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A Reflection on Dr Boyer's *College: The Undergraduate Experience in America* in the Contemporary Chinese Context

In the 1980s, Dr Boyer, President of the Carnegie Foundation for the Advancement of Teaching, Princeton (CFAT), identified eight key issues regarding American undergraduate education in his book *College: The Undergraduate Experience in America*. These issues are worthy of reflection in the context of Chinese undergraduate education today. Undergraduate education is the foundation of higher education, as it not only impacts graduates' careers and lives, but also the quality of postgraduate education. A focus on undergraduate education will therefore enhance the overall quality of Chinese higher education.

Higher education has been developing rapidly in China for more than three decades, since its reform and opening-up, with the gross enrollment rate rising from 3.4% in 1990 (Ministry of Education of the People's Republic of China, 2009) to 24.2% in 2009 (Ministry of Education of the People's Republic of China, 2010). Although Chinese higher education has been popularized, its educational philosophy is still elitist: Postgraduate education is overemphasized in comparison with undergraduate education; research is prioritized while teaching is neglected; undergraduate colleges rush to produce graduates with higher degrees at the expense of the quality and diversity of their students. These tendencies have negative effects on talent cultivation.

When referring to undergraduate education, the book *College: The Undergraduate Experience in America*, written by Ernest L. Boyer in the 1980s, should not be ignored. In its preface, the author identified eight key issues of American undergraduate education: (1) a gap between secondary education and higher education, leading to a disjuncture between faculty expectations and student academic preparation; (2) confused goals leading to a fragmentation of subjects, and a contradiction between vocationalism and liberal education; (3) divided faculty loyalties and intense career competitiveness leading to a conflict

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between research and effective undergraduate teaching; (4) a conflict between conformity and creativity in instruction; (5) academic life on campus in isolation from society; (6) presidents torn between different administrative opinions; (7) a lack of clarity on how to measure the outcomes of college education; (8) a great gap between the campus and the outside world (Boyer, 1987, pp. 2–6). More than 20 years on, these issues still exist in Chinese undergraduate education today.

The disjuncture between secondary and higher education is a conspicuous issue in current Chinese undergraduate education. Under the pressure of university entrance competition, secondary education has failed to free itself from an “examination-orientation.” Therefore, secondary school students prefer learning by rote and exam preparation exercises to independent and creative thought. Consequently, few of them can adapt to campus life, which calls for skills of self-initiated learning and problem solving research. Furthermore, due to the excessive intensity of the secondary school study regime, students usually slack off in their studies on entering university. Therefore, besides laying a solid foundation of professional knowledge for students, higher education should also take responsibility for helping undergraduates to set their life goals, and training their ability to learn and think independently. The transition from secondary to tertiary education should be studied seriously, since it is not only related to reforms of curriculum and teaching methods in secondary education, especially upper-secondary education, but also to reforms of the university entrance examination and evaluation system. It might be unwise for a university to focus only on issues of tertiary level education. Higher institutions should care about and act as leaders in secondary education reform by setting up advanced placement courses and sending faculty to secondary schools, as well as influencing learning methods.

The second issue mentioned by Dr Boyer is confused goals and a contradiction between vocationalism and liberal education. This phenomenon is not uncommon in Chinese undergraduate education. An over-specialized and over-utilitarian trend has long been a problem. However, in recent years, many universities have attached considerable importance to liberal education. For example, in some universities, in order to build a wide knowledge foundation, all students must receive liberal education in the first two years, choosing their major only on entering their third year. Undoubtedly, students benefit from this type of program. However, because of the division in secondary education due to science and liberal arts streams in the university entrance exams, the first two years of general university education do not actually enable the integration of science and liberal arts education. This is still a controversial issue in terms of undergraduate educational goals in China. Some advocate that undergraduates with comprehensive knowledge and abilities will adapt best to the rapidly

changing world and recommend that professional education should be postponed to the graduate level. Also, they argue, broad knowledge helps undergraduates to meet career requirements in a market-oriented economy. Others claim that specialized talents are needed for professional careers because the majority of undergraduates will go directly from university into society. Can undergraduate education be designed to take both needs into account? Strong general education, broad knowledge, and both science and liberal arts foundations are demanded in modern times. However, professional education needs to be enhanced for some highly specialized professions, such as mining and geology, medicine and health, finance and law.

The third issue made by Dr Boyer is also a serious one in Chinese higher education. The criteria for evaluating faculty in universities affects the direction and effectiveness of their work. At present, the evaluation system in Chinese higher education overemphasizes faculty research but neglects undergraduate teaching. As Boyer states, "A paper read at a national convention nets more praise than a splendid lecture to undergraduates. A published article in a prestigious journal or a major book is valued most of all" (Boyer, 1987, p. 122).

This evaluation standard encourages faculty to turn their attention to research and publishing articles and books, but fails to ensure good undergraduate teaching. Universities need scientific research and the creation of new knowledge, but their more important task should be talent cultivation, and this is what differentiates universities from pure research institutions. Scientific research can certainly serve economic and social development, but more importantly, the main function of universities is to transfer scientific research achievements into curricular knowledge, to improve the quality of teaching, and to provide human resources for social development. Only by combining scientific research and teaching can universities be developed in a sustainable way.

The fourth issue, on the conflict between conformity and creativity, is in fact about teaching ideas and methods. In a traditional classroom setting, students listen to lectures about existing knowledge in a conformist manner. As modern science and technology are constantly being updated, students should master methods of exploring new knowledge, not simply absorbing existing knowledge. Therefore, old teaching models need to be abandoned in the modern classroom. Teachers should give full play to student participation and let students learn by themselves and communicate with each other. Only this will ensure that enlightenment and creativity are cultivated. However, the ubiquity of old-style teaching models in current Chinese undergraduate education results in students lacking creativity, despite the advocacy of cultivating students' creativity and practical ability. If the conflict between conformity and creativity is not resolved, it will be difficult to achieve this goal.

The other four issues on higher education management discussed by Dr Boyer

will not be considered in this paper. This paper will instead focus on why universities and colleges should put an emphasis on undergraduate education and how it can be enhanced.

Firstly, the undergraduate period is an independent stage. Currently, only a small percentage of students will go on to pursue a master's degree. The vast majority of undergraduates will enter society as soon as they graduate from colleges and their universities. The quality and effectiveness of undergraduate study is closely related to students' employability and their future prospects. It is wrong to view undergraduate education as simply a preparatory stage for graduate education. Some institutions, in order to fulfill graduate enrollment requirements, encourage students to focus on curricula required for the post-graduate entrance examination while ignoring other courses. This seriously violates the mission of the university and goes against the development of both undergraduates and graduates. Universities, especially research universities, should not just emphasize the importance of graduate education, as this is to the detriment of undergraduate education.

Secondly, undergraduate education is the introductory stage of higher education. The primary content during this period is general curricula and basic theories. One cannot begin study as a graduate without building a professional foundation. Inevitably, the quality of graduates is directly affected by the quality of undergraduates.

Thirdly, besides continuing with some professional courses, graduate students spend most of their time doing research. If one has not laid a solid theoretical foundation at the undergraduate stage, innovation cannot be achieved at the graduate stage. As mentioned above, if undergraduate education is simply seen as a springboard to graduate education, students will not have built a solid foundation, and this will eventually affect their sustainable development as graduates.

Fourthly, the undergraduate period is the most important phase in cultivating students' world view and outlook in life. Undergraduate education should not only focus on students' knowledge foundation, but also on cultivating them to be upright, honest, dedicated and enthusiastic people. It is the responsibility of members of faculty to help students plan their futures and ensure that they develop open-mindedness, will power to overcome obstacles, a sense of responsibility, capability in social communication, and a sense of satisfaction with their current lives.

To enhance the quality of undergraduate education, career and life education should be carried out in universities and colleges. Undergraduates should not only realize their national and social responsibilities, and learn how to communicate and live with others, but should also be able to plan their individual lives taking into account both dreams and focused endeavor. That is to say,

undergraduates should be expected to achieve the four pillars of education: “learning to know,” “learning to do,” “learning to live together” and “learning to be,” which were proposed in the report that International Commission on Education for the 21st Century (1996) submitted to UNESCO.

Secondly, in order to cultivate talent with comprehensive development and individuality, undergraduate courses should be carefully designed to integrate general education and professional education, natural sciences, humanities, and social sciences, theory and practice. Training students' thinking capacities should be a focus. Scientific knowledge is found and acquired in the process of questioning and researching. Therefore, students' capability to identify, analyze, and solving problems should be developed.

Thirdly, well-known professors should give lectures to undergraduates. This is not only because they are more knowledgeable, but also because their personalities and moral profiles will greatly edify students. The magnetism emanating from the knowledge and personality of these professors can have a profound and long-lasting impact on young university students. Undergraduates are eager to interact with these professors upon entering university, and may be disappointed if they do not have such an opportunity. In other words, such professors may be a powerful source of motivation for the students.

It is striking to see how Dr Boyer's insights into American higher education in the 1980s have great relevance for Chinese higher education in the early 21st century. The move to mass higher education has expanded the system enormously over the past decade, but careful attention to secondary education reform, curriculum, pedagogy and the evaluation system for faculty are needed to ensure quality in the all important phase of undergraduate education.

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