

# The PAD Class - New Wisdom of Chinese Education: A Book Review

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**Abstract.** The PAD Class (Presentation-Assimilation-Discussion), proposed by Professor Zhang Xuexin in Fudan University, is a new paradigm for classroom teaching combining strengths of lecturing and discussion. With half class time allocated for teacher's presentation and the other half for students' discussion, an assimilation stage is inserted between presentation and discussion for independent and individualized learning with a purpose to stimulate the in-depth learning. Taking ground in Chinese philosophy, the paradigm, based on psychological and pedagogical rationales, has earned its effectiveness in enhancing active learning and popularity in China and deserves to be introduced, further analyzed and known by the world for its innovation and contribution to education.

**Keywords:** PAD class, four elements, 4C core abilities, qualitative evaluation.

## INTRODUCTION

People's exploration in education has never ceased in the long history of human development and various teaching theories, models, paradigm and practices have been performed, inspected and validated both home and abroad. School education is the major sector of education. Core to school education is classroom teaching and central to classroom teaching is the teaching paradigm (Michael, 2007). For millions of teachers and students, their everyday behaviors in the classroom, the efficiency and outcomes of their teaching and learning processes, the quality of school education, are prescribed by and contingent on the teaching paradigm (Xuexin, 2017). Lecturing and collaborative learning are the two most influential paradigms.

Across the whole world, classroom teaching in schools has been dominated by the lecturing paradigm for several centuries. Lecturing is mainly a one-way communication that does not involve adequate student participation (Xuexin, 2017). In this paradigm, the teachers' class presentation and the students' after-school learning are two separate processes. The interaction between teachers and students is little and the students accept passively;

students are not self-motivated and learning is not active, so it is hard to train out the students' thinking ability and spirit of exploration. Lecturing achieves systematic knowledge coverage and is very efficient in knowledge transmission. But the problem with it is that students have little control over the learning process and are mainly following the teacher to do imitative learning. Lecturing is a teaching paradigm that suits the industrial era where knowledge needs to be conveyed very efficiently. While in the post-industrial era, education needs to foster key competence such as critical, creative thinking, collaboration, communication and culture (referred to as 5C) (Xuexin, 2017; 2022). It is clear that the lecturing paradigm fails to achieve such goals.

Collaborative learning, a major alternative teaching paradigm, is to introduce discussion in class, increase interactivity and student control and participation in learning. While actually in the real classroom, it is quite too hard to implement. Many students find it difficult to raise questions and the discussion often takes long time. The students do not feel they have learned enough and a lot of time has been wasted in the class. Both the teacher and

students are not satisfied for the class lack of both efficiency and effectiveness.

Classroom teaching is the most important form of learning in society. Comparing the two major teaching paradigms, one can see that neither of the two major teaching paradigms is satisfactory and it is a universal problem that baffles teachers and students in all levels of classroom teaching. Like two poles, the pros of one paradigm are exactly the cons of the other and vice versa. The PAD Class, as a Chinese domestic paradigm, integrates the pros of the two paradigms and removes the cons of them, and has demonstrated its vitality in the past 8 years, especially the concise teaching and leaving blank (referred to as CTLB), prepared peer discussion and strict consideration of homework. These innovations, which the author will explore in the following part, have once more been applied in the author's online teaching practice in the spring semester in 2022 for the sake of the pandemic and have been proved to be effective. This is also why the author has such a strong wish and motivation to write such a book review for *The PAD Class--New Wisdom of Chinese Education*.

### **Operation of the PAD class model**

The PAD class, in Chinese "duifen ketang", is described as the teachers and the students, as two subjects in the class, being allocated their control of teaching and learning in a scientific way with a purpose to construct a real community of teachers and students in order to achieve the maximum value of teaching. In the PAD class, half class time is allocated for teacher's presentation and the other half for students' discussion, and an assimilation stage is inserted between presentation and discussion for independent and individualized learning. After the students' discussion, there is also communication between the teachers and the students, which ensures that the students' questions are solved completely. After class, there is also the arrangement of homework which aims to help the students' to consolidate what they have got from the class and to evaluate their learning. The PAD class is featured with four elements such as: presentation, assimilation, discussion, and communication between the teacher and students, also called Four-element paradigm, a fundamental and inevitable feature in the teaching process, and the order of the four elements should not be inverted.

Just like other classes, in the PAD class, it is advisable for the teacher to get a clear and detailed teaching curriculum, embracing the teaching schedule, learning objectives, contents and activities for each lesson, requirements for homework, attendance, and examinations. Zhang Xuexin holds that it is of great significance to select proper textbooks for the students; selecting proper textbooks is even more important than how to explicate the textbooks. It is a guidance for the teachers to consider how to choose

the textbooks and how to apply the textbooks in a scientific way.

The following is a detailed description of the teaching process of the PAD class.

### **Presentation**

In traditional class, the teachers' presentation is exhaustive and covers all matters. The more detailed the teacher's explanation is, the better. While in PAD Class, the concepts are reverted. The teacher should not teach too systematically, too completely, too exhaustively or too specifically. The principle of presentation in PAD class is concise teaching and leaving, shortened as CTLB (Xuexin, 2014). In PAD Class, the teachers have only half of the original time to teach the same content, so neither the class can be detailed, nor the teacher has enough time to teach lively and interestingly. The teacher can only give concise, guiding and frame presentation, instruct the study objectives as well as the logic structure of chapters, their relevance and relationship with other content and their positions in the whole course. Guiding must be macroscopic. The concise teaching of PAD is telling the students what to learn, why to learn and how to learn on the macroscopic level (Xuexin, 2017). The purpose of giving concise presentation aims to leave more time for students' assimilation and discussion and to lead the students to be well involved.

### **Assimilation**

Assimilation is a stage inserted between teacher's concise presentation and the students' discussion. It consists of two parts. If it is an in-class PAD, in which all teaching steps are finished in class, the assimilation can be finished in the same class; if it is a cross-class one, the assimilation can be finished after class as part of the after-class study. The choice of in-class PAD or cross-class PAD depends on whether there is enough time for the activities in class. The main content of after-class study is reading, reviewing, independent thinking and finishing homework, of which homework is a core step between presentation and discussion as well as the key for success of PAD (Xuexin, 2017). Homework is the most important tongs for implementing PAD in the early stage, so assignment of homework is very crucial. If it is an in-class PAD, the simple homework called "micro-homework" can be assigned; if the time is longer, the students can be asked to do some big or time consuming tasks, such as translating a paragraph, finishing several exercises or writing a short composition, etc. In cross-class PAD, the students have more time for study after class, so the in-depth homework can be assigned. The purpose of homework is guiding and urging the students to review and

explore further after class, ensuring students' understanding of basic content and making preparation for in-depth and meaningful group discussion in next class.

## Discussion

At the beginning of the discussion stage, it is advisable for the teachers to lead the students to briefly review what they have just learned in the class or the content of the previous class and requirements and then to the homework in 1-2 min before starting the discussion. The discussion can be performed in the following 4 steps, first group discussion, and then selective examination by teacher, free questions from the students and summary of teacher as the end of the discussion; the sequence of performance is important and shall not be changed.

First, the group discussion is normally carried out with 4 or 5 students as a group and lasts for 5-20 minutes. The students are required to learn from each other and solve problems together with regard to respective gains, puzzles and problems based on their previous homework, which is called "liang, kao, bang", and the whole class communication happens.

The second step is selective examination by the teachers. In the group discussion, the teachers randomly select 3 to 4 groups, and each group randomly selects one student to stand up and share the essence of the discussion or raise the problems that haven't been solved in the form of peer instruction (Xuexin, 2017).

The third step is that the students are required to face the whole class and start with "our group" to express the viewpoints or problems of their group instead of their own. In the end, the teachers invite the whole class to speak freely and put forward all questions unsolved no matter the questions are from an individual or a group and the teachers give answers, and this procedure takes about 5 minutes.

In the end, the teachers spends several minutes to make simple comments and conclusions and explain the questions omitted by the students with a purpose to deepen and sublimate the questions, and then finish the complete process.

## Dialogue between the teachers and the students

The conversation between the teacher and students and the response from the teacher is so important that Zhang Xuexin treats it as an one of the four elements characterizing the PAD mode of teaching, in which the teacher will briefly summarize the students' performance in the discussion and give further explanation to the left and unsolved questions in this procedure, and guide the students to explore further on the related topic.

## Main content and structure of the book

The PAD Class--New Wisdom of Chinese Education was

first published in December 2017 and had been published for the 4th time in December 2019, which in some sense displays its popularity and wide application. The book gives an overall introduction of the paradigm of the PAD class including its theoretical background and its significance. In the preface to the series of PAD class teaching handbooks and the preface to this book, the author of the book provides a detailed exploration for Chinese education in the new era and also his motivation and inspiration in putting forward the paradigm.

The book consists of eleven chapters. The first and second chapters introduce the historical background of PAD class, its operation and application essentials. The third chapter analyses the changes in the role of teachers and students and the new teaching ecology brought about by the paradigm. The fourth chapter systematically compares the similarities and differences between PAD class and many other traditional teaching reforms, and explains the innovation of PAD class.

The fifth chapter sorts out and reflects the four classical learning theories in educational psychology and the three modern teaching theories in pedagogy, and indicates PAD class has integrated nearly 70 basic teaching principles extracted and based on these theories, and implemented them in its classroom teaching.

In the sixth chapter, starting from the study of the latest "echo argument" theory, the author puts forward the argument of ability domination and concludes knowledge, cognitive ability, skills, attitudes, emotions, values and so on to a universal ability category, providing theoretical basis for the fundamental transition from the traditional knowledge-focus education to the ability education. On the basis of ability-only theory, the author of the book revised Bloom's classical theory, and proposed a new "four-level educational goal taxonomy", which depicts the development process of all ability types of reproduction, understanding, application and creation.

The seventh chapter points out that the concept of independent learning advocated in the educational reform in the field of basic education in recent 20 years is an over-idealized educational concept, which has not been successful in the teaching reform all over the world. Reasonable teaching should be based on a new theory of "progressive autonomy", so that students can gradually move towards autonomy under the full guidance of teachers.

In the eighth chapter, the author of the book points out that in order to give full play to the potential of PAD class, it is needed to carry out major reforms in teaching content, textbook compilation, teaching evaluation, and the balance between teaching and scientific research, etc. On one hand, it will realize the return of higher education to the main function orientation of talent training. On the other hand, it will go out of the misunderstanding of "mass scientific research" in the United States and turn to "elite scientific research" that truly reflects the scientific spirit. Through the open and transparent academic evaluation

mechanism based on the Internet, we can promote academic innovation and "double first-class" construction of universities, and realize the great leap in Chinese science and technology.

In the ninth chapter, Zhang Xuexin points out that China's basic education is superior to the West in educational democracy and ability training, and the root of this superiority lies in China's political system and cultural tradition. China's education and even East Asia have a lack of innovation ability, and it is difficult to solve the "Qian Xuesen's question", which is not unique to China, but a worldwide problem. It is just that the Chinese traditional culture with strong authoritarianism makes this problem more serious. The PAD class can effectively cultivate critical thinking, creative thinking, communication and cooperation ability, provide new ideas for how to implement core literacy in practical teaching, and have important reference value for curriculum reform and new learning reform around the world. The reform of teaching mode brought about by the PAD class will also lead to the reform of examination mode, making the traditional college entrance examination based on paper test move towards a new open "mass college entrance examination" mode based on massive question banks, computer and Internet technology. The PAD class has triggered a reflection on Chinese education, and then on Chinese culture.

Chapter 10 introduces a new point of view, which defines centralization of power, Confucianism, Keju (college entrance examination in Ming and Qing dynasties) and Chinese characters as the core symbols of Chinese traditional culture, and the author of the book believes that they are the "four pillars" supporting China's unified civilization, and the authoritarianism and hierarchical social structure corresponding to the unified civilization inhibiting the free development of human nature and the growth of democracy and scientific spirit to a certain extent. As to the relationship between teachers and students, the idea of dividing the power and responsibility of the classroom provides a new way to properly handle the relationship between authority and individuals, so that the elite and the common people can integrate their wisdom and become a community of development and achieve a fuller and broader democracy in real life.

Chapter 11 summarizes the essence of the PAD class with 40 key points, pointing out that the PAD class is not cooperative learning, autonomous class, flipped class, or MOOCs, but a new thing with hundreds of years of educational wisdom and great creativity. Classroom teaching is the core of school education. The emergence of the PAD class redefines the classroom, and thus redefines many dimensions and categories in the process of education such as teacher-student relationship. The PAD class has truly broken through the traditional educational paradigm corresponding to the era of large industrial production in the world, and provided a new educational paradigm for the postindustrial era, which calls for urgent personalized learning and all-round

development.

### **Innovation of the PAD class**

The major innovation of the PAD class lies in the following aspects:

#### **CTLB**

The PAD class integrates the advantages of both lecturing and discussion, allocating the time in class into two halves. One half is for teacher's concise lecturing and the other half is for students' discussion. The teacher shouldn't cover every details of the class, but present the most important ones to guide, lead and motivate the students to get involved in the learning and explore further. The CTLB helps the students to gain more freedom and control their own learning rhythms and empower their responsibilities at the same time. Both the pedagogy and cognitional psychology tell us that the individual inner stimulus is the key for one's further learning and exploration; the more one achieves in the learning process, the more he wants to endeavor to. The CTLB leaves the students with both time and space for their self-in-depth learning which will be of great necessity for the development and cultivation of their core competences. In online teaching most especially, both the teachers and the students are restricted by time and space, and the condition of the internet. It is a great challenge for the students' self-regulation and self-control. Lecturing all the time in class is really beyond the students and unbearable. Just as Pinde (2020), the professor in Huanan University of Science and Technology, said, online learning in nature is the students' self-learning under the direction of the teachers. The CTLB stimulates the students' inner in-depth development while setting the teachers free from the hard work of exhaustive lecturing. The CTLB is easy to say than done. Only the teachers who have employed it in real class can give the right comment. It is not easy at all as to how to arrange the time and content reasonably in order to achieve desirable teaching result, and it can be applied in every subject and also leaves enough and higher requirement for the teachers to explore on their own course.

#### **Competence oriented**

The PAD class focuses on the cultivation of students' 5C competence by arranging time for assimilation and prepared discussion to help the students well involved. Zhang Xuexin points out that when discussion is used in the classroom, it is typically implemented in the form of "Instant Discussion". The students are asked to discuss on the teaching content immediately after teacher's lecture. This way of operation violates the basic psychological principles of learning: students have not understood the

content that they just heard, and there is no time for thinking and assimilating the knowledge; so it is hard for the students to raise significant questions nor to form specific viewpoints and opinions. That is also why teachers always wonder in the class as to why the students cannot raise their questions. By switching from the “Instant Discussion” to “Delayed Discussion”, the students were given the chance to diagnose what they have learnt, to assimilate the taught content to a certain degree with independent study and thinking, so they may raise new and initiative questions by their own pondering and reflecting. The most critical competences the younger generation should have can only be trained, challenged and motivated and improved in the free and real discussion and argument, where the clash of mind happens. After their independent study, students test, clarify and revise their individual learning outcomes with peers in the group discussion, through collaborative learning, and new problems involving deeper exploration may also occur in this process.

### **Empowering to students**

A deep analysis shows that the PAD class involves theoretical innovation regarding the social relation between teacher and students. The lecturing paradigm over-emphasizes the authority of the teacher while inhabiting the individuality and initiative of the students. In a lecturing classroom, the power of control all goes to the teacher, students are simply followers. The collaborative learning paradigm over-emphasizes the right of the students and consequently brings chaos in learning. In a collaborative learning classroom, the power all goes to the students who are still growing, and they do not have the full ability to exercise the power properly, and inevitably low efficiency occurs in the class. One is too teacher-centered, the other too student-centered and both are seriously flawed. The truth lies somewhere in the middle and the ideal solution is for the teacher and students to share the power.

Essentially, PAD Class reassigns the rights and responsibilities in teaching. It endows the deserved rights to the students, makes them undertake their responsibilities, represents the maximum respect to the students and brings democratic, dialogic, open and free atmosphere to the class, and therefore makes the class more harmonious, comfortable, full of fun and full of vitality. The PAD Class reshapes the power structure in the classroom, changes the social relation between the teacher and students by forming a community of learning.

### **Qualitative assessment**

Evaluation on the class is the premise of education evaluation. While on the traditional class, it is rather difficult

to perform a scientific assessment. For one thing, there is no standard norm to evaluate a teacher's teaching behavior for both the way and style of passing knowledge is personalized. For another, teaching is the input process, and the quality of teacher's teaching may not be equal to the students' learning. The learning result should be judged by the students' output, that is, their learning behaviors. Zhang believes a classroom teaching can only be evaluated when it is one of scientificness and norms. The PAD class possesses a teaching paradigm of the following four elements: presentation, assimilation, discussion and the teachers' answering to the left questions left from the discussion, among which the discussion process makes students' learning behavior explicit which can be relied on to diagnose and judge whether the in-depth learning happens. Zhang proposes a two-pole qualitative assessment on a teacher's classroom teaching efficacy which give high praise to the best teachers and provide more encouragement and push on the backward ones. Every teacher's devotion and exploration to the classroom teaching hopes to be seen. Once the class-room teaching efficacy can be evaluated, the assessment on the teaching will not rely too much on the research papers, and consequently the bottleneck “Five Only” in teaching evaluation can be broken through.

### **Aiming for happy education**

By analyzing the PAD class paradigm, we can find the wisdom hidden in it also lies in that it aims for harmonious and happy education. Both the subjects, the teacher and the students, are respected and stimulated positively in the PAD class. By allocating the time in class and relocate the teaching process, the role of the teachers and students in the teaching process are redefined. The teacher needn't struggle to cover all the details in an exhaustive way, and more responsibility and control of learning given to students fits the fundamental regulation of teaching and learning. The teacher pays more attention to the students' learning process and more respect is given to the students' individuality, and there is more encouragement instead of criticism on students' mistakes, and both needn't be baffled by the scores too much for the adoption of two-pole qualitative assessment. Based on the scientific theoretical background of the PAD class, the teachers can be bravely and confidently opens their class to the public, which will increase more opportunities for the teachers to learn from and interact with other teachers. In the end, the teachers will benefit a lot from this process and achieve greater progress because most of the teachers choose to teach for love, and their devotion and exploration needs to be seen and assured with a positive assessment.

In the perspective of students, Zhang Xuexin holds that one of the major innovations of the PAD paradigm is its decentralization of the so-called elite students and its respect of the so-called backward students. In the usual

classroom, academic performance is considered the single most important criterion and all students are judged in reference with this one dimension. This will inevitably lead to a small number of “bright and excellent” students being praised and modeled after. In the PAD Class, performance is judged on a number of criteria including social skills like communication and collaboration, and more open-ended dimensions such as creative thinking; it deemphasizes the importance of standard answers. This gives all students a room to show their advantages without necessarily having to compare themselves with the few “elite” students. As students are given sufficient time for independent study, females or minority students considered mistakenly as poor in some subject areas (e.g., STEM) can have more preparation time in advance and hence can perform better in the discussion than before with rising self-esteem and learning motivation. PAD Class has no special requirement on the basis, abilities and motivation of the students. Some teachers may think that PAD is not suitable due to the students’ inferior basis, low abilities and insufficient study motivation. However, PAD is well needed to solve this problem for the traditional teaching and cannot achieve favorable effect on this kind of class. It is not to say that PAD cannot be utilized until the students have sound basis, high abilities and strong motivation. Rather, the PAD class is to guide the students to regain the initiative of study while gaining better basis, higher abilities and stronger motivation. The students in the common universities need the initiative badly. The key of success of PAD practice lies in more praise and encouragement to the backward students (Xuexin, 2017). The teachers do not criticize them but resolutely and bravely lower the requirements and the difficulty. The expectation and the requirements to the students shall be fair and reasonable.

In the PAD class, both the teachers and students cooperate happily and harmoniously in the learning community; the situation full of vitality and striving for progress together is hopeful and appealing.

There are also significant innovations in the major steps of the PAD procedure. For example, students’ homework are no longer graded by correctness; the students are not allowed to ask questions until the end of group discussion, and the teachers are required to set teaching by level of learning and use the textbook scientifically, reasonably and creatively. These features all represent major deviations from the classical teaching procedures and contribute to the effectiveness of the new paradigm.

### **Effectiveness of the PAD class**

The PAD Class is easy to learn and use. Since the publication of this book, five years have passed and the PAD class has achieved astonishing results. It has rapidly spread to all provinces in China and even to Benin in Africa (Xuexin, 2017). It has become popular countrywide and

been widely applied in thousands of courses in colleges, universities, middle schools and primary schools, covering disciplines of social science, natural science, etc. It was also enlisted in teacher training programs of the Ministry of Education and Shanghai Board of Education, and it was appointed as a key subject in undergraduate teaching reform of Shanghai Municipality. In basic education, the PAD class also produces many successful cases and is highly approved by numerous teachers and headmasters, and many schools and teachers open their PAD classes live to the public. It is the scientific nature and fitting to the norms that give the teachers enough confidence and courage, and it will stimulate the communication between different schools and enhance both the development of the teachers and schools. As far as the academic teaching research is concerned, teachers, with the PAD Class as research focus, have been granted hundreds of teaching reform projects and published more than three thousands of research papers until 2022. From the analysis of the data obtained from the CNKI, it is found that the annual number of papers relying on projects and the number of papers not relying on projects are increasing year by year. In 2014, there was only one paper with “PAD class”, which did not rely on any project; in 2017, there were 186 papers relying on projects, accounting for 57 % of the total number of annual papers. In 2018, there were 288 papers relying on the project, accounting for 63.2% of the total annual papers. It can be seen that the proportion of the number of papers relying on projects in the total number of papers is increasing year by year, and the growth rate is higher than that of the annual number of papers and the number of papers not relying on projects. The themes of the papers mainly lies in 3 types namely: theoretical research articles, practical articles, and summary and reflection articles. From the analysis of high-frequency keywords, we saw that many scholars have explored and studied PAD in practical teaching, teaching quality and reliability analysis in terms of teaching mode, classroom teaching and teaching reform. Teaching mode, classroom teaching and teaching reform have become the focus of scholarly research. As to the distribution types of core authors, teachers in the colleges and universities took the majority (Lihong, 2021). Until the writing of this paper, there are more than 3300 research papers on PAD class, and there are a series of 17 manual books on the PAD class, and the two-pole qualitative assessment conception has brought new hopes and dreams to the teachers at different levels. The fact that in such a short period of time there can be so many successful cases of the PAD application speaks of its great duplicability, scalability, and wide application.

There have been many rounds of teaching reforms in China in the past 20 years, both in K12 education and in higher education, but teachers and educators are generally not satisfied with the outcomes of such reforms. The extent to which they embrace the PAD Class and speed with which PAD spreads all over the country have no precedent in the history of education in China. This

speaks to the quality of the PAD Class bringing to the course of education as well as its relevance to the present day education reform (Xuexin, 2021).

## CONCLUSION

The PAD class, based on behaviorism, cognitivism, constructionism and humanism and taking ground in Chinese traditional education wisdom, has demonstrated its care and consideration to personality; it is a student-centered class in nature. The author has long wished to write about the book and recommend it for it is the best choice if one wants to understand the PAD class further and better his classroom teaching effect. This book gives both an overview of the detailed and systematic introduction of the PAD class, and its value has been tested in the past five years since its publication.

Just as Zhang Xuexin points out the PAD class, as a novel teaching paradigm, has a very low entry requirement on the equipment of the classroom. The users needn't upgrade their classroom and consequently improve the financial burden, and every teacher no matter what classroom he is in or what subjects he is teaching can employ it in his own class.

## Notes: Five Only

Five Only, referred as only papers, only positions, only professional titles, only education experiences and only awards, is from the notice issued by the Ministry of Education of PRC. Breaking "Five Only" means we should break the restraints of single assessment by adopting more scientific and diverse assessment systems to help the teachers and scholars develop, especially in colleges and universities. Educational evaluation should return to the essence of education, fulfilling the original intention of education and moral education will and should become the primary task of colleges and universities.

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