

# Exploration and Research on the Quality Improvement and Upgrading of Academic Early Warning in Colleges and Universities

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**Abstract:** *In order to improve the teaching quality of higher education, colleges and universities at home and abroad have introduced many measures and methods, among which a very effective part is to do a good job in academic early warning. But every year, numerous students repeat a grade or drop out because of their academic problems. Therefore, it is essential to focus on students' academic performance and improve the quality of academic early warning, which is also an effective measure to solve the teaching quality issues of higher education. This paper analyzes the current situation of academic early warning in colleges and universities, finds out the existing problems and causes of it, and makes an exploration and research for further improvement and upgrading of academic early warning, which can promote the quality of education and teaching.*

**Keywords:** *academic early warning; quality improvement and upgrading*

## 1. Introduction

The substance of academic early warning is to transform the traditional “post-processing” management into “pre-prevention”, which is the requirement to achieve the “quality project” goal, and is a powerful method to help students complete their studies successfully. In essence, the academic early warning system is a crisis intervention process involving colleges and universities, students and their families, with the aim of helping students complete their academic tasks smoothly.

It is common practice to count the failed credits or credits obtained in the courses in the last semester or cumulative semester of the student training program, and then compare them with the relevant standards of academic early warning to determine whether to issue a warning and the level of it. This is the method now adopted by colleges and universities.

Although the higher education institutions at home and abroad have relevant systems and regulations, every year various students repeat grades or drop out due to their poor academic performance, and some even suffer from mental illness and self-mutilation. Thus, how to scientifically implement the academic early warning system and how to improve the academic quality of students through effective early warning are two crucial components in the development of higher education quality.

## 2. The Current Situation of Academic Early Warning in Colleges and Universities

At present, academic early warning in colleges and universities in China is usually an information communication and crisis intervention system. Specifically, according to the requirements of the specialty cultivation program, the system carries out statistical analysis on students' learning in each semester, timely prompts and informs students of the adverse consequences that may occur or have occurred in their learning process, and takes targeted preventive and remedial measures to help students complete their studies.

The form of academic early warning usually adopts the academic mechanism, and the process mainly includes proofreading students' scores, issuing early warning, informing students, contacting their families when necessary, giving timely feedback, and keeping tracking. Office of Academic Affairs formulates standards and regulations for academic early warning. Academic affairs staff or counselors make statistics on students' final exam results and help students work their way out of

learning difficulties through a series of specific academic early-warning measures such as alerting students, communicating regularly with their families and providing them with assistance.

There are problems with academic early warning in many higher education institutions, which fail to achieve the desired results.

Some institutions have no relevant systems and measures for academic early warning, or emphasizing form over quality in academic early warning. Many education administrators have a weak sense of initiative. And they think that college students' learning depends on their own awareness, and that students do not need too much intervention from teachers or educational administrators. They also believe that the quality of students' academic performance is entirely their own business, and that it is therefore impossible for students with poor academic performance to improve their academic performance even through academic early warning.

At some colleges and universities, the meticulous management of academic early warning is lacking, the responsibilities of relevant faculty are unclear, and the analysis and study of early warning data is inadequate. There is not enough focus on teaching, and the professional level of education and teaching staff is not high enough, so various information-based teaching tools are not applied to teaching, leading to no noticeable early warning effects.

And a weakness in academic early warning at other higher education institutions is poor communication between institutions and students' families. Good communication is a better solution to the problems students run into. It can also help them step out of their comfort zone, correctly recognize setbacks, and deal with their emotional lives and other issues. However, some students are reluctant to communicate with their families about their academic problems, and they resist the institutions' attempts to contact their families. Similarly, when it comes to the problems existing in students' learning, there are families that cannot accept them or are unwilling to confront them properly, and these families reject the normal communication with the institutions. A few families may neglect their students' studies due to their own awareness or busy personal affairs. Things are different for other families. Having enrolled in a university, students are far from home and they are completely dependent on their university. As a result, these families lack substantial involvement in home supervision and communication with students, which is not conducive to achieving the desired educational outcomes.<sup>[1]</sup>

In short, academic early warning has not done its job in urging students to improve their academic performance due to various misconceptions about it.

### **3. Problems and Causes of Academic Early Warning**

Currently, the academic early warning mode of colleges and universities has played a positive role in the training and daily management of students in China, but it still has the following problems and deficiencies.

#### ***3.1 Emphasizing Treatment over Prevention in Academic Early Warning***

The higher education institutions usually emphasize early warning afterwards rather than intervention beforehand in academic early warning. Intervention beforehand refers to the college's analysis and intervention of the learning state of all the students in advance at ordinary times, so as to prevent problems before they occur. Its intervention target is all the students who may have academic problems. While early warning afterwards generally takes students' academic performance as the early warning indicator, and those who fail to meet the standards will be given academic early warning notice. Its target is individual students. When it comes to the main ways of early warning afterwards, colleges and universities usually remind and talk to the academically at-risk students, and they will demand students repeat their grades or drop out when the circumstances are serious. At present, many colleges and universities in China are paying more attention to post-event early warning; however, there is no clear system or regulation for the prior analysis and intervention methods. Whether to intervene beforehand and what to do at the academic early warning stage depends only on the sense of responsibility of the teacher in charge and their own experience. Eventually, the quality of it is uneven.

#### ***3.2 Emphasizing Form over Quality in Academic Early Warning***

When conducting academic early warning, higher education institutions only give early warning to

students with problems in their academic performance according to the process, and rarely dig into the data for root cause analysis. For example, there is a lack of in-depth exploration and analysis of the main types of these students, the major courses from which students receive early warning, and the respective relationships between their daily learning, life behavior, and academic work.

Nowadays, the reasons for the academic difficulties among college students are numerous, including insufficient subjective learning motivation, lack of learning ability, psychological diseases, and emotional distress. However, the academic early warning system in colleges and universities takes the results of students' final exams as the indicator, thus the specific reasons for students' academic difficulties cannot be perceived in advance. Due to the lack of active awareness of educational administrators or their limited ability, the reasons for students' academic problems are not deeply explored in the actual academic early warning process, making it a mere formality and ineffective.

### ***3.3 Academic Early-Warning Measures Are Not Effective***

In terms of implementation, some higher education institutions are not equipped with relevant educational administration staff or counselors, which, along with the large number of academically at-risk students, brought heavy workload and long period. Besides, a few institutions do not pay enough attention to the early warning communication, or the relevant personnel lack the necessary communication skills. Preparations are inadequate before the conversation; excessive criticism and insufficient empathy in the conversation. These lead to poor communication between the two sides and ineffective early warning, and can have a significant adverse effect on students.

Although colleges and universities have specific measures and regulations for academic assistance when warning students, the follow-up targeted assistance measures and tracking feedback are insufficient in addition to completing the early warning conversation and learning plan guidance stipulated by the institutions. In this case, students have received the academic early warning, but many weak-learners cannot completely solve their learning difficulties through their own efforts in a short term. Once there is a lack of assistance or no one to follow up in the later period, it is highly likely that the original situation will recur, and their academic status will continue to spiral out of control and deteriorate to the point where they can even drop out.

## **4. Quality Improvement, Transformation and Optimization of Academic Early Warning**

Combined with practical work, the following four aspects of transformation are the key in order to improve the quality of academic early warning and optimize its methods and forms.

### ***4.1 Transformation from “Independent Learning” to “Scientific Guidance”, Focusing on Education and Guidance***

From the beginning of student enrollment, we should focus on students with poor learning foundations and weak learning initiatives, as well as on students' daily learning. On the basis of the learning foundation and habits of each student, we should put forward scientific learning plans, carry out academic early warning in advance of research, and scientifically guide students to transition from high school to university.

With the analysis and mining of the data, we are able to find the relationship between the learning and life behaviors of students and their studies. We can build a predictive model with a computer and then predict the academic situation based on the daily behavior of the students. For students who may be experiencing academic difficulties, we can send academic early warning notices in time to remind them to take steps to improve their learning outcomes as soon as possible.<sup>[2]</sup>

### ***4.2 Transformation from “Extensive Assistance” to “Precision Assistance”, Improving the Quality of Academic Assistance***

We should develop specific assistance plans and measures. In accordance with the method of “adjusting measures to local conditions, providing classified guidance and precise assistance”, targeted assistance measures should be formulated for ethnic minority students with poor academic foundation and students who have received academic early warning. It is desirable to make the most of the resources available on campus to give better play to various forms of academic assistance, such as a teacher in charge of a class, study groups and one-on-one instruction.

There should be themed activities of the style of study that promote the development of students through model demonstrations, peer help, self-commitment and other ways. "Customized" assistance for students should be carefully planned, which includes learning content and time allocation, and learning trends should be tracked in real time. If possible, an assistance depot could be set up. And professional training should be provided for its volunteers.

#### ***4.3 Transformation from "After-the-Fact Notification" to "Whole-Process Interconnection", Exploring New Ways of Cooperation between Students' Families and Higher Education Institutions for Supervised Learning***

Research should be conducted on how to effectively establish an effective communication channel for academic information among higher education institutions, students and families. Educational administrators or counselors should fully understand the realities of students, their family backgrounds, family relationships and other factors, increase care and help for students with academic difficulties, get to know students' learning and living conditions, and give full play to the positive role of cooperation between families and higher education institutions. Staff should communicate the actual performance of students on campus to families in a timely manner and involve families in student academic planning in advance. We should also inform students and their families about the regulations on student status management and the cases such as students who fail to graduate and earn a degree due to academic problems, highlighting serious consequences, including failure to graduate on schedule or even dropping out. These practices can prevent students' academic problems from becoming unacceptable to their families, leading to conflicts between families and higher education institutions, among other issues.

#### ***4.4 Transformation from "Punishment and Treatment" to "Student-Oriented Approach", Strengthening the Improvement of the Academic Early Warning System***

Educational administrators should study and improve the implementation methods and warning process of academic early warning to improve its operational and practical capabilities. Presently, colleges and universities mainly use mobile phones or educational administration systems to send out early warning messages, and educational administration staff or counselors will notify academically at-risk students in person. In either case, the students' courses have already failed or have affected their graduation. Existing early-warning methods tend to be punitive, which can alert some students. By giving early warning, students can find their own academic problems and correct them in a timely manner. For some students, however, it is simply a punishment that is not conducive to the normal completion of their education. We can try to give all-round early warning in the learning process, such as completion of students' daily homework, self-study, classroom feedback from teachers, mid-term exams and so on.

At the same time, in line with the principle of how to train students, measures for the administration of student status in colleges and universities should be properly adjusted in conjunction with the students' situation. If the system of switching majors is looser, students who do not fit into their original majors will have more opportunities to transfer to other majors, which will give students more options. Similarly, some institutions of higher education are currently implementing the academic credit system, which gives students more opportunities to learn and is also conducive to their growth.

### **5. Some Thoughts on Academic Early Warning**

Educational administrators should adhere to a student-centered approach in the quality of student development, make prevention a priority for students who do not perform well in academic tasks, and constantly improve management methods and models through exploration and research. It is necessary to continuously optimize and update various systems and regulations, improve the quality of education and teaching in colleges and universities, and maximize the learning potential of students.

In addition, educational administration staff should improve the quality of academic early warning through targeted and practical methods. The ways and means of academic early warning should also be steadily refined. It is essential to make good use of available resources and take preventive measures at an early stage. Workers should also strengthen process management, identify signs of problems in a timely manner, and enhance communication and feedback.

College students with academic difficulties have become a group that cannot be ignored. For

various reasons, they fail to meet relevant standards in completing their studies on time, which affects the quality of graduates and the personal achievements of students, and hinders the development of colleges and universities.

Exploring the problem of low-quality academic early warning in higher education institutions, this paper presents research on quality improvement and upgrading of academic early warning, which constitutes an exploration of the whole process of academic early warning. New challenges and requirements are proposed in the paper for educational administrators to help college students cope with their academic difficulties. Thus, this paper provides some effective methods for improving the quality of education and teaching in colleges and universities. <sup>[3]</sup>

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