

## Construction and Exploration of AI Teaching Evaluation System

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### Abstract

Education researchers believe that continuous teaching feedback is a motivation to promote students' learning. But the fact is traditional ways of communication with students cannot always obtain the real study situation or accurate express from the students. This paper proposed an intelligent learning tracking platform-"ZhiIN". The design takes "pre-teaching prediction - learning situation tracking - fast input - fast analysis - effective promotion" as the main steps of teaching mode. The main aim is to make real-time analysis of the whole process and accurate diagnosis of learning problems of each student in time-limited class and it also helps to adjust the teaching strategy efficiently.

### Keywords

Study Feedback; Teaching Evaluation; real-time statistics; formative evaluation.

### 1. Introduction

In the past era, young people had a lot of time to grow up slowly and let society grind them into adults slowly, because world globalization and the speed of world change were not big problems for people at that time. But the world is different now. The speed of change and fierce competition are totally overwhelming young people today. Now the world calls for innovative talents who can solve future problems and problems that may never arise in human history[1,2].

Cultivating innovative talents depends on innovative teaching. There are many ways of innovative teaching innovation. There are no definite methods for teaching. Teachers will find a breakthrough according to their own situation and lead teaching to the right path for the future. Teachers today must help students find self-motivation to learn, so that students know how to learn the course for their future. Only when students have motivation can they have spontaneous enthusiasm for self-building. In all kinds of attempts, it is important to communicate with students and arouse motivation.

Teachers and students are not simply givers and receivers, but more equal learning partners. In the process of implementing innovative education, the teaching process and evaluation of achieving the teaching objectives will be different due to different teaching objectives from time to time. It is impossible to pursue the teaching goal of innovative education by using the traditional teaching mode and evaluation system. Therefore, it is necessary to update the teaching methods, teaching modes, teaching tools and teaching evaluation methods in school education, and to construct a new teaching system that is compatible with the teaching objective of innovative education.

### 2. A Review of the Present Situation

In the innovative education in colleges, teaching objectives are different from those of traditional exam-oriented education, so the teaching process and evaluation of achieving the teaching objectives will be different.

Due to some objective factors, traditional ways of communication with students, such as face-to-face interviews, classroom talk and after-class contacts, cannot obtain the real situation of study or students can not accurately express their real ideas for some uncertain reasons. Traditional paper-based questionnaires or end-of-term online surveys from the educational administration institutions often have the following major problems:

1) The process of investigation is so complicated that teachers don't spend too much time on investigation. A course may only be investigated once at the end of the term. However, when the

teachers get the survey results, the course is over. It is too late for teachers to make any amendments and reforms to the current teaching situation, and they can only wait until the next round of class begins. Therefore, classroom research once a semester cannot get real-time and effective teaching feedback, and cannot effectively guide teachers to make rapid adjustment of teaching strategies.

2) Traditional questionnaires lack procedural data and data support to help analysis and adjustment of teaching strategies.

### 3. Exploration and Constructing of Study Feedback System

Educational researchers believe that continuous teaching feedback may be a motivation to promote students' learning. The interaction between teachers and students is based on sufficient discussion. Teachers can timely adjust the teaching structure and optimize the teaching content according to the feedback information of formative evaluation, and guide students' learning progress, learning methods and learning attitudes by analyzing students' learning conditions, so as to urge students to develop good learning habits and achieve the goal of promoting learning by evaluation. Teachers can also give individual guidance to each student according to the learning situation of each student recorded by the system, and timely diagnose, evaluate, so as to realize the integration of teaching and evaluation.

The relationship between teaching and learning is not only the imparting of knowledge, but also the humanistic care and emotional communication. The more the communication between teachers and students, the closer the distance between them, then the equal and harmonious relationship between teachers and students can be really established.

According to the actual teaching needs of our college, and based on the big data analysis mechanism and HTML5 multimedia technology, we independently developed the "Intelligent in Learning Tracking Platform-ZhiIN". The design takes "Pre-teaching prediction - learning situation tracking - fast input - fast analysis - effective promotion" as the main steps of teaching mode.

#### (1) Pre-teaching prediction

Before class, teachers analyze and predict the possible "focus problems" in this class according to the students' current knowledge background, students' realistic level, resource constraints and task content. According to the teaching forecast, adjustment of teaching design content and teaching strategy is made to adapt to the actual situation of this class. Because of the inconvenience of real-time recording in class due to the various evaluation indicators and the concretization of projects, teachers will set up the predicted learning problems as "the shortcut of possibility analysis of focus problems" with the help of ZhiIN before class for teachers to do a real-time classroom evaluation.

#### (2) Track

According to the instructional design, teachers introduce the task of this course, and analyze the starting point, goal, supportive learning conditions and task decomposition of specific teaching tasks. After organizing students to implement teaching goals and sub-goals at all levels through task-based learning, teachers use ZhiIN to quickly evaluate and select the current learning situation and focus issues of each student. Among them, the possible "focus problems" have been preset as "shortcut items" in the form of "shortcut menu" before class for teachers to quickly complete the input of learning tracking in the task guidance process. In classroom instruction, teachers can also view students' early tracking records at any time, browse individuals' dynamic performance in the whole process across time, comprehensively evaluate students' situation, and make more personalized guidance.

#### (3) Diagnosis

With the help of ZhiIN, teachers can quickly check the students' early classroom performance, and comprehensively identify the strengths and weaknesses of the students' work, such as "repeated errors on a certain kind of problems" and "problem solved" according to the degree to which the students achieve their goals or sub-goals in this class. In order to accurately locate the specific problems in

learning and their causes, it is necessary to determine whether students have laid the foundation for follow-up learning or to establish a good method of subject learning. At the same time, teachers can get the overall statistics of the learning situation of each task node in real time, and adjust the teaching strategy flexibly according to the overall learning situation in the classroom. For example, in the "price-guess" programming task, teachers find "printf format" in the analysis window of ZhiIN with a very high error rate, then teachers can immediately focus on this common problem to consolidate the weak part of learning.

#### (4) Promote

Learning situation tracking data of each node is recorded in ZhiIN. It can also help teachers pay more attention to underachievers or students in special situations in the process of project guidance by putting slow-progress students on the top of the "student list" or labeling them through the tracking system.

## 4. Discussion

The study found that in the process of classroom teaching, there are many evaluation indicators of specific projects, and the specific situation of each student in the whole process is not easy to be fully captured. What are the advantages and disadvantages of students in the process of learning or in the process of projects? How to adjust teaching activities according to personal characteristics is unknown to teachers. Generally speaking, formative evaluation is formally uncertain compared with summative evaluation. At the same time, formative evaluation requires that teachers should pay more attention to each link of the learning process of each student in the whole project guidance, which is difficult to implement. It is not conducive for teachers to make accurate teaching diagnosis in time.

The success or failure of a single link in the implementation of a project often has a tremendous impact on the whole project outcomes. However, due to the specificity and uncertainty of project content and the continuity and randomness of teaching, the relationship between process and result is complex and changeable, and there are multiple relationships among them. However, teachers do not always have enough time to make real-time analysis of the whole process and accurate diagnosis of learning problems of each student in time-limited class guidance and it is also difficult to flexibly adjust the overall learning situation as a teaching strategy.

With the ZhiIN platform, teachers can get real-time statistics of the learning situation of each task, flexibly adjust the teaching strategy, and truly realize the management of teaching work in a more standardized, refined independent tool.

## Acknowledgements

This work is supported by 2018 Zhongshan Polytechnic College scientific research projects (Project number: 2018KQ18)

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