

The Effects of Digital/Online Written Feedback on Paper-based Test for College Students

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Abstract: In recent years, online teaching has become more and more popular, but it also brings many challenges to teachers and students. Currently, the lack of feedback is one of the biggest challenges in online teaching. This study provides students with a new method of living feedback through digital written feedback on paper-based test. Research shows that this method can effectively improve students' learning strategies and academic achievement.

1. Introduction

The emergence of this pandemic of COVID-19 makes online learning rapidly enter a booming period. For online education, both teachers and students have their own problems.

For teachers, there are various problems. Jianli Jiao (2020) said that students participation is pretty low, teachers can't control students to listen, don't know the students' current status of learning, classroom discipline is out of control, so the learning efficiency is unsatisfied. Student couldn't get feedback of their problems in the first place. According to Rhode the familiarity to online-learning platform is different from person to person, which affects the efficiency of online education[1].

For students, online learning requires more self-study ability, students must have a good learning motivation and self-study ability to achieve their goal. Yijiang Dong (2020) says that lacking of laboratory experiment class is a tremendous issue for online education[2]. During online study, it is difficult to concentrate, terrible learning habits, and vague objectives. From the perspective of the learning platform, the prevention of media, entertainment and games during the learning stage, and the rational judgment of all remind on the mobile phone are all factors that affect almost every student for online learning. For some poor students, they even don't have enough any device to connect to internet.

2. An Overview of the Effects of Digital Written Feedback on Paper-Based Test for College Students in China

2.1 Motivation

Jiaping Yan's (2022) research investigated the status quo of learning motivation and its influence

on learning behavior. The complete mediating effect of learning motivation can promote individuals' positive solitary performance and thus obtain better grades. Research shows that strengthening the education of medical students' sense of vocation mission can promote their learning behavior, thus effectively improving their academic performance, which is also one of the important factors in the learning motivation of medical students [3].

2.2 Parental Supervision

Caizhen Nong (2021) found that the parent-child interaction of boarding students in high school is dissimilar, which is mainly manifested in: boarding or not is related to the time, state, mode and effect of parent-child interaction[4]. Through the comparison of various dimensions, it is found that boarders' parent-child interaction is different from non-boarders, and there is a “disguise” in the interactive content and interactive initiative. Students' social anxiety affected their physical and mental health and school adaptation. Both children's emotional symptoms and parent-child interaction disorder can significantly predict children's social anxiety, and their emotional symptoms can indirectly affect children's social anxiety through the mediating effect of parent-child interaction disorder. Improving teachers' teaching ability and level can help students better establish self-discipline.

2.3 Self-Discipline

Wenxin Niu(2020) believed that students should also be supervised from all sides when they study independently[5]. As a part of school education and teaching management, teacher monitoring is mainly aimed at improving students' learning performance and achievement. With the deepening of the reform of basic education, teacher supervision in classroom teaching has become an important teaching measure for teachers to achieve their curriculum objectives and improve students' achievements. The teacher supervises and inspects the students in the process of learning. The teacher can consider the students in various positions in the classroom; In the classroom, from the perspective of students' cooperative learning behavior, teachers' supervision still has a certain degree of initiative.

However, for current Chinese college students, each course is taught by different teacher and they only study each course for one semester. After each course, they will have their final exam and they will not longer study this course anymore. But for medical related major students, all courses are closely linked, and future courses are based on previous courses. Therefore, this study focuses on whether the students adjust their learning plans and improve their subsequent academic performance after receiving digital written feedback on paper-based test, and whether the improvement is due to the change of learning plans after this feedback.

3. The Significance of Effects of Digital Written Feedback on Paper-Based Test for College Students in China

Some students said that there were too many interesting things to attract their attention in the online class in the dormitory, and they could talk or do other things without the supervision of the teacher on the platform. Some students also said that they played games in class, the teacher didn't know what they were doing. Then the problems accumulated more and more, and even later they didn't understand anything about what the teacher had talked about in the online class. So they stopped listening. Some students said that because it was online course, sometimes they cannot communicate with the teacher immediately when they had encountered questions, resulted in they had no idea about how they did during for the subject. Although there was a problem during the

class, but they had already forgotten after right after the class dismissed. As time goes by, they realized that there are too many questions about the course they were taking. Another part of the students said that they did study hard when online courses just started. But later, they had no idea about which step they had come to of their study. So they did not know how to study for the next part, because knowledge are all correlated. Then, slowly they did not care about learning anymore, that was how their motivation of study perished. Those students who are excellent of study said, they do studied very hard, but communicating with the teacher is pretty difficult during the online classes. They usually need to spend more time and energy on figuring out the answer of their problems. So they feel that studying online requires more time for the same knowledge than offline study because online study is less efficient. But there are a lot of students said that there are only one paper-based exam of each courses, final exam. That is the only test of reflecting how they did in this course and what they need to make up for better performance. But all they get is just a grade, a number. So they have no idea about how they did in the exam, or what to improve in their study plan, even there is no any help for their own study plan for the future study. This situation had damped their study motivation and enthusiasm. It has become a vicious circle of the circumstance that their grade is lower and lower.

4. The Strategy of Effects of Digital Written Feedback on Paper-Based Test for College Students in China

4.1 Participation and Procedure

The descriptive-correlational design will be used in this study.

4.2 Correlational Research Design

Correlational research is a non-experimental research method used to identify a relationship between two variables with no influence from any extraneous variable. Among the types of quantitative research, this design can help the researcher recognize patterns and trends in the feedback the researcher gather. For example, an ice cream brand can use this methodology to identify the relationship between weather and ice cream sales. The correlation between the two variables will reflect the direction and/or strength of their relationship.

4.3 Comparative Design

A causal-comparative design is a research design that seeks to find relationships between independent and dependent variables after an action or event has already occurred. The researcher's goal is to determine whether the independent variable affected the outcome, or dependent variable, by comparing two or more groups of individuals. There are similarities and differences between causal-comparative research, also referred to as ex post factor research, and both correlational and experimental research. This entry discusses these differences, as well as the benefits, process, limitations, and criticism of this type of research design.

Comparative research can take many forms. Two key factors are space and time. Spatially, cross-national comparisons are by far the most common, although comparisons within countries, contrasting different areas, cultures or governments also subsist and are very constructive, especially in a country like New Zealand, where policy often changes depending on which race it pertains to. Recurrent interregional studies include comparing similar or different countries or sets of countries, comparing one's own country to others or to the whole world.

4.4 Descriptive Research Design

Descriptive research is used to understand a phenomenon, a situation, or a population. Unlike experimental research, descriptive research does not involve the manipulation of certain variables. Rather, it seeks only to observe and measure the variables in order to investigate them.

Among the types of quantitative research, this design is used when trying to identify characteristics, categories, and trends. The most common methods of collecting descriptive research are case studies, observations, and surveys.

Descriptive research design is a type of research design that aims to obtain information to systematically describe a phenomenon, situation, or population. More specifically, it helps answer the what, when, where, and how questions regarding the research problem, rather than the why.

The descriptive method of research can involve the use of many different kinds of research methods to investigate the variables in question. It predominantly employs quantitative data, although qualitative data is also used sometimes for descriptive purposes.

It is important to note that in the descriptive method of research, unlike in experimental research, the researcher does not control or manipulate any variables. Instead, the variables are only identified, observed, and measured.

4.5 Research Locale and Research Participants

This study was focused primarily on the effects of digital/online written feedback on paper-based test for college students in China. It determined that what would happen to student's study plan and study method after getting the effects of digital/online written feedback on paper-based test. This study will be taken at a college in China. Student participants are the students of Grade 21, 59 students majored in Medical Imaging Technology, 53 students majored in Rehabilitation Therapy and 190 students majored in Medical Laboratory Technology in Medical Technology College of Shaoyang University and the teachers. The profile of the respondents should be recorded, which includes sex, age and the course they take as for student respondents, while sex, age and their length of teaching experience as for teacher respondents.

4.6 Research Instrument

Questionnaire survey method, also known as the questionnaire method. It is a survey method in which investigators use uniformly designed questionnaires to understand the situation or solicit opinions from the selected respondents. A questionnaire survey is a research method that collects data by asking questions in writing. Researchers compile the questions to be studied into a question form, which can be answered by mail, face-to-face, or by follow-up interview.

Table 1: Shows the Qualitative Descriptions Corresponding to the Quadruple Scale

Point	Scale	Rating	Symbol	Interpretation
4	3.51-4.00	Strongly Agree	SA	High Extent/ Highly Manifested
3	2. 51- 3. 50	Agree	A	Certain Extent/Manifested
2	1. 51- 2. 50	Disagree	D	Some Extent /Did not Manifest
1	1.00-1.50	Strongly Disagree	SD	No Extent /Extremely did not Manifest

In this study, there are two parts in the questionnaire. One part is for the demographic profile. The second part is the questionnaire table. The researcher had made the questionnaire according to the situation of student. There is a four-point scale mechanism was set to measure the level of respondents' attitude towards the questions, ranging from 4 (Strongly Agree) to 1 (Strongly Disagree). The following Table 1 describes the qualitative descriptions corresponding to the four-

point scale

Aside from the primary instrument which is the questionnaire, unstructured interviews was also employed. As the researcher distributes the questionnaire and conducts the study, informal interviews took place. A guide questions were used as supporting information for the answers acquired from the duly-accomplished questionnaire. At this point, the researcher also gained feedback from the respondents.

In the preparatory phase and during brainstorming, the researcher chose the topic of the effects of digital/online written feedback on paper-based test for college students in China. The aim of the researcher is to assess the effects of digital written feedback on paper-based test for college students in China. Also, it would be beneficial to teachers, teachers, platform investigators and school administrators.

After the topic was chosen, the researcher needs to prepare the questionnaire. In order to make a good questionnaire, the researcher needs to do enough review of the topic to acquire enough knowledge about the topic. Then, form the questions on the questionnaire correctly and neatly. So that respondents could understand the questions at first look. After that, the first version of the questionnaire was prepared.

The next step is to submit it to the Open University of China to get validation from several experts in this field.

Then the questionnaire could be assigned to respondents who are chosen from the Grade 21 Medical Imaging Technology, Rehabilitation Therapy and Medical Laboratory Technology and the teachers in a university from China through internet.

After all questionnaires were duly-answered by the respondents, tallied and properly documented, the data was forwarded to a statistician for data analysis according the objectives set.

5. Conclusion

Feedback is one of extremely important way for students to affects their study process and grade. However, college students always complains that provided feedback is not enough. And for college students in China, their courses varies from semester to semester and there are only one test for them to figure out their flaws in one course. Recently, online study had been prevailed. But the paper-based test still occupied the predominant way of exam for college students in China. Therefore, this study offers a way for college students in China to enhance their study strategy and improve their academic performance. It has been proved that the digital written feedback on paper-based test has a positive effects on students' academic performance and study strategy. Moreover, this study utilized the modern technology and inspired students' enthusiasm of study, improved students' study strategy. Though, there is no online study platform could offer a specific function about digital version of written feedback on paper-based test. It is benefit to students and teachers.

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