Exploration on the Reform of Students Oriented Macroeconomics Course

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Abstract—Taking macroeconomics course as the object of research, this paper explores the reform program that fits the new era of college students’ psychological characteristics and their learning patterns from four dimensions of teaching: contents, methods, tools and evaluations. This paper also put forward macroeconomics curriculum resources and construction strategy aiming at improving students’ initiative in learning and cultivating students’ innovative ability.

Keywords—macroeconomics course; sectional classroom; problem-oriented teaching method; teaching team; digital learning method

I. INTRODUCTION

Since the expansion of higher education enrollment in 1999, in order to cope with the rapid decline in the proportion of teachers per student, Chinese colleges and universities have adopted a system of unified syllabus, unified textbooks and unified progress, by letting students “step by step” in order to increase teaching efficiency, and pushing the traditional class teaching system to its limit. However, for college students in the new era, this unified teaching system has become increasingly unsuitable for their development. The Ten-Year Development Plan of Education Informatization (2011-2020) of China puts forward that the future development of education should be guided by the innovation of educational ideas, based on the construction of high-quality educational resources and information-based learning environment, and centered on the innovation of learning methods and educational modes. College students have a strong plasticity. They are in the forefront of the times and the carrier of the future “innovative talents”. At the moment when “national innovation” has become the strongest voice in current China, how to systematically and scientifically cultivate the innovative ability of college students is the most important issue facing every university teacher.

II. CHARACTERISTICS OF MACROECONOMICS COURSE

Macroeconomics is a core course of economics and management. It is the basis of other economics courses and also the compulsory course of entrance examination for postgraduates majoring in economics. Some universities also take it as an optional course for students majoring in science and engineering, humanities and social sciences. The course teaching goal is to enable students to master basic knowledge, establish a global perspective and improve their application ability. Its curriculum features are as follows.

A. Conformity of Abstraction and Reality

Macroeconomics takes the whole national economy as the research object, and studies the determination of the aggregate economic variables and their changing patterns. Through the study of the relationship between the aggregate economic variables, macroeconomics reveals the contradictions in macroeconomic performance, the law of macroeconomic change and the impact of government policies on the national economy, which provides a theoretical basis for the government to make macroeconomic policy. It is an important feature of macroeconomics that both theoretical analysis and policy research are emphasized, and that abstraction and reality are closely combined.

B. Inheritance of History and Contemporary Times

Although the term “macroeconomics” was proposed only in 1933, the idea of macroeconomic operation and management has a long history. The development of the whole discipline is closely related to economic events in historical process. It features the characteristics of theoretical inheritance and innovation of the contemporary times. Every big economic event and the problems that previous theories cannot explain are the starting point for the emergence of new hotspots in the field of macroeconomics. Therefore, unlike other courses, macroeconomics course emphasizes not only the teaching of classical theory, but also should introduce the frontier of economic theory.

C. Theorization and Instrumentality Complement Each Other

In recent decades, macroeconomics is not confined to solving practical problems. Developing analytical tools and establishing theoretical principles have also become the main tasks of macroeconomics. To this end, the requirements of macroeconomics course for students are also gradually increasing. It is necessary for students to have a solid theoretical basis, and also to master the relevant models and tools for the analysis of macroeconomic phenomena, to explain the internal mechanisms and links of various economic variables in reality, and to be able to analyze the causes of various macroeconomic phenomena.
D. Integration of Universality and Characteristics

At present, the teaching content of macroeconomics in colleges and universities is basically based on western economics. However, macroeconomic operation not only has its general pattern, but also has distinct national, regional, political and institutional characteristics. Therefore, this requires students to learn not only the desirability of western economics, but also requires students to realize that western economics is established and developed on the basis of western capitalist economy. When applying to Chinese economy, they must consider the reality of our national conditions and especially the preconditions for the use of various principles. When designing teaching contents, teachers should not only take into account the cultivation of students’ international vision, but also their abilities to digest and absorb economic theory critically and to analyze domestic economic problems in the light of national conditions.

E. Coexistence of Mainstream and Non-Mainstream Theories

There are many schools of macroeconomic theory, which are developing rapidly, showing greater diversity and being influenced by ideology. The development of disciplines is largely driven by disputes among schools. Parkin and Bade (1988) [1] once compared macroeconomics to mountaineering: “Different mountaineering teams climb from different routes, and no mountaineering team has ever seen the peak of the mountain, because it has always been covered by clouds and fog.” Due to the theoretical differentiation, the opinions and suggestions of different schools in policy are likely to be quite different.

III. CONFLICTS BETWEEN STUDENTS’ CHARACTERISTICS AND CURRICULUM CHARACTERISTICS

In the new era, Chinese college students are mainly the “post-95”. Their learning and cognitive features are quite different from those of the “post-80” and even the “post-90” generation. When there are conflicts between learning habits and curriculum characteristics, students are apt to fall into a vicious circle: teaching content and methods cannot cultivate students’ ability of innovative problem solving, and difficult to achieve satisfactory teaching results; poor learning results reduce students’ learning enthusiasm, which further weakens the teaching results. For macroeconomics courses, the following conflicts need special attention.

A. Conflict between “Pragmatism” and Basic Courses

Influenced by pragmatism and the tight job market faced by college students, post-95 students often choose to acquire vocational qualification certificates and prepare for future work in college. More and more students begin to pay little attention to the study of professional courses, and the perception of “getting vocational qualification certificates is better than going to class” prevails. Macroeconomics, as a basic course, is relatively abstract, and there are still many problems in teaching methods [2]. As a result, students are not enthusiastic about theory. Unsolid foundation of basic knowledge limits the studies of follow-up courses.

B. Conflict between Student’s Strong Self-Consciousness and Dullness of Curriculum

Growing up in the information age, “post-95” college students have a strong self-awareness. They need to be constantly stimulated by new information to satisfy their curiosity. Otherwise, they will find studies boring. Teachers’ appearance, whether they are interesting in lectures and other factors are more and more important than the curriculum itself and become the focus of students’ attention. At present, the content of primary macroeconomics course is basically around the determination of national income. The course deals with the short-term determination of national income and policy making. Then it introduces the long-term determination of national income, including the theory of economic growth and business cycle. The curriculum clue is clear, but cases are few. The course emphasizes model deduction and neglects practical application. Students generally believe that teaching content is out of date, which makes them lose interest in textbook.

C. Conflict between Learning and Teaching Methods

With the increase of family income, mobile phones, computers have become the basic supplies for college students. In the network era, almost all post-95 college students have their own online social accounts. It has become normal for them to communicate and express their opinions through friend’s circles and micro-blogs. However, the teaching methods lags behind. Blackboard and PPT are still the main teaching tools. The rich and colorful network is in sharp contrast to the dull black and white textbooks. It is more and more common for students to bow their heads and play mobile phones in class.

D. Conflict between Student’s Short-Term Attention and Teaching Styles

Studies have shown that student’s attention drops to a low ebb after 10 minutes of classroom teaching. After an hours’ lecture, students will forget 50% of the course contents. Macroeconomics is usually taught in three consecutive classes. Especially when new content accounts for a high proportion of the whole class, many students cannot concentrate on all the three classes. Therefore, students often forget the previous content after learning subsequent content, and complain after class that the teaching was ineffective.

E. Conflict between Social Activities of Associations and Study Time

Macroeconomics, as a compulsory course, is generally taught in the first semester or the second semester. For the freshmen who just got away from the exercises-stuffed teaching method and the discipline of their parents, they are apt to have the idea that “high school is so hard, they will be liberated after go to college”. At university, many students will devote most of their time to various kinds of community activities, which virtually replacing the time used for study. When students begin to study professional courses in their senior year, they often find that they have a weak foundation before.
F. Conflict between Curriculum Assessment and Teaching Objectives

The typical test types of macroeconomics course are mainly judgement question, choice question, notional problem and calculation problem. Students often seriously rely on the “highlighting” and rapid learning before examination. Under this circumstance, examinations can only urge students to memorize several basic concepts and principles mechanically, which makes it difficult for them to have a deep understanding of macroeconomic theory and to apply it flexibly.

IV. SUGGESTIONS ON STUDENT-ORIENTED CURRICULUM REFORM

Economics undergraduates will be engaged in a large number of economic activities after graduation, and they need to solve a lot of economic problems. This not only requires students to master a comprehensive professional theoretical knowledge, but also to have the ability to solve practical problems. Therefore, the teaching goal of macroeconomics needs leaps and bounds from “having basic knowledge” to “mastering systematic theory” to “applying theory flexibly”. For this reason, to deal with the above issues, macroeconomics curriculum needs to be student-oriented, and make a systematic reform to achieve innovations of teaching contents, methods, tools and evaluations which complement each other.

A. Reform of Teaching Contents: Stimulating Interests of Active Learning

To stimulate students’ interests of active learning, it’s necessary to clarify the significance of curriculum learning and encouraging students’ learning enthusiasm firstly. Using cases around students’ everyday life to make them realize that macroeconomics is not so far away from them, so as to stimulate their interests in learning macroeconomics courses. Introducing economic news in class to help students understanding the basic concepts and principles of macroeconomics. For example, prices are related to their monthly living expenses; future economic situation is related to the difficulty of finding jobs after they graduate; changes in exchange rates affect the decision of when is it more cost-effective to exchange currency to study abroad.

Secondly, it’s necessary to combine the main course contents with cases in China. Most colleges and universities in China now use the western economics textbook (Macro Part) published by China Renmin University Press [3], while some famous universities mostly use textbook written by Mankiw [4]. Domestic textbooks have systematic advantages, like complete theoretical framework and logical system, but also have the shortcomings that the course contents are not keeping up with the times and the depth of analysis is not enough [5]. In contrast, foreign textbooks have the advantage of openness. By combining the two merits, teachers should use domestic textbooks to help students to master a knowledge system, while use foreign textbooks to help students to develop an international outlook, so as to ensure that students can better develop their ability to understand and apply macroeconomics theory without losing the main line. Teachers should not only recommend some research articles closely related to the curriculum, but also timely supplement the latest economic cases closely related to each part of the teaching content, so as to broaden students’ vision. For example, when explaining the manifestations and causes of inflation, teachers can introduce the case of hyperinflation in Venezuela in 2016. It is a good example to show that an economy with excessive unique industrial structure is easy to encounter economic turbulence when facing external shocks. When it happens, the government facing a huge fiscal deficit will inevitably print money so as to trigger hyperinflation. Through this case, students can “know what inflation is and how it is happened”. When explaining monetary policy, students are recommended to learn the implementation of three rounds of quantitative easing in the United States and their impacts on the economy after the subprime mortgage crisis in 2007, so that students can understand the differences between the latest unconventional monetary policy and traditional monetary policy.

Thirdly, it’s necessary to pay attention to localization of foreign cases. Most of the cases in Mankiw’s textbook are based on data from the United States. When learning macroeconomics, domestic students need not only to know the data of other countries, but also to be familiar with the economic reality of our own country. Therefore, besides explaining foreign cases, students should be encouraged to collect domestic data for case study. In this process, students can not only grasp ways to collect data, but also deepen their understanding of what they have learned in class. By doing so, students can exercise their ability to use western economic theory to solve Chinese problems creatively.

Fourthly, it’s necessary to combine the introduction of macroeconomics development with the explanation of realistic macro-problems. By doing so, students will better understand the limitations, diversity and reality of macroeconomic theory, and be avoid from applying macroeconomics knowledge mechanically. For example, when lecturing the brief history of macroeconomics, teachers can start with the controversy between neoclassical school and Keynesian school as an introduction, and then compare the differences of theoretical viewpoints and policy suggestions between the two schools, so as to let students to understand why policy suggestions of a school are much easier to be adopted by the government in a specific period of time. When teaching economic growth and business cycle theory, teachers can focus on comparing differences of the theoretical basis between the two kinds of problems. For example, economic growth analysis is based on classical and neoclassical theories, while business cycle analysis is based on Keynesian theory, and the corresponding policy recommendations of the two problems are also in line with the theory respectively. The former emphasizes the supply side, while the latter emphasizes the demand management. Based on the above lecturing, teachers can then introduce macroeconomic regulation and control in China, such as the short-term macroeconomic regulation and control which was emphasized in the 1990s. For example, the macroeconomic policy at that time emphasizes the
combination of monetary and fiscal policy to iron out economic fluctuations. It is helpful to let students to know that the theoretical basis of government regulation and control is the IS-LM model and AD-AS model in primary macroeconomic course. After the global economic crisis in 2008, Chinese economic growth has gradually entered a “new normal” stage. Under this background, the theoretical basis of the government regulation and control became “supply-side reform”, which is opposite to Keynesian demand management policy.

Fifthly, it’s necessary to bring research projects into the classroom. For example, when teaching the concept of GDP accounting and pulling effects of three forms of demands on economic growth, I used to first explain to students the differences of expenditure method, production method and income method. After that, I will introduce one of my research project “Research on the Gross Domestic Product of Hangzhou City” to show how to apply different method in different circumstances, and to show reasons for the need to adopt different accounting indicators. Through research back-feeding teaching, the classroom teaching is closer to the practical problems that students may encounter after they work. So that students will have a more thorough understanding of the macroeconomic concept, and the lecture are more popular among them.

B. Reform of Teaching Methods: Improving Classroom Teaching Efficiency

Firstly, it is helpful to adopt a mode of sectional classroom teaching. In limited classroom time, teachers usually have to lecture a large number of new contents. It is difficult for students to absorb so much new information. This will inevitably lead to the loss of new knowledge or replacement of previous knowledge. Therefore, many teachers often explain one concept repeatedly in order to deepen students’ impression. However, this will make the classroom teaching dull. To solve the problem caused by above situation, it is recommended to demonstrate video clips related to the course content during class, such as the cartoon animation of “60-second Economic Exploration”, or the current economic news. After playing the video, teachers can put forward some related questions for students to meditate, and to show reasons for the need to adopt different accounting indicators. Through research back-feeding teaching, the classroom teaching is closer to the practical problems that students may encounter after they work. So that students will have a more thorough understanding of the macroeconomic concept, and the lecture are more popular among them.

Secondly, it is helpful to use problem-oriented teaching method. Teachers can start with the clue of “why - what – how” when introducing new concept. For example, when explaining the concept of GDP, it is convenient to first tell students that GDP is an important indicator representing the aggregate economic volume, and its growth rate is an indicator of measuring economic growth. Then teachers can interpret the concept of GDP and its three accounting methods specifically. At last, teachers can expound the limitations of GDP indicators and the latest research to improve the accounting of GDP, such as “green GDP”, “welfare GDP”, etc.

Another example is the IS-LM model. Since it is easy for student to confuse different effects of different policies on equilibrium output and interest rate, teachers should explain the steps of macroeconomic modeling and analysis before introducing the model. By doing so, students can understand that variables in economic model are divided into exogenous variables and endogenous variables. As exogenous variables, such as economic policy, they will influence endogenous variables, like output and interest rate, through different channels which will produce different effects.

Thirdly, it is helpful to use mode of small class teaching. Most primary macroeconomics courses include the theory of national income determination, the IS-LM model, the AS-AD model, inflation and employment theory, economic growth and business cycle theory. Macroeconomics course is generally limited to 48 class hour, therefore, the average teaching time of each above basic theories is only 6 to 8 hours [6]. If teachers want to introduce case analysis into classroom teaching while guaranteeing the effect of teaching textbook knowledge in such few teaching time, it is necessary to adopt mode of small-class teaching. By doing so, every student can actually participate in the classroom discussion, so as to avoid the “free-rider” problem that happens in large class.

Fourthly, it is helpful to use team teaching method. Some teachers have a deep understanding on western economic theory, some are good at studying China’s social and economic problems, and others are proficient in macroeconomic data and econometric model analysis [7]. Teachers can make full use of their different interests, professional expertise and other resources to form a teaching team, to carry out regular course discussions and share teaching resources. Through undertaking a course by a teaching team, it will integrate a number of classes and direct the teaching content to deepness.

C. Reform of Teaching Tools: Cultivating the Ability of Extracurricular Exploration

Firstly, it is helpful to adopt a seminar-based classroom teaching. Teachers should conduct a survey among student at the beginning of school, so as to find out students’ expectations to the course. Teachers and students can also discuss the teaching content together. After considering the needs of students, teachers can design specific themes for research beforehand and then explain basic theoretical knowledge around the theme. After class, teachers should encourage students to discuss in groups to find out the extracurricular materials and integrate them with the knowledge learned in the classroom. Teachers can then organize students to report their research results and to initiate group debates [7]. Finally, teachers should make comments and summaries, promote good ideas, even guide students to write academic papers for publication. In this process, students’ ability to retrieve and analysis should be emphasized. Through seminar teaching, students can put forward and solve problems independently. They may also acquire pleasure of learning knowledge and solving problems, which will enhance the enthusiasm of active learning afterwards.
Secondly, it is helpful to use digital learning and teaching tools. In consideration of the characteristics of post-95 college students, teachers should energetically use the Internet or other digital means to organize teaching activities, and give students enough self-learning opportunities. For example, teachers can recommend some MOOC (Massive Open Online Courses) websites suitable for self-study of macroeconomics as supplement courses, such as “the Power of Macroeconomics in the Real World” offered by University of California Irvine\(^1\), and “the Principles of Macroeconomics” provided by University of Melbourne\(^2\). Teachers can develop a WeChat Subscription, through which to provide quick quizzes to help students reviewing the course, and recommend regularly news and latest research related to macroeconomic facts. In addition, by making micro-lesson videos, teachers can put the course content that there is no time to explain in the classroom online for teachers and students to share. Teacher can also set up a micro-message group as a “discussion area” for students and teachers to express their ideas in the form of follow-up posts, so as to encourage students to raise questions of interest. Under the collision of views, students’ will take the initiative to fill its own knowledge vacuum, and their ability of critical and innovative thinking will also be improved.

Thirdly, it is helpful to develop a printed version courseware that leaving blanks for students to fill in notes. In addition, by using public mailbox, teachers can distribute courseware to students every time before class so as to set aside sufficient pre-class time for students to preview. By doing so, students can come to class well-prepared, listening class and asking questions with focuses. All above measures will improve the efficiency of students’ classroom learning, and make the network resources seamlessly linked with classroom teaching.

**D. Reform of Assessment Method: Supporting the Effect of Innovative Teaching**

The nature of macroeconomics curriculum requires that its assessment methods must take into account students’ classroom performance, grouping assignments and final exams. In other words, assessment methods should emphasize the learning process. Therefore, teachers should design scientific, reasonable and flexible assessment methods, and adopt a comprehensive evaluation of students’ records from the perspective of improving their ability to acquire knowledge, to use knowledge and to discover knowledge \([8]\). For example, classroom performance assessment should include attendance, answering questions in class and homework after class so as to comprehensively evaluate students’ learning attitude and mastery of the course. As for group performance, it should be evaluated by teacher, group itself and other groups. Besides basic macroeconomic concepts and principles, the final exam should also inspect students’ ability to apply knowledge synthetically. Therefore, it is necessary to increase proportion of subjective questions in examination, like analysis and discussion problems which do not have unified answers.

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\(^2\)https://www.coursera.org/course/macroeconomics

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