

A Review on the Application and Development of the BOPPPS Model in Chinese Colleges and Universities

Yijun Pan

School of International Communication, Communication University of China, Nanjing 211172, Jiangsu, China

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Abstract: The BOPPPS teaching model is originated from the Instructional Skills Workshop (ISW) in Canada since 1979, which had been found to be an effective way to enhance instructors' teaching in classroom with effective teaching structure. This model has been widely applied in China in its college courses, yet more research needs to be done to testify its effectiveness in colleges and universities nationwide. This paper examines its application and development in lesson planning by reviewing the general application and feasible development of the model itself in the arena of higher education in mainland China. It aims at guiding college teachers and helping them to command a wholistic and developing view of the BOPPPS model and its innovative exploration in future.

1. Introduction

Based on the preset structure focusing on the interactive nature of teaching, BOPPPS is one of many lesson planning models instructors apply and succeed to organize classes, sessions, and workshops throughout the world[1]. However, this model just starts to gain its momentum in mainland China recently. Instructors within the higher education system adopt this model in their lesson planning. And BOPPPS becomes increasingly welcomed into college courses in China in recent five years. Many practical studies on the application of BOPPPS in instructors' typical classrooms have been published lately, but there are still room for a wrapping-up the scope of view that can give a wholistic, inspect, and overview of what happens to BOPPPS model in Chinese's higher education teaching practice[2]. It is given that BOPPPS model has refreshed the traditional teacher-centered idea in typical Chinese classrooms. Instructors, especially those who creatively apply such a model in their online MOOCs courses during the years of breaking-up of COVID-19 in China, have found its effectiveness and positive influence exerted on their students in the long term. Hence, it is of great significance to characterize the model's teaching power and its innovative potentials in its future teaching practice in China[3].

2. The Elucidation of BOPPPS in Chinese Educational Circles

BOPPPS (bridge-in learning objective, pretest, participatory learning, posttest, and summary) is a typical student-centered model teaching model that can improve classroom teaching effectiveness. This is a generally accepted view by most Chinese college instructors. And in most universities, courses are now laying much more importance on students' course satisfaction[4]. Instructors, rather than turning to the traditional teaching approaches in lecturing, now rely much more on effective lesson planning which stress on student-teacher interaction, students' learning initiatives, analytical ability, critical and intercultural thinking abilities, and even their self-study ability is also taken into consideration in teaching structuring under the theoretical guide of BOPPPS within the country, where BOPPPS, with the six elements has been detailed examined and elucidated in papers and studies conducted by concerned professors in recent years, especially during COVID-19, which offers much room for the development BOPPPS model studies and practice in both online or offline courses planning and teaching[5].

The five basic elements stemming from the BOPPPS model have been put into closer examination and experimentation throughout these years. By listing the features and practical lesson planning processes (Table 1), scholars in China gave them a clearly guiding view to make them much popular with instructors who might get interested in its functions.

Table 1. BOPPPS Basic Elements List

Basic elements	Main Teaching Tasks	Teaching Planning Keywords
Bridge-in	Introducing topics Attracting students by rousing interest	Asking "Why?"
Learning Objective	Clarifying teaching and learning objectives and what they can do with what they learn	Who/do What/under What/How well
Pre-test	Pre-testing what students already command	Known/ what
Participatory Learning	Classroom teaching process with activities and guiding students into self-learning	Whether or not
Post-Assessment	Multiple means to test students on how much and how well they learn	How much / how well
Summary	Concluding the learning by doing reflective thinking and leading to next session	—

3. The Application of BOPPPS from a Historical Perspective

To some extent, BOPPPS can not be referred as a brand-new model since it has already attracted scholars' researching interests since 2011. Based on the data from CNKI, the searching result shows that there are 1600 entries with BOPPPS as the keyword. By conducting a thorough research on those papers and studies, we do see a typical developed route for the application of BOPPPS in colleges and universities in China. And several phases can be found in its on-going development when BOPPPS model's application range and profundity are taken into consideration. The three phases are literal label as "the Introductory Period, "the Developing Period" and "Maturing Period" in some papers published by scholars in China[5].

By further probing into the details of its application in Chinese colleges and universities, we may discover a typical BOPPPS route or certain patterns that have been applied in this country with much details that we can collect from CNKI database[6].

3.1. Phase I: the Introductory Period

The BOPPPS model got into Chinese instructors and scholars' eyesight as early as the first decade of the 21st century, when several researchers had noticed the trend of teaching model transformation was appealing teachers' interest and calling for further practice within the country.

The years from 2011 to 2014 saw the arrival of the new model in teaching planning and the uprising of related research papers on such methodology in China. In this preliminary period, there are 5 colleges and universities in China starting to experiment with BOPPPS model. Namely, Beijing Forestry University, China Three Gorges University, Army Engineering, University of PLA, Wenzhou Polytechnic, and Bengbu University had applied BOPPPS teaching model into classrooms for various majors ranging from computer science, 3D graphics courses and college English courses, where different levels of college students had been covered and guided by using then new teaching methods[7].

In those universities, BOPPPS models has been introduced into the instructors' the classroom to tackle prevailing problems in lesson planning such as teacher-centered lecturing, inactivity of students in learning, lack of effective teaching models and methods, to name a few. It was under that circumstance that BOPPPS won the attention from the teaching staff in China's higher education arena[8]. During this period, the related research fanned out its researching scope in how to make the application work in an effective way in a substantial process of teaching and learning, however, because of the lack of experimental data, the BOPPS related studies remained on the theoretical basis.

3.2. Phase II: The Developing Period

The following years after 2015 ushered in the great development of the BOPPPS model and its application and studies in China. There as an eruptive amount of researches during the next two years from 2015 to 2017. Dozens of papers on this teaching methodology have been published. A great deal of college majors began to adopt such models, such as pedagogy, Architecture Design, medical science, Chemistry, and Computer Science. The effectiveness of teaching in the classroom was brought into discussion. "Student-centered" teaching planning started to gain its momentum during that time, together with the uprising of the teaching ideology such as participatory learning and effective teaching planning. The prevailing practice of BOPPPS model of lesson planning began to shift instructors' teaching focus from simple knowledge lecturing to active learning[9]. The objectives of teaching gradually intertwined with the concept of learning objectives, which attached more importance to student-teacher interaction in classrooms. Studies on BOPPPS began to look into the communicative nature of such models. Hence, the combination of flipping classes, online courses, and mobile platform-based courses became a new blended teaching model that were further taken into teaching practice[10].

With the development of technology and the empowerment of the Internet, classrooms began to acquire its supplementary space. Online courses such as MOOCs and Micro Courses became popular at the end of this period when BOPPPS model initiators and advocators in China were anxious to join in the reinnovation of the orignal model by adding teaching techniques and means. A great deal of local universities in China began to seek their own pathway in renewing the model through different types of input of teaching technology.

It is commonly recognized by scholars and teaching practioners that the solidification of classroom teaching design is stressed in this period. Practical teaching should be used flexibly as well as be adapted to its teaching purposes and objectives [11-15].

3.3. Phase III: The Maturing Period

Starting from the year 2017, BOPPPS model develops with the convergence of ever-evolving teaching ideology and technology in China's undergraduate education, which has been the emphasis of higher education. The traditional teacher-student relation in class, which largely relies on teacher-centered teaching modules, is facing constant challenges in college. BOPPPS are now seen as a typical way or key point to carry out to face such challenges to regain the effectiveness of the traditional classroom.

With the popularization of faculty development centers among colleges and universities in China, BOPPPS model was increasingly adopted in teacher training sessions in this typical faculty center. Instructors embraced BOPPPS and enriched it by absorbing multiple teaching methods, such as Cloud Classes, Blended Teaching methods, and flipping teaching modules. And quantity researches and results generated from related experimental data and statistics are also applied in BOPPPS researches in this period. As a result, reflective researches on creative teaching by innovating BOPPPS models have been put forward in teaching practice and even in the field of teacher training.

This period stresses on students' involvement in class. The interaction and positive feedback instantly from students are discovered as the sources of college teachers and instructors' self-awareness and confidence. And from scholar's research review, a new trend towards the empowerment of technology in the further application and exploration of BOPPPS model is under way.

4. The Patterns of the BOPPPS Model Developed in China

4.1. Objective-Oriented and Student-Centered

At its advent in China during the early days, the BOPPPS model was received by most Chinese instructors as it was first taught in Canada during the 1980s. The workshop in lesson planning attached importance or, in other words, shifted its focus to students in the classroom, rather than teachers or lecturers. In most classes, at its early development in China, the teaching objectives became items to be claimed and shown to the students clearly at the very beginning of each class. Teaching sessions were accordingly shaped up and broken into minor parts and many more activities are designed and filled in each part or small session of a class. It was soon found that the basic characteristics of the BOPPPS model, hence, were able to work well to structure a traditional class when instructors sensed the necessity of being student-centered and objective-oriented in lesson planning. And the learning outcome is more effective and complete, and it can reflect the student-centered education teaching concept and its positive impact.

The BOPPPS teaching model (Figure 1) guides teachers to focus on achieving a certain preset teaching goal. The lead-in part, pre-assessment unit, students' participatory learning, post-assessment, and the summary part are closely integrated with the the awareness of goals. Thus, the BOPPPS model modularizes the teaching process and emphasizes the importance of the students' participatory learning.



Figure 1. The BOPPPS Teaching Model

4.2. Blended with Multiple Teaching Models

According to the BOPPPS model, each learning unit should be divided into small phases designated with its basic elements and purposes, with each phase lasting for about 10–15 min and the students concentrating on the objective for the given phase during that time. Teachers can, meanwhile, moderately adjust the order and timing of these six phases according to the requirements of the teaching. Chinese scholars are applying different teaching models in these learning units and phases to see whether they can generate much more advancement in teaching efficiency and learning outcome in class.

Among those different means and models that can be blended or combined into BOPPPS model, Flipping Classroom (FC) and its effect are frequently discussed in China. Some scholars in China keep their probing into the perceptions and effects of implementing the BL-BOPPPS model, that is, Blended Learning and BOPPPS model, on student learning outcomes in specific and well-designed experimental courses. And their studies found that the BL-BOPPPS model (Table 2) could stimulate learners' enthusiasm and interest in the course, in which students' skills, initiative, and motivation in learning are improved, as well as their academic performance, and teaching quality itself were on an increasing scale in the pattern of blended learning (Table 3).

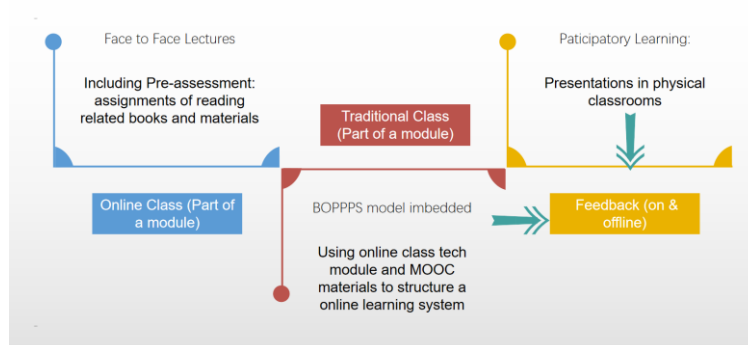


Figure 2. The BL-BOPPPS model

Additionally, some scholars in China attempt to use the BOPPPS model to implement teaching practice in the teaching process. And in those experiments, the teaching effect of BOPPPS model is compared and analyzed through the combination of teaching experiments, which in turn will generate different blended teaching models to light up the teaching effects in the coming years.

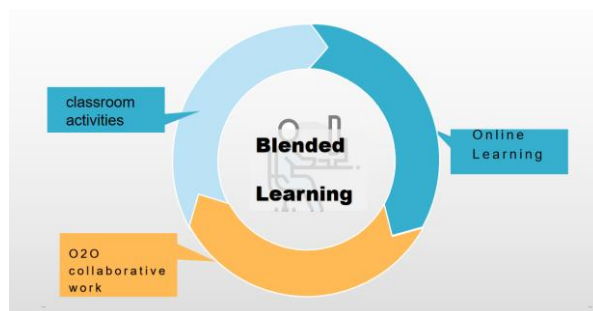


Figure 3. Blended Learning Pattern

4.3. Technology Empowered

With the national innovative of embracing the new technology, namely, the policy of “The internet +”, education and its renovation pathway is shaped with the empowerment of pioneering technology, especially with the development of the Internet, the smart perspective of classroom teaching is emphasized more frequently. The BOPPPS model is, with no exception, a typical teaching model expected to gain more popularity with the combination of newly found and equipped teaching techniques and the means that new technology has to offer. In China, the same level of application and method combination are also taken into closer inspect and experimentation.

Lately, some instructors have tried to use Problem-Based Learning (PBL) in a BOPPPS teaching model in class designing. In English teaching courses, some Chinese scholars probed into the possibility of the combined models of SIOP (Table 2) and BOPPPS; and an increasing majority of college faculties are heading toward the pathway of O2O(online to offline)education, by applying multiple online platforms, such as Zhihuishu, Chaoxin, as well as Wechat groupings to structure their own e-platform as a new online community or cloud classroom to personalize teaching and learning process. It is empirically proved that the application of BOPPPS model in such a creative way, i.e., by annexing to other forms of teaching methods in different phrases or teaching units, can effectively monitor online learning and reinforce students’ personalized learning patterns and self-directed study abilities. A hybrid perspective of different teaching models via various techniques and means, such as SPOC model, tools of O2O, etc. has been brought into the researching sphere in China.

In view of its rigid setting of teaching units, some researchers also pointed out the BOPPPS model has its drawbacks in teaching designing in the adaptation process in Chinese colleges and universities, some scholars argued that it is the empowerment of technology and its variety implication in the development of courses or module planning that instructors in China high education institutions can use the model in a much more effective way, by vitalizing the whole interacting process while avoiding its rigidity in phase-setting as its original version. Thus, Chinese classrooms can enjoy the varied forms and patterns of teaching based on the BOPPPS model.

Table 2. SIOP Model and its Components (Echevarria et al. 2008)

Lesson Preparation	Examines the lesson planning process, including the language and content objectives, the use of supplementary materials, and the meaningfulness of the activities.
Building Background	Focuses on making connections with students' background experiences and prior learning and developing their academic vocabulary.
Comprehensible Input	Considers adjusting teacher speech, modeling academic tasks, and using multimodal techniques to enhance comprehension.
Strategies	Emphasizes teaching learning strategies to students, scaffolding instruction, and promoting higher-order thinking skills.
Interaction	Reminds teachers to encourage elaborated speech and to group students appropriately for language and content development.
Practice/Application	Provides activities to practice and extend language and content learning.
Lesson Delivery	Ensures that teachers present a lesson that meets the planned objectives, promotes students' engagement and paces the lesson appropriately.
Review and Assessment	Considers whether the teacher reviewed the key language and content concepts, assessed student learning, and provided feedback to students on their output.

5. Conclusions

The BOPPPS teaching model is a much more student-centered and practical classroom design model in China higher education. By reviewing its application and development in China and by looking into the patterns of its adaptation in Chinese higher education, it is strongly supported that the BOPPPS teaching model has changed the boring classroom atmosphere in Chinese traditional higher education system. Despite its Canadian origin, the BOPPPS has been viewed and developed in a more combined and renovated way in China. Research on BOPPPS has its own research appeals and favor under the Chinese educational circumstances.

And in the coming future, the BOPPPS should also be an open teaching design model. With the consistent emergence of new teaching methods and techniques, it should not be constrained the rigid order of the six teaching units in the process of teaching, planning and practice. The model itself is open to be transformed, annexed, and judged accordingly by the users and adapters by taking different students, situations and teaching contexts into consideration.

The review itself gives a wholistic and thought-provoking insight into the higher education system in China, hoping to raise a universal awareness of the efficient model and its typical developing pattern that work well in the Chinese cultural and educational context.

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Data Availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

Conflict of Interest

The author states that this article has no conflict of interest.

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