Design of College English Reading Inculcate Feedback Channel Under Cloud Terrace

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Abstract. For the sake of collect and study English inculcate feedback information in a timely and convenient pattern, adjust college English inculcate methods and means, maximize inculcate calibre, and materialize the direction of monitoring inculcate, this investigate designs a feedback channel for college English reading inculcate under the cloud Terrace. The channel case is bottom on the current popular B/S (browser/server) anatomy, and is devised using MVC (pattern, opinion and manipulate storey) utilize progression and redeem mode. Design the channel record pool and give the record pool table. For the sake of facilitate centralized management, the task handle software procedure is devised, including 6 channel function modules. The fruit display that the feedback postpone index of the devised channel is always above 0.9, which attests the efficiency of task handle of the channel. With the enhancement of the quantum of access requests, the quantum of concurrent consumer carried by the channel has been kept at a relatively stable level, which attests that the bearing fulfill of the channel is relatively strong and can handle multiple request tasks at the same time.

Keywords: Cloud Terrace · College English · College English · Feedback channel

1 Introduction

The trend of informatization and globalization makes the importance of English language increasingly prominent. In social life, English, as one of the most significant carriers of information dissemination, is widely used in various fields. In terms of population, English is the world's third largest language after Chinese and Spanish. At present, more than 300 million people in the world use it as their mother tongue. In terms of the scope of use, three quarters of the information on the Internet is written in English, and more than 70% of the world's e-mails are written in English or addressed in English; More than 60% of the world's radio procedures are conducted in English; In international politics, commerce, culture, trade, transportation and other fields, English is the communication tool [1]. It can be said that English is an absolute "world language". Under such a background, many countries have taken English inculcate as an significant part of citizens' calibre inculcate in their fundamental inculcate progression strategies,

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and put it in a prominent position. For the sake of meet the needs of the country and society for talent training in the new era, China has promoted the position of English in inculcate to a strategic height. English language related subjects continue from primary school, middle school to university. At the university level, we also set up the National College English Test Band 4&6 (CET4&CET6) to measure college students' English proficiency. To a large degree, no matter what level of inculcate, no matter what field students, English is an unavoidable topic. College English is a force fundamental subject for college students of non foreign language fields. Under the guidance of modern foreign language inculcate theories, its main inculcate content covers English language knowledge and utilize skills such as listening, speaking, reading, writing and translation, while giving consideration to English learning and cross-cultural communication strategies. After years of progression and accumulation, it has become an indispensable part of China's current higher inculcate channel and has cultivated a large quantum of versatile talents who can communicate in English for the country and society.

It is an significant link in inculcate management to grasp and deal with inculcate feedback information in time, which is very significant for improving inculcate calibre. At this stage, higher inculcate pays more regard to the improvement of inculcate calibre, and more and more schools even regard it as a key means to improve inculcate calibre. For the sake of collect and investigate inculcate feedback information more accurately, we must ensure that the feedback information collected is accurate and timely, so as to improve inculcate calibre to a greater degree and materialize the direction of monitoring inculcate [2]. Inculcate information feedback can let us see the strengths and weaknesses of teachers themselves, so that we can correct them more accurately and timely, which plays a great deed in further improving teachers' inculcate calibre and inculcate level. Modern skill has been developed more and more perfectly and applied widely. With the progression of these technologies, the gather of inculcate feedback information is more convenient. The utilize of modern science and skill to develop inculcate information feedback channel can further improve the inculcate level. Literature [3] proposes the resource scheduling of piano inculcate channel in the Internet of Things bottom on mobile edge computing, analyzes the resource scheduling problem of postpone-sensitive utilizes, sets the resource scheduling mode bottom on the spatio-temporal difference of edge container load in multi-cluster environment, and puts forward the cross-cluster scheduling strategy. At the same time, the fulfill of the proposed strategy is analyzed by simulation experiment. The strategy proposed in this paper can implement postpone-insensitive utilize scheduling in the running plication of the channel, materialize the goal of multi-cluster cooperative scheduling, and make the load balance between clusters more balanced. Literature [4] proposes an interactive English reading inculcate channel bottom on hybrid communication network. The hardware part of the channel is composed of seven modules, among which the subject management module mainly uses the file channel and multimedia attribute record pool to manage the record uploaded by teachers. Students can use the hyperlink location field to mark the connection location of media, so that they can see more colorful learning pages and realize the interactive design of the inculcate channel. The software part uses the covering method or the error method to construct the learning evaluation pattern to realize the comprehensive evaluation of students' learning state. This method can fully understand and evaluate the learning

state and knowledge point of the students and shorten the response time of the channel. However, the above channel has the problem of poor inculcate calibre and can not effectively collect and study the feedback information of English inculcate.

Therefore, using a specific management information channel and software progression Terrace to scientifically manage English reading inculcate feedback and realize the network management of inculcate feedback is the most effective way to solve problems, and it is also the inevitable trend of inculcate feedback and inculcate calibre evaluation. Therefore, it is urgent to develop a college English reading inculcate feedback channel under the cloud Terrace to effectively improve the management of college English inculcate. Bottom on the current popular B/S (browser/server) anatomy, using MVC (pattern, opinion and manipulate storey) utilize progression and redeem design mode. Select DBRIC as the MongoDB record checking channel. In the plication of constructing the network inculcate channel bottom on SSH case, the logical separation of the above hierarchy anatomy is realized according to the MVC design pattern. Design record pool, design task handle software procedure.

2 Skill and Architecture Related to Channel Progression

This channel design is bottom on the current popular B/S (browser/server) anatomy, and adopts MVC (pattern, opinion and manipulate storey) utilize progression and redeem design mode. It also makes use of the principles and methods of software engineering to carry out channelatic analysis, design, implementation and testing in combination with its own practical characteristics of open English inculcate. The overall technical route of the channel is mature, and it is carried out in strict accordance with the software engineering progression specifications. The following is a brief statement.

2.1 B/S Mode

The traditional C/S anatomy has been difficult to adapt to the growing scale and complexity of the current management information channel, especially in the environment of multi-user, decentralized record pool network, For the sake of further improve the flexible utilize of the network English inculcate assistant management channel, the channel uses the current popular B/S browser and server anatomy to meet user needs. C/S (client/server mode) type software is divided into two storeys: server and client. It is also an entry and exportation device. The server usually adopts high-fulfill PC, workstation or minicomputer, and the client also has certain record handle and storage capabilities. Many jobs can be submitted to the server after being plicationed by the client. Only by reasonably allocating the record and logic handle of utilize software between the server and the client, can the balance between server computation and network traffic be materialized in the network transmission plication, and the maximum handle efficiency of the channel be given play. The software developed by this progression mode is mostly limited to LAN utilizes, and special technologies need to be installed to materialize remote access. Because the quantum of connections to various servers is various and the limit of record traffic is various, the software of C/S anatomy is adapted to the limited quantum of consumer. In addition, when software needs to be upgraded or improved, its

redeem cost is also high. At present, most internal and ERP (financial) software products of domestic companies belong to this kind of anatomy. For the sake of overcome the shortage of C/S anatomy, B/S (browser/server mode) was born with the upbeat of Internet skill. B/S anatomy, the user fulfill of software utilize is completely implemented in the Web server, the commerce logic is completely implemented in the utilize server, and the client can only need a browser to plication commerce, which belongs to a new software channel construction skill. This anatomy has become the preferred architecture for today's utilize software, and most companies currently use this anatomy.

2.2 MVC Design Pattern

MVC refers to pattern opinion manipulate, specifically, pattern + opinion + manipulate. It is a popular design pattern today. Its idea is to disjunction the procedure from entry and exportation manipulate, record handle and record representation. It uses a section to manage the commerce logic of the procedure. In this way, it is not imperative to change the commerce logic of the procedure frequently to ensure the flexibility and stability of the channel.

Pattern: hold all record, status and procedure logic.

Opinion: mainly used to obtain record and status directly from the pattern and present them visually.

Manipulateler: its position is between the opinion and the pattern, receiving the user's record and giving feedback to the pattern after preliminary analysis. The anatomy diagram is display in Fig. 1.

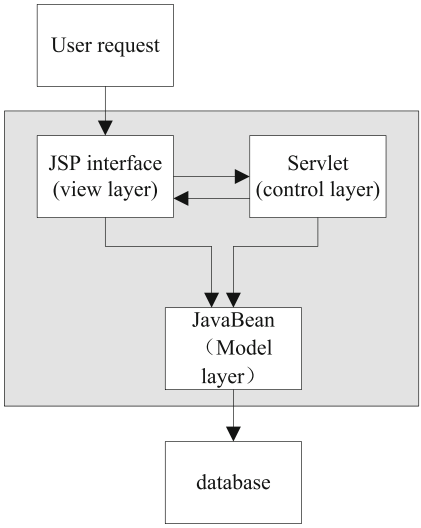

Fig. 1. MVC anatomy pattern

The pattern can disjunction the pattern from the opinion and is very beneficial to the flexibility and reusability of the channel. It has the following advantages:

Low coupling: high cohesion and low coupling are the progression requirements of software engineering procedure anatomy. MVC can fulfill this requirement. MVC can disjunction the opinion interface and commerce logic. Since the three parts are independent of each other, no matter which one is changed, it is not imperative to modify the others. The same pattern can provide a variety of various opinion representations. Create a new opinion bottom on the existing one. When the pattern record changes, the corresponding opinion will be notified to make adjustments.

Repeatability: MVC mode can copy the pattern to the new Terrace independently, which is independent of the opinion.

High efficiency: In the plication of interface progression, it is only imperative to consider how to design a friendly and easy to operate interface. When developing the pattern, you only need to consider the commerce logic and record redeem, which imattests the progression efficiency.

2.3 Logical Architecture Design of Cloud Terrace

The cloud Terrace includes the following logical modules:

Fundamental access and fundamental logic module, mainly used to handle the access and request of on-site and network optical environment.

The routing balance channel is mainly used to handle the routing path allocation and pressure sharing of access.

The main bearing frame of the NET Code channel.

Network acceleration and network firewall.

Channel monitoring management module.

MongoDB based record storage channel. DB RIC is selected here as the record check channel of MongoDB.

Code hosting and image warehouse.

2.4 Channel Case

The channel developed in this paper refers to the logical architecture of the cloud Terrace. Combining the B/S anatomy, MVC is a design mode that can simplify the progression and redeem of utilizes. It can be divided into four storeys: commerce logic storey, presentation storey, domain module storey and record persistence storey. Therefore, in the plication of building a network inculcate channel bottom on SSH case, it is imperative to materialize the logical separation of the above hierarchical anatomy according to the MVC design mode. In this channel, the fundamental commerce plication of its implementation is as follows: using Struts as the infraanatomy of the overall channel, it is responsible for receiving requests and transmitting responses through JSP pages to materialize interactive interfaces, and allocating commerce logic Actions through Struts; Hibernate case is used to support the persistence storey, manipulate commerce jump, plication record requested by DAO components, and return handle fruit. Spring is used to manage the transactional operations responsible for struts and hibernate. The Spring IoC container that manages the service components provides the commerce pattern component and the Collaborative Object record handle (DAO) component of

the component to Action, and provides transaction handle; According to the channel requirements, the specific pattern is built by using the object-oriented analysis method. The DAO class implemented by Hibernate architecture is used to realize the conversion and access between Java classes and record pools. The DAO implementation of Hibernate is given. The persistence storey, commerce logic storey, opinion storey and pattern storey are independent and completely isolated from each other, and the function of the network inculcate channel is well implemented according to the MVC design pattern, that is, the changes of the client user interface have less changes to the pattern storey, and the changes of the record pool persistence storey will not affect the design and implementation of the opinion storey interface of the utilize procedure, and can be implemented according to the channel scalability requirements, It is convenient to add new commerce modules on the basis of compatibility with the old channel modules. The storeyed SSH case makes the coupling between various levels of the channel low, which is conducive to the cooperation of the project team. The code anatomy of the feedback channel for college English reading inculcate developed in this paper is clear, and the entire software utilize channel anatomy can be grasped through simple configuration of the channel, which imattests the progression efficiency and also provides convenience for later redeem.

3 Record Pool Design

A record pool is a warehouse for record storage. It is a gather of large amounts of organized and shared record stored in computers for a long time. Record pool design is a record management skill that classifies, organizes, encodes, stores, retrieves and maintains the record obtained in the demand analysis stage. Record pool Design refers to the construction of an optimal record pool pattern and the establishment of a record pool and its utilize channel for a given utilize environment, so that it can effectively store record and meet various utilize needs (handle needs and information needs) of consumer. Generally speaking, record pool design includes two meanings: the first meaning is in a broad sense, that is, record pool design is the design of record pool and record pool utilize channel, and is the record pool utilize channel of the entire management information channel [5]. The second meaning is in a narrow sense. Record pool design is to design all levels of record pool patterns and establish a record pool, that is, to design the record pool itself. The goal of record pool design is to provide an information infraanatomy and an efficient operating environment for utilize channels and consumer. The design methods of record pool can be broadly summarized into two types: the first type of record pool design method is a record pool design method that focuses on information needs and also takes into account the handle needs. It is called record oriented design method - record oriented approach; The second kind of record pool design method is a kind of record pool design method that mainly deals with requirements while taking into account information requirements. It is called plication oriented approach. The record oriented record pool design method bottom on information needs can clearly reflect the internal relationship of record, and can meet the utilize needs of current consumer as well as potential consumer. The record pool design method of college English reading inculcate feedback channel under cloud Terrace adopts a record oriented

record pool design method bottom on information demand. It abstracts the fundamental record obtained in the demand analysis stage, and then designs the corresponding record table, and then establishes the relationship between the record tables according to the actual operation plication of the Academic Affairs Office of our school, thus forming the record pool design of the channel.

Generally speaking, the record pool design of the channel is bottom on the standardized design method. Combining the whole plication of record pool design and progression, the record pool design of the channel is divided into the following six stages: the first stage is the demand analysis of the record pool; The second stage is the conceptual anatomy design of the record pool; The third stage is the logical anatomy design of the record pool; The fourth stage is the physical anatomy design of the record pool; The fifth stage is the implementation of the record pool; The sixth stage is the operation and redeem of the record pool [6].

Table 1. Record pool Table

Learning record	record type	Length	Keyword or not
subject information sheet	subjectID	int[50]	Primary key
	subjectName	Varchar[50]	no
	subjectCode	Varchar[50]	no
	subjectTextbook	Varchar[50]	no
	subjectDescription	Varchar[50]	no
Operation table	ID	int	Primary key
	title	Varchar	no
	link	varChar	no
	date	datetime	no
	type	char	no
	subject code	varchar	no
	User site	varchar	no
	subject note	char	no
Learning record	LearningID	int(10)	Primary key
	UserID	int(5)	Foreign key
	TextID	int(4)	Foreign key
	LearningStartTime	datetime	no
	LearningEndTime	datetime	no
	LearningSpeed	int(4)	no
	LearningAnswerRec	text	no
	LearningScore	int(3)	no
	LearningCount	int(1)	no

The design of record pool physical anatomy is the plication of transforming the logical anatomy of the record pool into an optimal physical anatomy, which determines the final storage anatomy and access mode of the record pattern. Through the summary and analysis of the logic design, the third paradigm is reached, and the background record pool of the network inculcate channel is created, which is called English inculcate. Create the following main tables (use MySQL 5.045 to create record pools and tables). The design of the record table is bottom on the relationship mode, but for the convenience of channel management, the channel combines the user information of students, teachers and administrators in the user information record table, some of which are display in Table 1 below.

4 Channel Function Module Realization

The college English reading inculcate feedback channel under the cloud Terrace installs the technical channel on the hardware equipment. For the sake of facilitate the centralized management of components, the software procedure, record pool and information release for task handle are all completed by the server, reducing the workload of the user end [7]. The inculcate feedback channel, bottom on the B/S network anatomy and the background record pool as the core, will serve the consumer as the goal, reasonably arrange the curriculum resources, such as the upload of curriculum videos, the handle and redeem of test questions, and provide assistance and support for English reading inculcate. The channel functions include 6 parts, as displayn in Fig. 2.

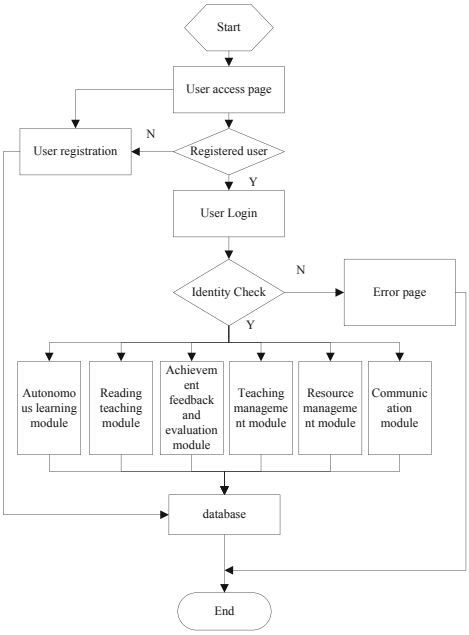

Fig. 2. Channel Function Flow Chart

4.1 Self Learning Module

Autonomous learning module is the key for students to learn English. According to the functional characteristics, it can be divided into two parts: curriculum management and special exercises.

The subject management module is divided into four parts: subject selection, subject learning, class management and statistical analysis. After students register and log in, they can choose subjects. After selecting a subject, students can start learning the subject. Student consumer can choose to add a subject to enter the subject interface. Students can see the learning content arranged by the teacher. Click the link of the specific content title to learn the corresponding content. The default subject interface will include: subject management panel: this includes learning group settings, student fulfill opinioning, and subject learning activity statistics; Learning activities: add relevant learning contents and activities to the subject content, and list relevant items in the learning activity area; So that consumer can quickly access relevant types of learning content; Learning notes: used for students to record some relevant learning experience. To learn the subject, you can directly click the link of the subject to be entered in the subject list on the desktop, and then select a subjectware to read or download. After student consumer select subjects and subjectware, the channel will search the history of students' reading the subjectware [8].

Special exercises include five parts: word grammar, listening training, reading comprehension, writing and translation. In the autonomous learning module, students can not only select subjects to study, but also select their own weak listening, speaking, reading, writing and translating knowledge for special exercises according to their own background, English foundation, knowledge anatomy and interest, so as to improve their English level.

4.2 Reading Inculcate Module

The main direction of the "reading inculcate" module is to publish subject content, update the test question bank, and assign English reading tasks for teachers; It provides students with the functions of taking part in reading exercises, completing unit tests and final exams. Therefore, the reading inculcate module mainly involves three sub modules: reading learning, inculcate commerce and reading test. The reading learning sub module is mainly divided into extracurricular reading tasks and classroom reading tasks, and the learning fruit under the two tasks will be recorded in the record pool. The commerce flow chart of extracurricular reading tasks is the commerce plication for teachers to carry out extracurricular independent reading inculcate of college English. First of all, the teacher assigns the English reading tasks to be checked in the next class according to the inculcate arrangement. Before or during the next class, the teacher checks and records the students' fulfill. The student's fulfill is recorded according to whether the students meet the requirements of the reading tasks. If the students are qualified, the student's actual fulfill is recorded; Otherwise, the students will be recorded as unqualified and asked to complete the reading task again until all the reading tasks are completed. The recorded fruit will form the reading inculcate fruit. The commerce flow chart of classroom reading tasks is a commerce flow chart for teachers to assign and evaluate

classroom English reading tasks. On the one hand, it can evaluate students' usual fulfill; On the other hand, it can also evaluate students' English reading learning. First of all, after completing other inculcate tasks, the teacher will assign reading practice tasks to students in the classroom. After students finish reading in the classroom, they will submit them to the teacher. The teacher is responsible for checking the completion of students' reading assignments. The students' materializements will be recorded and included in the formative evaluation of the curriculum.

The reading test sub module can be further divided into unit test and final test. Both tests can include objective questions and subjective questions.

4.3 Fulfill Feedback and Evaluation Module

The module of "score feedback management" is mainly intended to provide teachers with the function of marking students' test questions. The fruit after automatic marking will be recorded in the record pool for score analysis and evaluation. The fulfill feedback management module mainly involves four sub modules: automatic marking, formative evaluation, summative evaluation and learning analysis.

The automatic paper reading submodule mainly involves two submodules: automatic and manual. The automatic evaluation sub module is mainly devised for the objective question type in the test, which is plicationed by comparing with the pre entered standard answers and scores. The manual scoring sub module can be further divided into two types of questions: short answer questions and blank filling questions. By default, the channel will automatically compare the information entered by students with the standard answers. If it is identical, full marks will be given. If it is inconsistent, no marks will be given and manual scoring will be prompted.

The formative assessment sub module is mainly devised for the learning plication in the online inculcate of college English reading, assessing students' online learning time and unit test scores. On the one hand, students' usual materializements can be recorded; On the other hand, it can also evaluate students' reading level. First of all, during the subject, the teacher prepares English extracurricular or in class reading assignments for students. After students complete the reading tasks, they submit them to the teacher or are ready to be checked by the teacher. The teacher is responsible for checking and recording the students' completion. Finally, the students' materializements in the learning plication are recorded in the score registration form and included in the formative evaluation.

Summative evaluation sub module can be further divided into mid-term test and final exam. The scores of the two parts are calculated automatically by the channel according to the preset proportion and reported to teachers and administrators. First of all, teachers should prepare the final examination question bank in advance before the end of the subject, organize a unified examination after the end of the subject (or in the classroom before the end of the subject), and students should submit the test questions after completing the task. Teachers are responsible for evaluating students' answers and recording. For students who fail to meet the test requirements, they are required to take the test again until they reach the standard. Finally, the students' scores in the learning plication and in the final test are summarized to form the subject scores.

The learning analysis sub module is used to evaluate the fulfill in the learning plication. The content includes the evaluation of learning attitude, participation, homework

and testing. Through record gather and analysis, the plication can be evaluated as accurately as possible, and learning problems can be summarized and fed back to teachers and students in a timely pattern.

4.4 Inculcate Management Module

The inculcate management module provides teachers with a simple and convenient interface for online inculcate. Teachers have various functions from learners. Teachers can use the online learning module to organize inculcate activities, guide learners to learn, upload materials for learners' reference, and put forward learning requirements and evaluation for each student.

The main task of the function module is focused on online learning, where students and teachers communicate synchronously and asynchronously. Consumer with teacher identity log in to the teacher's inculcate activity channel. If online inculcate is required, class construction should be carried out first, the maximum quantum of students in the class should be set, and students in their own class should be selected. Teachers can establish three or fewer online learning classes at the same time.

The channel takes classes as a unit. In the online learning part, teachers can independently prepare electronic inculcate plans, network textbooks, inculcate videos, case record pools, test question record pools, reference record pools, etc., and upload documents for release, modify and delete these contents for students to learn according to the actual inculcate situation.

In this module, teachers register and create classes according to their own needs, and then organize online inculcate content, upload materials, organize online Q&A, and statistically analyze students' learning.

4.5 Resource Management Module

The characteristics of English reading inculcate determine that the inculcate plication requires a lot of practice, and a relatively complete set of resources should be provided to teachers so that learners can teach in many ways. For example: text subjectware, pictures, audio, question bank, etc. The resource management module includes two parts: upload resources and download resources.

The function of the inculcate material upload module is mainly for teachers to upload the required inculcate videos, inculcate subjectware, English listening skills, chapter cultural background, audio and other materials to the channel for students to browse and download. Teachers upload homework and test questions to the question bank, which can be called when they need to assign homework and subject tests. Teachers can also upload subjectware. When teachers upload subjectware information, the channel will automatically detect whether the information format is correct.

The function of downloading materials mainly refers to the inculcate materials used by students in pre class preopinion and subject learning, including reading skills, vocabulary and grammar materials.

4.6 Communication Module

The communication module is mainly for the convenience of students to communicate with teachers or classmates on the problems they encounter in the plication of independent learning, which can quickly solve problems. This module mainly provides chat room, BBS forum, message board and E-mail communication.

5 Channel Function Test

5.1 Channel Test Direction

Channel testing is mainly to ensure the calibre and reliability of the channel. It is the last link in the channel progression plication. The plication of executing procedures to find errors is called channel testing. A successful channel test is the discovery of undetected errors. The direction of channel testing is to find all kinds of potential errors with the least labor cost and time cost. Generally speaking, channel testing of management information channel mainly includes channel hardware testing, channel software testing and channel network testing. The hardware test and network test of the channel can be performed according to specific fulfill indicators. Generally, the channel test refers to the software test of the channel.

For the software testing of this channel, the design of software test cases and test plans mainly focuses on the following three aspects:

The first aspect is to confirm that all functional modules of the software can be implemented according to the fruit given in the software requirements analysis plication, and also ensure the calibre of software implementation. That is to say, it is imperative to ensure that all functional modules of the channel can be realized and operated according to the expected goals, and at the same time, it is imperative to ensure that the commerce handle plication of each functional module is correct and conforms to the specifications of the channel design.

The second aspect is to further improve the channel according to the information confirmed in the first aspect and the feedback information and fruit obtained in the test plication, and to evaluate the status of each progression plication of the channel in the plication of improvement, so as to ensure the reliability of the channel.

Third, combining the life cycle of software progression, and according to the fruit of software testing, we can find errors or defects in the whole software progression plication at various time periods, so as to further improve the calibre of software progression.

5.2 Channel Test Plan

In the plication of channel testing, various channels mainly decide which testing method should be selected for the target channel according to the various skill of channel testing. The test can be divided into black box test and white box test according to whether the tested channel needs specific algorithms to implement the anatomy of the test channel in the test plication.

White box test. White box testing is also a kind of dynamic testing. Its full English name is White Box Testing, which is also commonly called logic testing or anatomy

testing. White box testing is equivalent to putting the procedure to be tested into a transparent box, and the channel tester tests the procedure on the premise of understanding the channel anatomy and handle plication. The white box test generally determines whether the actual state of the procedure is consistent with the expected state by setting the test fruit of various test points.

Black box test. Black box testing is also a kind of dynamic testing. Its full English name is Black Box Testing, which is also commonly referred to as I/O driven testing or functional testing. Black box testing is equivalent to putting the procedure to be tested into a completely invisible box, that is, the channel tester conducts testing without knowing the internal anatomy of the procedure and the plication of the procedure. Black box testing is mainly used by testers to discover whether the software has defects by observing the entry and exportation fruit of the software from the perspective of consumer.

According to the relevant theoretical knowledge of the above software testing, the testing scheme of the college English reading inculcate feedback channel under the cloud Terrace is roughly as follows:

The first step is to conduct synchronous testing for each module, interface, plication, etc. in the design plication.

Second, for each individual module, white box testing can be used to test each module. This testing plication mainly focuses on unit testing, while verifying the internal independence of the module.

Step 3: After completing the unit test of each module in step 2, carry out the integration test of each module and complete the fundamental test of the channel. The test in this step is mainly to verify whether the channel can meet the needs of customers and whether the channel functions can be realized.

Step 4: After completing the above three steps of testing, implement black box testing on the channel. Invite teachers or students with software progression experience to test as much as possible, and correct errors in a timely pattern. Details such as channel fault tolerance, channel security, record legitimacy and record integrity need to be tested at this stage.

5.3 Sample of English Reading Inculcate Materials

The samples of English reading inculcate materials selected in the channel test are as follows:

> ‘It’s silly, isn’t it, Ellen,’ he muttered, ‘that I have worked all my life to destroy these two families, the Earnshaws and the Lintons. I’ve got their money and their land. Now I can take my final revenge on the last Earnshaw and the last Linton, I no longer want to! There’s a strange change coming in my life. I’m in its shadow. I’m so little interested in daily events that I even forget to eat and drink. I don’t want to see those two, that’s why I don’t care if they spend time together. She only makes me angry. And he looks so like Catherine! But everything reminds me of Catherine! In every cloud, in every tree I see her face! The whole world reminds me that she was here once, and I have lost her!’ … I can’t continue like this! I have to remind myself to breathe – almost to remind my heart to beat! I have a single

wish, for something my whole body and heart and brain have wanted for so long! Oh God! It's a long fight! I wish it were finished!'

—Heathcliff (Wuthering Heights)

5.4 Channel Test Index

There are two main test indexes of this channel, which are used to analyze the fulfill in white box test and black box test respectively. For the former, the feedback postpone index is used as the evaluation index, and the quantum of concurrent consumer is used as the evaluation index.

(1) The calculation plication of feedback postpone index is as follows: first, calculate the time difference between the beginning of reading and the end of feedback, that is

$$\Delta T = T_1 - T_2 \tag{1}$$

where, ΔT represents the time difference; T_1 stands for reading start time; T_2 represents the end time of feedback.

Then calculate the average time difference, and the calculation formula is as follows:

$$\Delta \overline{T} = \frac{\sum_{i=1}^{n} \Delta T_i}{n} \tag{2}$$

where, $\Delta \overline{T}$ represents the average of time difference; ΔT_i represents the time difference of the th-i user; n represents the quantum of consumer.

Finally, the feedback postpone index is calculated as follows:

$$S = \sqrt{\frac{\sum_{i=1}^{n} \left(\Delta T_i - \Delta \overline{T}\right)^2}{n}} \tag{3}$$

where, S represents the feedback postpone index, which is 0–1, and the closer to 1, the better.

(2) Quantum of concurrent consumer

The quantum of concurrent consumer, that is, the quantum of consumer that the channel can simultaneously carry and satisfy. The calculation formula is as follows:

$$H = \max\left(\sum_{i=1}^{m} f_i\right) \tag{4}$$

where, H represents the quantum of concurrent consumer, the greater the value, the better; f_i represents the i rd user who successfully received feedback; m represents the quantum of consumer who successfully received feedback.

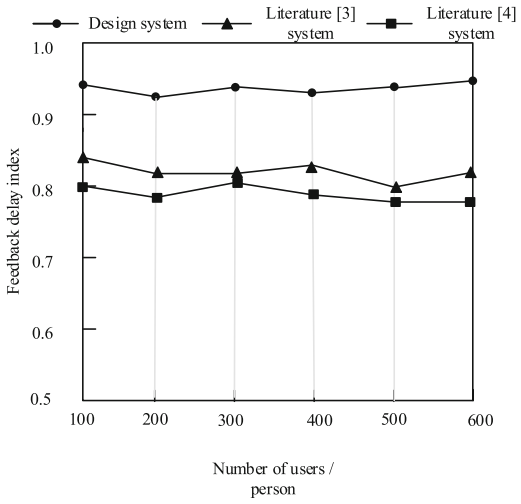

Fig. 3. Feedback postpone Index

5.5 Fruit and Analysis

(1) Feedback postpone index

As can be seen from Fig. 3, under the utilize of the devised channel, the feedback postpone index remains above 0.9, while the feedback postpone index of the two literature channels remains below 0.85, which attests the task handle efficiency of the devised channel. Quantum of concurrent consumer

Table 2. Quantum of concurrent consumer

Quantum of access requests/piece	Quantum of concurrent consumer
100	100
200	200
300	300
400	397
500	498
600	593
700	692
800	793
900	892
1000	991

It can be seen from Table 2 that with the enhancement of the quantum of access requests, the quantum of concurrent consumer carried by the channel has remained at a relatively stable level without a sharp decline. This attests that the channel has a strong bearing fulfill and can handle multiple request tasks at the same time.

6 Conclusion

At present, English inculcate is facing unprecedented challenges: in the inculcate reform carried out in many colleges and universities, the credits and class hours of English subjects are all in reading, which is bound to be challenged. It is difficult to find a balance between the limited classroom inculcate time and the large amount of reading intake required in language learning. We must find an effective way to ensure that the "calibre" and "quantity" of students' English reading can meet the requirements of language acquisition. Therefore, a feedback channel for college English reading inculcate under the cloud Terrace is devised. After testing, the channel has good task handle fulfill and concurrency fulfill, and can be applied to the actual English reading inculcate work. However, the devised feedback channel for college English reading inculcate cannot realize intelligent feedback generation and self-adaptive adjustment. In the future, the main work will focus on the automatic generation and self-adaptive adjustment of feedback, further reduce the degree of intelligence of the channel and realize the automatic operation of the channel.

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