

# Research on Student Self Evaluation and Feedback Management System in English Language Teaching

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## Abstract

The construction of self-evaluation and feedback management system for students in English language teaching is based on information technology and with the help of computer network technology, multimedia technology, data collection and analysis algorithm, and English language teaching theory. The system can reduce the workload of teachers and parents, improve the effectiveness of English language teaching, and make the information fully flow and shared between teachers and students and between home and school, so as to truly improve the learning efficiency of students, promote the development of English language ability, and achieve the goal of English language education. The research contents of the paper mainly include: first, introduce the concept, framework structure and function of the self-evaluation and feedback management system of students in English language teaching. Secondly, the paper discusses the design principles of self-evaluation and feedback management system for students in English language teaching, and emphasizes the importance of scientific and reasonable framework design for building an efficient and convenient self-evaluation and feedback management system for students in English language teaching. Thirdly, the application strategy of self-evaluation and feedback management system in English language teaching is proposed. Finally, based with the actual experience, the problems in the research process are reflected and summarized, and suggestions for the subsequent research work. It is expected that this study can play a certain reference role in the research of this field, and provide reference for the design and implementation of self-evaluation and feedback management system for students in English language teaching.

## Keywords

English Language Teaching; Students; Self-evaluation; Feedback Management; System Design.

## 1. Introduction

Under the context of deepening globalization and frequent international exchanges, English, as a common language, teaching and learning has become an important part of the education system around the world. With the rapid development of information technology, especially in the field of education, student self-evaluation and feedback management system, as an emerging teaching aid, is gradually widely used in English language teaching. This system can not only provide students with a space for self-evaluation and reflection, but also provide important feedback information for teachers to optimize the teaching methods and content.

By collecting and analyzing the self-evaluation and feedback management system, students' actual performance data helps teachers and students understand the advantages and disadvantages in the learning process, to make a more personalized learning plan. In addition, the application of the system can also promote the effective communication between teachers and students, and enhance the students' learning motivation and initiative. However, in English

language teaching, how to design and implement such a system to make it truly effective becomes a problem worthy of further study [1].

## **2. Characteristics and Functions of the Self-Evaluation and Feedback Management System in English Language Teaching**

### **2.1. Concept of Students; Self-evaluation and Feedback Management System**

In this system, students can view their learning status in real time, compare their historical achievements, and understand the advantages and disadvantages in learning. In addition, the system can also provide targeted learning suggestions and resource links to help students to more effectively master knowledge and improve skills.

For teachers, the system provides a powerful tool for data analysis, helping them better understand individual differences and learning needs among students. By monitoring data on student learning behaviors, teachers can promptly adjust their teaching strategies, design more targeted activities and assignments to promote student development.

Another key point is that the student self-assessment and feedback management system also supports formative and summative evaluations. Through regular or irregular self-evaluation activities, students can reflect on their learning process and outcomes under the guidance of teachers. This not only helps enhance students' self-awareness but also provides valuable lessons for future learning[2].

In short, students; self-evaluation and feedback management system is an idea of integrating information technology and educational psychology, which plays an important role in English language teaching. It not only pays attention to the final performance of students, but also pays more attention to the continuous improvement and self-improvement in the process of students; learning, which is of great significance to promote the improvement of English teaching quality [3].

### **2.2. The Framework Structure of Students; Self-Evaluation and Feedback Management System**

1. User Management module: This module is responsible for the management and certification of the system users, including teachers, students, and potential external evaluators. It ensures the security of the system and the privacy of the users.

2. Learning resource module: This module provides students with rich learning materials and tools, including online courses, exercises, video tutorials, etc. Through these resources, students can choose the learning content independently, to improve the autonomy and effectiveness of learning.

3. Evaluation module: This is the core part of the system, including two aspects of students; self-evaluation and teacher evaluation. Students can reflect on and summarize their own learning situation through this module, and at the same time, teachers can also give objective evaluation and suggestions according to the students; actual performance.

4. Feedback module: Based on the evaluation results, this module provides students with personalized learning advice and guidance. Through specific feedback information, students can be more clear about their own advantages and disadvantages, so as to adjust their learning strategies.

5. Statistical analysis module: This module collects and analyzes the system operation data, including the frequency of students; use, the distribution of evaluation results, etc., and helps managers to monitor the use of the system, identify problems, and make corresponding optimization and adjustment.

6. System setting module: The administrator can configure the system parameters in this module, including user permission, evaluation weight setting, statistical report generation, etc., to meet different teaching environments and personalized needs.

### **2.3. Functions of the Student Self-Evaluation and Feedback Management System**

Students; self-evaluation and feedback management system play a crucial role in English language teaching, mainly reflected in the following aspects:

1. Provide a variety of assessment tools: The system integrates multiple assessment tools, including but not limited to self-assessment, peer assessment, teacher evaluation, and automated analysis tools. This diversity ensures a comprehensive assessment of student abilities, focusing not only on language use skills but also on learning strategies and attitudes.
2. Real-time feedback mechanism: The system can record and analyze students' learning progress in real time, and provide personalized feedback to students according to the analysis results in a timely manner. This immediacy helps students to timely understand their learning status, so as to adjust their learning strategies and methods accordingly.
3. Personalized learning path recommendation: Based on the individual differences of students, the system can intelligently recommend the most suitable learning resources and practice questions for different students according to their specific needs and characteristics. This helps to improve the learning efficiency and the effect, and stimulate the students' interest in learning.
4. Data visualization display: The system uses visual elements such as charts and graphics to visually show students' learning data to teachers and students. This visualization facilitates the understanding and analysis of complex learning data, making information transmission more efficient and accurate.
5. Learning motivation incentive: The system enhances students' learning motivation and sense of participation by setting stage goals, providing successful case sharing and conducting group discussion. This positive learning environment helps to improve the learning effectiveness.
6. Security and privacy protection: In the process of collecting and processing students' personal information, the system strictly abides by relevant laws and regulations to ensure the security and privacy of students' information. At the same time, multi-layer security measures are provided to ensure the stability of the system operation and the security of data transmission.

Through the realization of these functions, the students; self-evaluation and feedback management system not only improves the quality and efficiency of English language teaching, but also provides students with a more humanized and personalized learning experience [4].

## **3. Design Principles of Student Self-Evaluation and Feedback Management System in English Language Teaching**

### **3.1. Dynamic Nature Principle**

In the specific application scenarios, the dynamic principle can be reflected in the following aspects:

Students ;learning progress tracking: the system can record students; learning process in real time, including homework completion, test scores, etc., and dynamically adjust the evaluation content and feedback frequency according to these information.

Personalized learning path planning: Based on the specific performance and needs of students, the system can customize the learning path for each student to realize truly personalized learning.

Dynamic delivery of teaching resources: According to students' learning status and feedback, the system can recommend teaching resources and tools most suitable for the current learning stage to help students master knowledge more effectively.

In conclusion, the dynamic principle is one of the core points of the self-evaluation and feedback management system design for students in English language teaching, which ensures that the system can keep up with the individual differences and developments of students, and provides more flexible and effective support for English learning [6].

### 3.2. Personalization Principle

1. Customized learning objectives: The system should allow teachers to set personalized learning objectives for different students according to their actual situations, such as setting different reading volume, vocabulary or grammar practice focus. In this way, students can make progress in a learning environment that is closer to their needs.

2. Diversified feedback methods: In view of the significant differences in students' interests and learning habits, the system should provide a variety of feedback forms for selection, such as text, graphics, audio or video, etc., to ensure that each student can receive and understand the feedback information from the system.

3. Individualized learning progress: Students have different understanding speeds of the course content, so the system should provide a flexible progress control mechanism. Allow students to decide when to complete the learning task according to their own learning pace, and also get timely feedback on progress.

4. Personality matching of learning resources: According to different students' learning preferences, the system can intelligently recommend corresponding learning materials and resources. These resources may be online articles, video lectures, or interactive exercises, which should stimulate students' interest and help them achieve their established learning goals.

5. Emotional support and incentive mechanism: Understanding students' psychological state is also important to improve their learning effects. The system should design effective emotional support and incentive mechanisms, such as the medal of achievement, personal letters of encouragement, to enhance students' learning motivation and confidence.

### 3.3. Principles of Sharing Sex

In addition, the sharing principle also requires that the learning materials contained in the system should be made public and easily accessible. This includes but is not limited to textbook resources, online open class videos, exercise banks, etc. Open content sharing can make the resources more widely used, and it is also convenient for teachers to constantly update and adjust the course content according to the feedback of students, so as to ensure that the teaching materials keep pace with The Times and are close to the actual teaching needs.

Finally, the principle of sharing also encourages the development team to continuously innovate and improve the technology platform to better meet the teaching and learning needs of teachers and students. For example, the system should support the uploading and sharing of multimedia resources to facilitate more intuitive and vivid display of teaching content, and meanwhile, data analysis tools should be provided to help teachers and managers analyze learning results and optimize teaching strategies.

In short, as an important design principle of the self-evaluation and feedback management system of English language students, the core purpose of sharing principle is to break the limitation of resources and information under the traditional education mode, promote the effective integration and optimal allocation of educational resources, and then improve the quality and efficiency of education and teaching.

### 3.4. Scientific Principles

The scientific principle also means that continuous monitoring and evaluation must be carried out throughout the whole system operation process. This means that in addition to the initial design phase, it regularly checks the effectiveness of the system during the daily operation and adjusts the functions and strategies according to new educational research and practice.

Finally, the scientific principle also involves the design of the user interface. Interface-friendly and easy to operate has a direct impact on the acceptance of the system. Therefore, while ensuring the scientific nature of the system, developers also need to pay attention to user experience to ensure that the interface is clear and intuitive and easy for teachers and students to use.

To sum up, scientific principle is one of the core principles in the design and application of self-evaluation and feedback management system in English language teaching. By following this principle, the system can not only provide accurate and useful information, promote the progress of students; learning, but also improve the efficiency and quality of the whole teaching process.

## 4. Application Strategies of Student Self-Evaluation and Feedback Management System in English Language Teaching

### 4.1. Build a Reasonable Data Acquisition Model

1. Identify data sources: Determine which aspects of the data are critical to the function and effectiveness of the system. This includes students ;self-evaluation data, teachers; observation records, peer feedback, and behavioral data analysis in the process of using the system. By clarifying the data source, we can ensure the targeted and comprehensive data collection.

2. Classification and coding: Classify and sort out the collected data, and code and process them as needed. This is not only helpful for the subsequent analysis and processing, but also to facilitate the management and maintenance of the system database. Classification should be based on the nature and use of the data, and coding should be unified to facilitate rapid identification and search.

3. Automated data collection tools: Using modern information technology, such as mobile applications and network platforms to develop automated data collection tools. These tools can help teachers and students easily complete data entry and upload, reduce human error, and improve the efficiency of data collection.

4. Establish a safe data protection mechanism: Considering the possible privacy protection needs of the students' personal information involved, a strict data protection mechanism must be established. This includes but is not limited to data encryption storage, access control, data backup and recovery policies to ensure the security of user data.

5. Implement Real-time Data Analysis: For the collected data, real-time analysis should be achieved. This not only helps to promptly identify issues in the teaching process and provide immediate feedback but also offers data support for subsequent teaching improvements. Real-time data analysis can be realized through big data technology, but it is essential to ensure the system's processing speed and accuracy.

### 4.2. Develop Scientific and Effective Analysis Algorithms

(1) Algorithm selection and optimization: the system first needs to choose the appropriate algorithm model according to the specific learning data types (such as listening, speaking, reading, writing, etc.). For example, supervised learning techniques in machine learning can be used to identify learning behavior patterns, and structural information in unannotated data can be discovered through unsupervised learning. Moreover, processing high-dimensional learning

data with deep learning methods also helps to improve the accuracy and efficiency of the algorithm.

(2) Feature extraction and modeling: good feature extraction is the basis of effective analysis. The system should preprocess the original data (including data cleaning, normalization, etc.) to extract the key features that have a decisive impact on the students' language level. Feature modeling involves how to transform these features into a data format suitable for algorithm processing, such as mapping feature values to a fixed size vector through a transformation function.

(3) Model training and verification: Use historical data to train the selected algorithm models to ensure that the model can accurately predict students' language ability. On this basis, cross-validation methods were applied to evaluate the generalization ability of the model to prevent the occurrence of overfitting phenomena. At the same time, it is also necessary to constantly adjust and optimize the model parameters to adapt to different students' learning habits and characteristics.

(4) Feedback generation and display: Based on the trained model, the system can automatically generate personalized feedback for each student. This feedback includes not only the analysis of the current learning state, but also the specific suggestions for improvement, such as the recommendation of suitable learning materials, practice strategies, etc. In order to improve the user experience, the display interface should be simple and intuitive, which is convenient for users to quickly understand and receive feedback information.

The analysis algorithm developed through the above steps can provide strong support for the self-evaluation and feedback management system in English language teaching, help teachers and students better grasp the learning situation, and timely adjust teaching and learning strategies according to the feedback, so as to improve the overall teaching quality and learning effectiveness [7].

### 4.3. Establish a Good Communication Feedback Mechanism

In English language teaching, one of the cores of students' self-evaluation and feedback management system is to establish an effective communication feedback mechanism. This mechanism can not only help teachers timely understand students' learning situation and needs, but also make students more active and positive in the learning process, so as to improve the teaching effect.

1. Encourage students to ask questions and promote two-way communication. The system should design interactive areas for immediate feedback and discussion between teachers and students. In this way, students can directly ask questions to teachers or express their doubts, and teachers can also answer students' questions in time, so as to realize the effective interaction between teaching and learning.

2. provide diverse feedback methods. In addition to traditional verbal and written feedback, various forms of feedback tools such as video, audio, and graphics can be introduced to make the feedback more intuitive and vivid. For example, for students who perform poorly on listening tests, the system can offer targeted listening training videos for them to study.

3. Implement regular feedback and summary meetings. The system should support regular online or offline meetings, so that teachers can focus on collecting student feedback, and adjust and optimize the teaching content, methods, and materials. This helps to form a teaching environment for continuous improvement.

Through the implementation of the above measures, the students' self-evaluation and feedback management system in English language teaching will effectively promote the communication and understanding between teaching and learning, create a positive, healthy and interactive

learning environment for students, and finally achieve the purpose of improving the teaching quality and students; learning effect [8].

#### **4.4. Build a Flexible and Convenient Evaluation Interface**

Building a flexible and convenient evaluation interface is crucial to improve the effectiveness of students; self-evaluation and feedback management system in English language teaching. This interface should not only be provided for teachers and students, but also pay attention to the optimization of user experience to make the information input and display more efficient and intuitive [9].

In order to improve the real-time and interactivity of feedback, the evaluation interface should support the instant feedback function. When students submit self-evaluation or teachers give feedback, the system should display the evaluation results in time and allow the interaction between teachers and students. This two-way communication mechanism helps to promote the students ;in-depth understanding of the learning content, and also enables the teachers to timely grasp the students; learning status and adjust the teaching strategy [10].

To sum up, to construct a flexible and convenient evaluation interface, it is necessary to comprehensively consider the intuition of interface design, the simplicity of operation, the compatibility of equipment, the ability of real-time feedback and the function of personalized setting. Through these measures, we can effectively improve the overall performance of students; self-evaluation and feedback management system in English language teaching, and create a more efficient and pleasant learning and teaching environment for both teachers and students [11].

#### **4.5. Create a Positive Atmosphere For Use**

Promoting the establishment of positive incentive mechanisms is key to enhancing the learning atmosphere. By setting up reasonable incentives, such as recognizing actively participating students and sharing excellent cases, we can effectively boost students' motivation to learn. Additionally, encouraging teachers to provide personalized guidance and suggestions based on students' self-evaluations and feedback makes students feel that their efforts are recognized, thereby increasing their enthusiasm for learning.

In short, through the implementation of the above strategies, we can effectively create a positive use atmosphere, so as to stimulate students' inner learning motivation and improve the effect of English language teaching. This requires educators not only to pay attention to the development and application of technology, but also to pay attention to the update of educational ideas and the innovation of practical methods [12].

#### **4.6. Regular Maintenance and Update of the System Functions**

In English language teaching, the regular maintenance and functional update of students; self-evaluation and feedback management system is the key to ensure the efficient operation of the system and meet the needs of users. With the continuous progress of educational technology and the change of students; needs, the optimization and upgrading of the system has become particularly necessary. Here are the specific strategies to achieve this goal:

1. Establish a sound feedback mechanism: collect user feedback on the current system functions by setting up the feedback entrance in the system, such as online survey, user interview or special forum. This feedback can not only help developers understand the actual needs of users, but also timely identify the problems in the system.
2. Analyze user behavior data: Use big data analysis technology to analyze users' operation habits, usage frequency, access time and other data. This helps to identify which features are most popular and which are less used frequently, leading in targeted optimization of the system.

3. Regular system performance tests: evaluate the stability, response time and data processing capability of the system by simulating different use scenarios and stress tests. Once a problem is found, measures should be taken to fix it and improved in the next round of updates.

4. Improve system security: With the increasing number of network security threats, regularly updating the system security measures, such as upgrading the encryption protocol and fixing vulnerabilities, is crucial to protect user data.

Through the implementation of the above measures, it can not only maintain the best performance of the system, but also continuously optimize and upgrade the system functions according to the feedback of users and the development trend of technology, so as to provide more powerful support for students; self-evaluation and feedback management in English language teaching [13].

## 5. Conclusion

After deeply studying the students; self-evaluation and feedback management system in English language teaching, this paper proposes a comprehensive management system design framework, and discusses the design principles and effective strategies that should be followed in its practical application. Through the systematic analysis and empirical study of this study, we realize that the establishment of this management system has significant significance for improving the effect of English teaching.

By implementing the principle of dynamism, the system can adapt to changes in students' learning progress and abilities, enabling real-time monitoring of their learning status; the principle of personalization ensures that each student receives targeted teaching resources and support based on their individual needs; the principle of sharing encourages information exchange and collaboration between teachers and students, thereby optimizing the allocation of teaching resources; the principle of scientificity guarantees the accuracy and efficiency of data processing and feedback mechanisms.

In a word, the students; self-evaluation and feedback management system in English language teaching can not only improve the students; independent learning ability, but also enhance the teachers; education and teaching effect. Future research should further explore how to use the latest technology and innovative ideas to optimize this management system and make it more intelligent and personalized to meet the changing teaching needs of.

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