Implementation and Exploration of Process Assessment of Undergraduate Courses Based on Digital Platform

Yanyan Sun[(✉)] and Yaping Jiang

School of Business, Shanghai Normal University Tianhua College, Shanghai 201815, China
{syy2377,jyp2186}@sthu.edu.cn

Abstract. Based on the analysis and comparison of the differences between Chinese and Western university curriculum assessment, this paper proposes the urgency and necessity of strengthening the process assessment of undergraduate courses. In view of the bottlenecks encountered in the process assessment of domestic university education in terms of syllabus, teaching methods, teaching contents, assessment methods and examination frequency, various signs indicate that the traditional assessment method has obvious disadvantages and the process assessment effect is significant. Therefore, the teaching reform, It is urgent. The crux of the problem is that there are so many process assessment methods. Each course needs to adopt appropriate process consideration methods based on its own characteristics. In addition, how to formulate assessment standards for a specific assessment method can ensure fairness and justice. This paper puts forward my own simple suggestions based on the results of the professional questionnaire survey, It is expected to provide reference for the reform and innovation of undergraduate curriculum assessment in China.

Keywords: Process assessment · Curriculum assessment · Education reform

1 Introduction

In November 2018, the Ministry of Education issued the Notice on Strengthening the Implementation of the Spirit of the National Undergraduate Education Conference in the New Era, emphasizing that "we should practically strengthen the learning process assessment and increase the proportion of process assessment results in the total curriculum scores". Therefore, from the national policy level, it can be seen that strengthening the process assessment is the internal requirement of doing a good job in undergraduate education and teaching in the new era, and is also an important measure to improve the quality of undergraduate education and teaching [1]. Process assessment, also known as process assessment, is a way to evaluate students' learning progress during the course implementation. Process evaluation adopts the value orientation of paying equal attention to goals and processes, and comprehensively evaluates the motivation, effect, process and non intellectual factors closely related to learning [2]. At present, almost all courses

in universities in the United States, Britain, Australia and other countries are assessed by process. Domestic universities have also gradually realized the importance of process assessment, and have taken corresponding measures.

Because of the COVID-19, universities and colleges actively promote online and offline hybrid curriculum teaching based on digital teaching platforms such as Learning Connect. The online teaching link in this teaching mode has played an important role during the epidemic, realizing the substantial equivalence between online teaching quality and traditional teaching quality. However, in the process of connecting traditional classroom teaching with digital teaching platform, how to reasonably build a comprehensive evaluation system is an inevitable problem. In order to effectively evaluate [3] the teaching quality of the mixed teaching mode, a diversified process assessment and evaluation system is introduced. This evaluation mechanism not only subverts the inherent undergraduate teaching concept, enhances the students' initiative in learning, but also provides an all-round and multi angle evaluation for testing students' learning effect, which is conducive to the formation of a situation of "promoting learning by evaluation, promoting teaching by evaluation, and combining teaching with learning and evaluation" [4]. It is of great significance for curriculum construction and the cultivation of light chemical engineering talents [5].

Four years have passed. After several years of implementation and precipitation, few universities have successfully implemented and continued to implement it. Suzhou University is an early pilot university for undergraduate process assessment, and has developed corresponding assessment management methods, which are worth learning from many universities [6]. First, from the school level, starting from the teaching system, it completely changes the evaluation composition, The assessment method of "Mid-term exam & final exam" will be changed to the process assessment method. Teachers can modify the assessment module and score composition, and develop corresponding systems to ensure the successful implementation of the process assessment. In addition, undergraduate colleges and universities also need to systematically sort out the differences between undergraduate teaching in Chinese and Western universities, face the shortcomings of Chinese undergraduate education in process assessment, find the real pain points, and then propose effective improvement methods [7].

2 Differences Between Chinese and Western Undergraduate Teaching

In terms of undergraduate course assessment, there are significant differences between China and the West in terms of syllabus, teaching methods, teaching contents and assessment methods, as shown in Table 1:

2.1 The Status of the Syllabus Varies Greatly

In Western countries such as Europe and the United States, at the beginning of the semester, the teacher will issue the syllabus at the first time. In order to get high scores, students need to carefully read and understand every sentence in the syllabus, because the teacher will strictly follow the assessment methods, assessment standards and deadlines

Table 1. Differences between Chinese and Western undergraduate curriculum assessment

Differences	*Western countries*	*China*
teaching program	Issued at the beginning of the period and strictly implemented	General/not strictly enforced
Teaching method	Lecture, large amount of self-study, group discussion	Teachers give priority to teaching
Teaching content	wide coverage,additonal matiarials	Relatively few, more detailed, teaching content is often limited to textbooks
Assessment method	Clear quantification and various forms	High proportion of closed papers at the end of the period
Assessment frequency	weekly	Mid term & end of period/end of period

Source: According to relevant data

for homework submission to carry out the curriculum assessment; In China, the status of the curriculum is often not so important. Sometimes the teacher may not issue the curriculum at the first time. Even if it is issued in a timely manner, it may not be strictly implemented. In many cases, the curriculum is just a document for teachers to deal with teaching inspection, and students do not attach great importance to it.

2.2   Different Ways of Teaching

In Western countries such as Europe and the United States, the weekly classroom teaching time is not too much, and the content of each lesson is very broad. In order to digest these contents, students must have a lot of self-study time, otherwise it is difficult to cope with homework and exams. Teachers in Western countries such as Europe and the United States attach great importance to the quality of small papers submitted, and must have their own views. If they want to write new ideas, a lot of extracurricular reading is essential, Although the assessment forms are diversified, the assessment criteria are also very clear. If you want to get high scores, you need to keep up with the pace of the teacher throughout the semester. Students will feel great pressure from this immersion learning, but at the same time, they will live a very full life. In China, teachers explain very carefully, so the teaching content is often limited to textbooks, students' self-study ability is weak, and they still stay in the high school stage of "teachers tell, I will remember". In addition, there are not many opportunities to write small papers, and there is no opportunity to express their views. Over time, the innovation ability and thinking ability cannot be improved [8].

2.3   The Scope of Teaching Content is Different

In Western countries such as Europe and the United States, teachers also specify textbooks, but the teaching content is not limited to textbooks. On the one hand, teachers

will add a lot of information. On the other hand, students need to expand their reading in order to put forward their own views [9]; In China, students rely heavily on textbooks. Some students even want teachers to follow the book and make it easier for them to take notes. Students are used to the controlled learning atmosphere in high school. After entering college, students who lack self-discipline will lose their goals because of no instructions from the head teacher, and even join the team playing games. Quite a few students report that they often get the highest score in CET-4 for the first time, if you don't pass the exam for the first time, there will be a situation that the more you pass the exam, the lower you will be. Because there is no control, some students can't do enough preparation for the exam, and they have to eat the "old school".

2.4 Different Forms of Assessment

In Western countries such as Europe and the United States, there are many types of assessment methods, such as quizzes and assignments, staged big exams, group assignments, small papers, big papers, etc. The assessment methods are diverse. In addition, the proportion of each module's score and the assessment criteria are clearly quantified and strictly implemented [10]; In China, many universities still adopt the traditional one-time closed book final examination. The proportion of the final examination is even more than 60%, and the proportion of daily learning activities such as homework and attendance is 40%. This "light process, heavy results" assessment method often corresponds to the traditional teaching method of "teachers speak, students listen". Students do not participate in the classroom very much, and do not experience the sense of achievement in the learning process. Over time, You will lose your interest in learning. Anyway, as long as you concentrate and cram for the exam, it is not difficult to pass the exam, so it is not so important to listen or not to listen in class. Over time, you will not pay attention in class, play mobile phones, talk and other phenomena unconsciously continue to occur, which is not uncommon.

2.5 The Assessment Frequency Varies Greatly

According to the feedback of students studying in the United States and the United Kingdom, although there are not many classes every week, the frequency of homework and exams is very high. There will be exams and homework for each course every week, and basically there will be a big exam every month; In China, many exams are completed at the end of the semester or a midterm exam is added. The frequency of the exam is seriously insufficient and the deterrent is not strong enough, so students will easily slack off [7].

3 Ways to Improve the Performance of Process Assessment in Chinese Universities

3.1 Attach Importance to the Role of Syllabus

The reason why many students do not attach importance to the syllabus is that schools and teachers do not attach importance to it. If you want to change the status quo, you must start from schools and teachers. At the beginning of each semester, each teacher

must publish the quantified syllabus to the digital teaching platform such as Learning Connect. During the teaching process, the progress and assessment standards of the syllabus shall be strictly followed. The questionnaire was distributed by the questionnaire star to investigate the mastery of the process assessment by the students and teachers of the international business major of Tianhua University Business School. A total of 156 questionnaires and 133 student questionnaires were collected. The information is summarized as follows:

As shown in Table 2, only 17.79% (21 students) knew about the process assessment very well, 16.54% (22 students) did not know about it at all, and 67.67% (90 students) did not know much about it. Although most students did not know much about the process assessment, 36.09% (Table 3) could accept the assessment frequency once per chapter. The data shows that the process assessment has a good basis for implementation in the international business major of Tianhua College, Therefore, the lecturer only needs a little guidance to further strengthen the advantages of process assessment, and the students will slowly accept it, and then integrate into it, so that the students can deeply realize that it is not easy to enter the university, and it is extremely difficult to pass the four years of university smoothly, and the process may be very painful, but this "delayed gratification" can exercise the patience and willpower of the students, through the repeated training of the four years of university, Turn these abilities into habits and bring them into the workplace.

Table 2. Understanding of process assessment

Degree	No. of Students	Proportion
Know but not much	90	67.67%
Know clearly	21	15.79%
know nothing about	22	16.54%
Total	133	100%

Source: Questionnaire collection

Table 3. Acceptable course assessment methods

Degree	No. of Students	Proportion
Final one-time assessment	53	39.85%
Including exam + final exam	32	24.06%
Process assessment, with assessment in each chapter	48	36.09%
Total	133	100%

Source: Questionnaire collection

3.2 Diversified Teaching Methods

In addition to the classroom, let students busy after class. Through different task driving, cultivate students' self-learning awareness and habits, improve students' self-learning ability. In the first semester of freshman year, help students quickly complete the transformation from "I want to learn" to "I want to learn", which will benefit them for life.

3.3 Replenish Cutting-Edge Knowledge at All Times

In view of the current situation that Chinese students rely too much on textbooks, teachers need to constantly guide them to contact new knowledge, from passive acceptance to active search, which will also require higher requirements for teachers. College teachers must keep pace with the times, always absorb cutting-edge information and knowledge, so that the teaching content can slowly become active, and through the power of example, imperceptibly tell students, It is normal to pay attention to and absorb new knowledge all the time, and any textbook is far from enough.

3.4 The Assessment Method Must Be Completely Changed

The assessment method of "final exam results" must be changed, otherwise, it will slowly return to the old way. We can learn from the experience of European and American countries to enrich the assessment methods, such as small papers, assignments, staged big exams, group assignments, and big papers. As shown in Table 4, among the 133 students interviewed, the closed book examination (67.67%), group assignments (16.54%), and writing small papers (15.79%) are popular, Teachers need to select appropriate assessment methods based on the nature of the course. In addition, the proportion of each assessment method and the assessment criteria must be quantified and strictly implemented. For teachers, after the first round, the workload will be relatively large, but after the first round, the follow-up workload will be less and less. In addition, in order to further reduce the workload of teachers, quizzes and assignments can take the form of objective questions, and the digital teaching platform can automatically score, but the difficulty should be moderately higher than the textbook, and try to avoid cheating, plagiarism and other sites, to ensure the effectiveness of the assessment.

3.5 The Frequency of Assessment Must be Strengthened

For each course, try to arrange small tests and assignments every week through learning, regularly hold periodic big exams (such as one month), arrange group assignments in an appropriate amount, occasionally arrange small papers, and the final exam may not necessarily require closed book examination questions. You can also try to get students to move up and participate in it through large papers and other forms, and urge students not to slack off through regular assessments.

Table 4. Methods of process assessment (Multiple choice)

Degree	No. of Students	Proportion
examination	71	67.67%
paper	60	15.79%
Group work	71	16.54%
Video	29	21.8
Total	133	–

Source: Questionnaire collection

Table 5. Effect of process assessment

Degree	No. of Students	Proportion
No effect at all	7	5.26%
A little effect	70	52.63%
The effect is obvious	56	42.22%
Total	133	100%

Source: Questionnaire collection

4 Conclusion

As shown in Table 5, only 4.49% of the 133 students think that the process assessment has no effect, while 95.51% think that it has a little effect or obvious effect. Therefore, the implementation of the process assessment in Business School of Shanghai Normal University, Tianhua College has a good foundation, but it will also face many challenges, such as how to select the appropriate assessment mix, how to establish fair and just assessment standards, and how to avoid free riding in group work, The above changes require the efforts of all teachers in the school. If only some teachers adopt the process assessment, and other teachers remain unchanged, the final result is that teachers who have done a lot of work to implement the process assessment will encounter "thankless" situations. For example, because they are too strict, the teaching evaluation score is often not too high. If the assessment of other courses is loose, finally, the implemented courses are forced to, We can only give up the process assessment to meet the needs of the public. Therefore, the reform of process assessment requires the joint efforts of all university teachers. In addition, the effectiveness period of process assessment is long. Only when teachers are confident in their hearts can they resist all external pressures. Only when all teachers unify the assessment standards can students accept this reality.

Table 6. Components of process assessment [11]

Assessment score components		*Proportion*
Classroom questions and answers		CP
Chapter theory study at ordinary times		SP
Group Assignments	Mutual evaluation between groups	GP
	Mutual evaluation within the group	IP
	Faculty evaluation	TP
Final Exam		FP

5   Deficiencies and Prospects

5.1   There Are Few Details Involved in the Assessment

This article only systematically compares the traditional assessment method and the process assessment method. The disadvantages of the traditional assessment method have been exposed, and the advantages of the process assessment method are very obvious. However, the specific assessment details of the process assessment are less involved, such as the specific methods of the process assessment, the proportion of each method, the quantitative indicators and standards of each assessment method, and the relationship between the quantitative method and the nature of the curriculum, How to make good use of the digital teaching platform and other details have not been studied in detail. In the future, I will use the following quantitative analysis methods, such as formula 1 and Table 6.

$$CP + SP + GP + IP + TP + FP = 1 \tag{1}$$

5.2   Simple Research Method

Although the article combines the questionnaire survey to analyze, the level of data analysis only stays in descriptive analysis, and the analysis method is relatively simple, which can only excavate superficial information. In the future, it can be considered that through comparing the relevant indicators of the sample group and the reference group, the quantitative analysis method can be used to obtain the quantitative information of the teaching effect of the process assessment.

References

1. Xingyu Zhang,Yaoli Zhu. Implementation and Exploration of Undergraduate Course Process Assessment [J]. Heilongjiang: Research and Practice of Innovation and Entrepreneurship Theory 2022 (9): 24–26.
2. Lingbiao Gao.Reflections on Process Evaluation [J]. Beijing: Curriculum, Textbooks and Teaching Methods, 2004 (10): 45–46.

3. Jiahua Zhang, Zou Qin, Zhiting Zhu. Research on Audio Visual Education, 2016, (12):46–51.
4. Chunlei Wang, Baozhao Su. Curriculum Education Research, 2019(24):43–48.
5. Yun'er Wang. Research on Education Development, 2018, (21):3–7.
6. Fang Xu, Yajuan He, Li Ma. Investigation and Analysis on the Current Situation of Undergraduate Course Process Assessment: Taking Suzhou University as an Example [J] Xinzhou: Journal of Xinzhou Normal University. 2020 (36):106–110.
7. Hongzhen Wang, Meng Bai. Application of process assessment in the teaching of Cell Biology [J]. Shaanxi: Journal of Livestock Ecology. 2022 (43):94–96.
8. Dan Ji, Rong Lin. Research on the Construction and Application of "Internet+Classroom" Learning Quality Evaluation Index System [J]. Science and Technology, 2021 (36):19–21.
9. Yan Chen. Reform of Course Assessment Methods in Private Colleges and Universities [J]. Western Quality Education, 2020, 6 (04): 154–155.
10. Qingyong Zhang, Xuejiao Qin, Huaping Ma. Design of Higher Mathematics Assessment Index System Based on OBE Concept [J]. Wind of Science and Technology, 2021 (33): 113–115.
11. Nailong Zhang. Exploration on the Application of Task driven Project Teaching Method in Practical Courses [J]. Education and Teaching Forum, 2021 (45): 117–120.