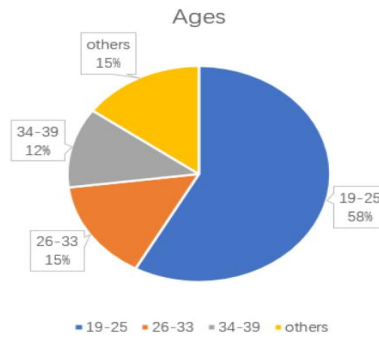
How old are you?

30 responses

Figure4.4 Question One

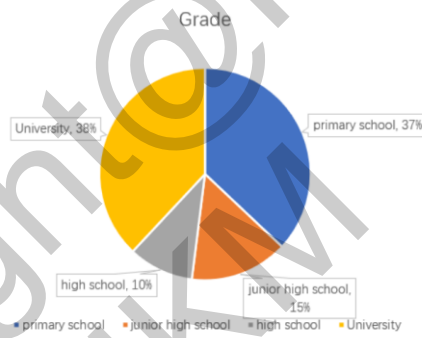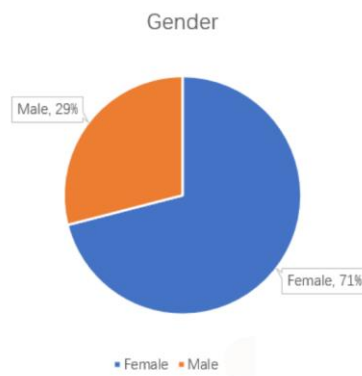What's your grade?

30 responses

Figure4.5 Question Two

What's your gender?

30 responses

Figuer4.6 Question Three

55

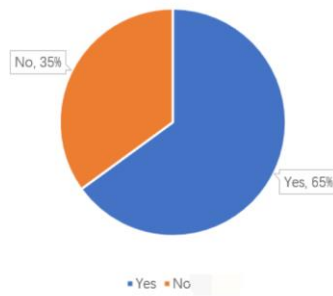Have you used an online learning platform before?

30 responses

Figure4.7 Question Four

Do you think online learning will be more effective than traditional education?
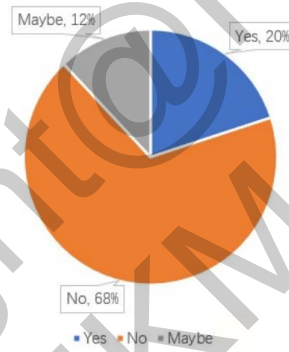
30 responses

Figure4.8 Question Five

As a user, do you think the system needs to add some new functions?
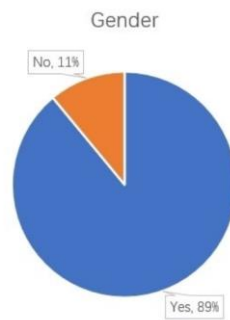
30 responses

Gender

Figure4.9 Question Six

If you are a learning web developer would you add a monitoring system to your site?
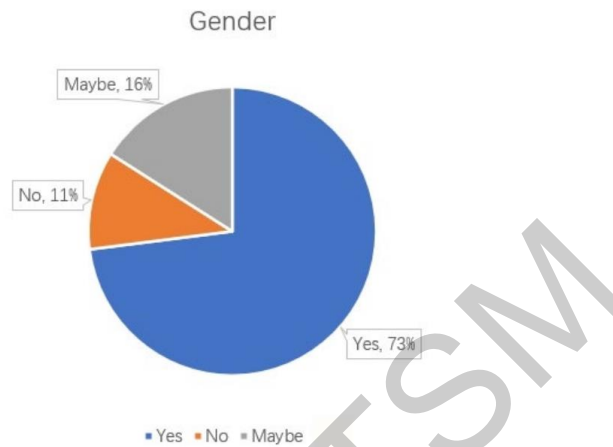
30 responses

Gender

- Yes
- No
- Maybe

Figure4.10 Question Seven

Can you suggest some features or functionality of the online learning system?
12 responses

Allow users to log in, set up the backend database

Features that allow users to interact with instructors, such as sending thumbs up

Provide different functions for different types of users, such as teachers, students, administrators, etc.

Set up a simpler interface for people to use

Provides more detailed data classification and search capabilities

Add a variety of theme modes such as: Diablo series

More interactions between different users and systems.

Dynamic live preview

Make the interface theme simpler and easier to use.

Suitable for different device sizes

Surveillance system

Provide users with more secure information protection.

Figure4.11 Question Eight

5   RESULTS OF THE STUDY

Although the current learning system can meet the daily learning needs of students and teachers. However, in this article, the actual implementation part is relatively simple, and there is still a lot of work to be done to extend all the functions of the platform. The course of this system is displayed by video, so the bandwidth requirements are high. Although the subject has achieved some results, but there are still many deficiencies, some aspects need to be further improved and perfected to ensure the system more robust operation.. In this chapter, the system will be demonstrated.

5.1 HOME PAGE

Figure 5.1 shows the home page interface of the learning system. The user can clearly see the smart interface content.

Figure 5.1 Home page interface

5.2 JUMP PAGE

Figures 5.2 and 5.3 use Bootstrap to divide the navigation bar into five sections. This navigation bar provides a more efficient convenience that all other PHP interfaces contain only this navigation bar, and each interface can share the same and consistent navigation bar. It also shows the characteristics of this website: bilingual interface, which can satisfy users of different languages to use this website.

Figure 5.2 Jump page(Chinese-page)

Figure 5.3 Jump page(English-page)

5.3 Course Page

This page shows the courses section of the website, this page uses the English course as an example, but click on the yellow boxed part to see the four courses on this website.
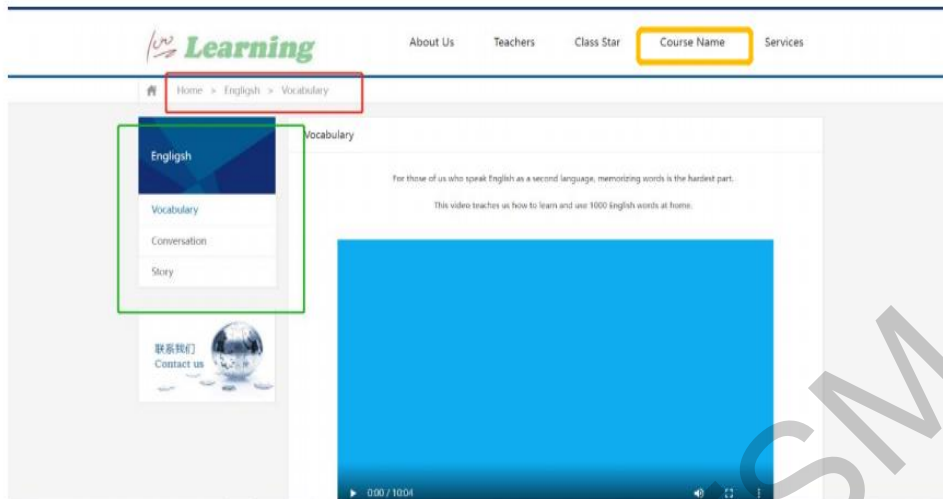
Figure 5.4 Course Page

5.4 TEACHER PAGE

This website is equipped with eight professional teachers to help students solve the problems they encounter in daily learning (not limited to the exercises on our website). Since this website is a static webpage without timely response to questions and answers, we can click the part of the teacher to enter the sub-page of this teacher. We can see the basic information and contact information of each teacher we input. Students and parents can communicate with the teacher through the contact information we left, click on each teacher's page to see the teacher's specific information and contact information.
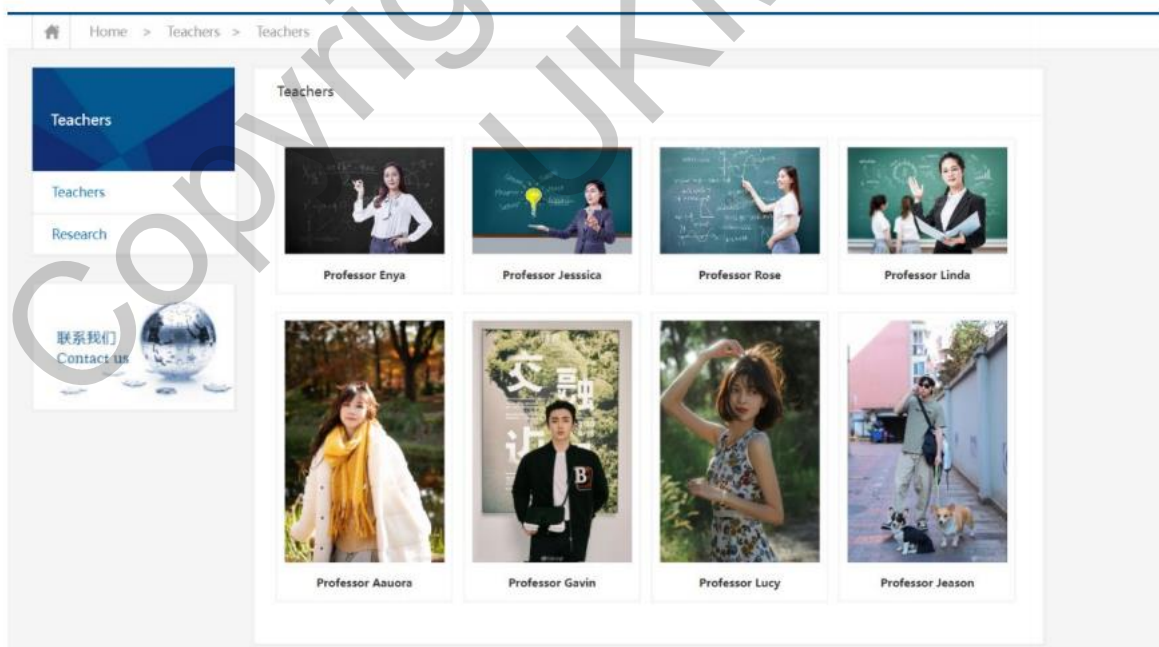

Figure 5.5 Teachers Page

5.5　PRACTICE PAGE

This page is about the practice part of this website. Success is not achieved overnight. The test requires a percentage, and learning requires input and output. After research, it is necessary to strengthen this part of the content to solve the problem. This interface takes Chinese as an example (video) and will include listening. The Chinese test section including the test. For the rest of the practice questions, click on the red box to see the practice questions of other subjects.
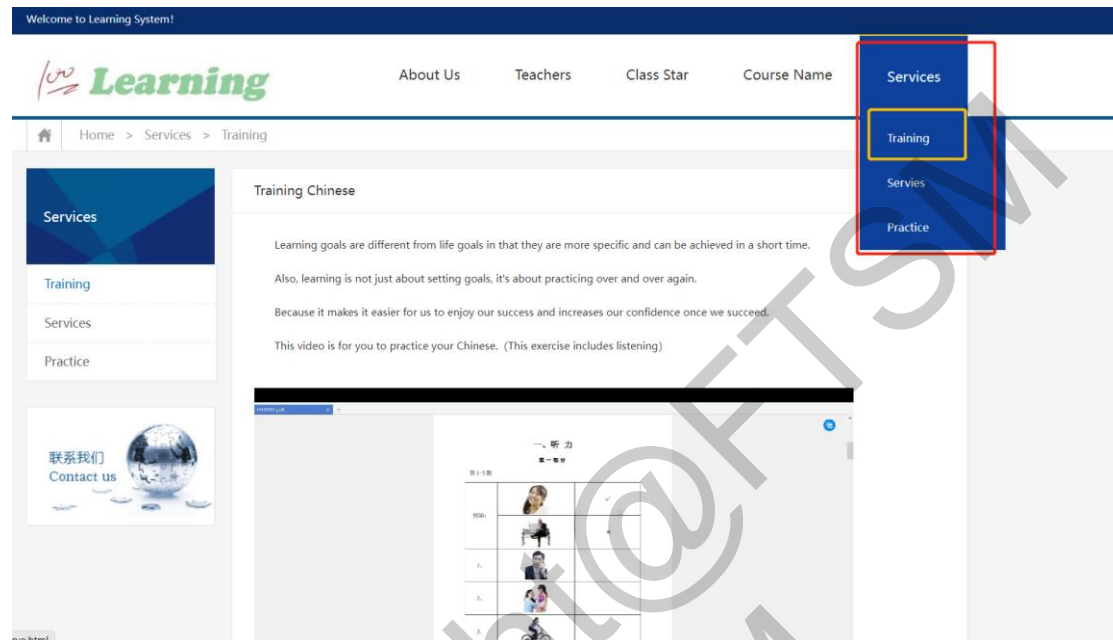

Figure 5.6 Course Page

6　CONCLUSION

With the gradual development of the network and education system in the future, this webpage can provide users with more functions. The author learned a lot in the university and also learned a lot from this project. After this project, the author accumulated important experience for the future development of the project. Although this topic has made some achievements, but there are still many deficiencies some aspects need to be further improved to ensure that the system can be more stable operation.

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