

TRANSITION FROM ELITE TO MASS HIGHER EDUCATION IN CHINA

by

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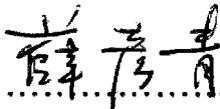
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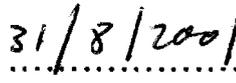
TRANSITION FROM ELITE TO MASS HIGHER EDUCATION IN
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SUMMARY

The research focuses on the strategies for the transition from elite to mass higher education in China. The expansion of Chinese higher education has accelerated since 1998. The Chinese government plans to increase its gross enrolment rate in higher education to 15% by 2010. According to Trow's (1974:63) phase development theories, this increase of enrolment would lead to fundamental changes in higher education. These changes interact with its contextual factors, such as, economy, politics, society et cetera. The research aimed at analyzing this by using both literature study and qualitative inquiry. The Chinese strategies for the transition were preliminarily evaluated. Findings were that people's elite values, shortage of funds and social inequality are major obstacles for the transition. The study revealed that developing non-traditional higher education, among others, is an effective way to overcome these difficulties and to accelerate the transition from elite to mass higher education.

Key words:

CHINA - TRANSITION STRATEGY - EDUCATIONAL REFORM - ELITE
HIGHER EDUCATION - MASS HIGHER EDUCATION

TRANSITION FROM ELITE TO MASS HIGHER EDUCATION IN CHINA

Contents

CHAPTER 1	page
1 INTRODUCTION	1
1.1 The perspective of China	1
1.1.1 The administration of education and the higher education system of China	1
1.1.1.1 Administration of education	1
1.1.1.2 Higher education	1
1.1.2 Chinese economy	3
1.1.3 Chinese society	4
1.2 Problem formulation	5
1.3 Aims	7
1.4 Motivation for the research	8
1.5 Methods	9
1.6 Definitions of terms	10
1.6.1 Educational reform	10
1.6.2 Family planning	11
1.6.3 Gross enrolment rate	12
1.7 Limitations of the research and explanation of language translation	13
1.7.1 Limitations of the research	13
1.7.2 Explanation of language translation	13
1.8 Chapter division	14
1.9 Conclusion	14

CHAPTER 2

2	STRATEGIES FOR THE TRANSITION FROM ELITE TO MASS HIGHER EDUCATION AND ITS CONTEXTUAL FACTORS	16
2.1	Introduction	16
2.2	The transition from elite to mass higher education	18
2.2.1	The concept of elite higher education	18
2.2.2	The concept of mass higher education	19
2.2.3	Usage of the elite-mass-universal access model	22
2.2.4	Other models of higher education development	24
2.2.5	Reasons for the expansion of higher education	26
2.2.6	Diversification	27
2.2.7	Enrollment	30
2.2.8	Curriculum	33
2.2.9	Quantity and quality	35
2.2.10	Dilemmas	37
2.2.11	Conclusion	39
2.3	Economy	40
2.3.1	Employment	43
2.3.2	Funding and fees	45
2.3.2.1	Funding	45
2.3.2.2	Fees	48
2.3.3	Conclusion	50
2.4	Political factors	50
2.4.1	Government policies	51
2.4.2	Equality	53
2.4.3	Conclusion	56
2.5	Society	56
2.5.1	Conclusion	59
2.6	Science and technology	59
2.6.1	Conclusion	61

2.7	Some aspects of the transition from elite to mass higher education in Britain	61
2.7.1	Introduction	61
2.7.2	Process of the transition from elite to mass higher education in Britain	62
2.7.2.1	Conclusion	66
2.7.3	Funding and fee policies in Britain	67
2.7.4	The rise and the fall of British binary system	69
2.7.5	Conclusion	72
2.8	Some aspects of development of higher education in Australia	73
2.8.1	Introduction	73
2.8.2	Process of the transition from elite to mass higher education in Australia	73
2.8.2.1	Conclusion	76
2.8.3	Funding and fees	77
2.8.4	The structural changes in Australia's higher education: the binary system and the Unified National System	79
2.8.5	Conclusion	81
2.9	Strategies for the transition from elite to mass higher education	82
2.9.1	Introduction	82
2.9.2	Strategies in general	83
2.9.3	Equality	86
2.9.4	Diversification	87
2.9.5	Studies	90
2.9.6	Research	92
2.10	Conclusion	93

CHAPTER 3

3	STRATEGIES FOR THE TRANSITION FROM ELITE TO MASS HIGHER EDUCATION AND ITS CONTEXTUAL FACTORS IN CHINA	96
3.1	Introduction	96

3.1.1	History of Chinese higher education	97
3.2	Economy	99
3.2.1	The economic influence on the expansion of Chinese higher education	99
3.2.2	Employment difficulties when higher education expands	101
3.2.3	Funding	104
3.2.4	Fees	107
3.2.5	Conclusion	110
3.3	Political aspects of the expansion of Chinese higher education	110
3.3.1	Conclusion	115
3.4	Social reasons for the expansion of the Chinese higher education system	115
3.4.1	Conclusion	117
3.5	Influence due to the scale and structures of Chinese population	118
3.6	The strategies for transition from elite to mass higher education in China	120
3.6.1	Massification of the Chinese higher education system	120
3.6.1.1	Challenges China faces in massification of its higher education and the debate on the issues	122
3.6.1.2	Conclusion	126
3.6.2	Non-traditional institutions in China	127
3.6.2.1	Higher vocational education	130
3.6.2.2	Adult higher education	132
3.6.2.3	Self-study examination system	136
3.6.2.4	Private higher education	139
3.6.2.5	Conclusion	142
3.6.3	Enrolment	143
3.7	Prospects for the development of higher education in China for the next decade	145
3.8	Conclusion	147

CHAPTER 4

4	THE STRATEGIES FOR THE TRANSITION FROM ELITE TO MASS HIGHER EDUCATION IN CHINA: A QUALITATIVE INQUIRY	149
4.1	Introduction	149
4.2	Qualitative methodology - a theoretical basis	150
4.2.1	General orientation	150
4.2.2	Grounded theory	151
4.2.3	The role of a qualitative researcher	153
4.2.4	Data collection techniques	154
4.2.5	Interviews	155
4.2.6	Analysis of data	157
4.2.7	Presentation of findings	158
4.2.8	Reliability and validity	159
4.3	Choice of the methodology for the present research	160
4.3.1	Qualitative research is suitable for policy research and evaluation	161
4.3.2	Complementary role of the present qualitative study	162
4.3.3	Qualitative research is descriptive	162
4.4	Design of the present study	163
4.4.1	Statement of subjectivity	163
4.4.2	Language	165
4.4.3	Selection of informants	165
4.4.4	Data collection	166
4.4.5	Data analysis	167
4.5	Summary	168
4.6	Presentation and discussion of key themes	168
4.6.1	Introduction	168
4.6.2	Characteristics of informants and background data	169
4.6.2.1	Students	169
4.6.2.2	Teachers	170

4.6.2.3	Parents	171
4.6.2.4	Government official and an academic	172
4.6.2.5	Employers	173
4.6.3	Presentation and discussion of key themes	174
4.6.3.1	Chinese government policies for expanding its higher education and their effects	174
a.	Discussion	177
4.6.3.2	Reasons for the expansion of Chinese higher education	177
a.	Discussion	178
4.6.3.3	Positive influences brought about by the expansion of Chinese higher education	179
a.	Discussion	180
4.6.3.4	Difficulties faced by China to expand its higher education	181
a.	Discussion	183
4.6.3.5	Conflicts caused by the expansion of Chinese higher education and methods to resolve them	183
a.	Discussion	184
4.6.3.6	Enrollment policies for easing the fierce competition and effects of these policies	184
a.	Discussion	187
4.6.3.7	Diversification	187
4.6.3.7.a	Different types of non-traditional higher education systems in China	189
4.6.3.7.b	Reasons that non-traditional institutions are the second choice of students and their parents	190
a.	Discussion	192
4.6.3.8	Employment	192
4.6.3.8.a	Over-qualification	192
4.6.3.8.b	Government policies on employment	195
a.	Discussion	196
4.6.3.9	Funding	197
a.	Discussion	198

4.6.3.10 Fees	198
a. Discussion	202
4.6.3.11 Equality	202
a. Discussion	204
4.7 Conclusion	205

CHAPTER 5

5 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	207
5.1 Introduction	207
5.2 Strategies for the massification of Chinese higher education	208
5.2.1 Summary	208
5.2.2 Conclusion	209
5.2.3 Recommendation	210
5.3 Enrolment policies	210
5.3.1 Summary	210
5.3.2 Conclusion	210
5.3.3 Recommendation	211
5.4 Diversification	211
5.4.1 Summary	211
5.4.2 Conclusion	212
5.4.3 Recommendation	212
5.5 Private higher education	213
5.5.1 Summary	213
5.5.2 Conclusion	213
5.5.3 Recommendation	214
5.6 Higher vocational education	214
5.6.1 Summary	214
5.6.2 Conclusion	215
5.6.3 Recommendation	216
5.7 Funding	216

5.7.1	Summary	216
5.7.2	Conclusion	217
5.7.3	Recommendation	217
5.8	Fees	218
5.8.1	Summary	218
5.8.2	Conclusion	218
5.8.3	Recommendation	219
5.9	Employment	219
5.9.1	Summary	219
5.9.2	Conclusion	220
5.9.3	Recommendation	220
5.10	Equality	221
5.10.1	Summary	221
5.10.2	Conclusion	221
5.10.3	Recommendation	222
5.11	Social factors affecting transition of Chinese higher education	222
5.11.1	Summary	222
5.11.2	Conclusion	223
5.11.3	Recommendation	223
5.12	Suggestions for further research	224
5.13	Conclusion	225
	Bibliography	226

Appendix

List of Tables and Diagrams

Diagram 1.1	The administration of education in China	2
Table 3.1:	1978-1994 indicators of educational expenditures from government (%)	106
Table 3.2	Origin of the fees and living expenses of the students from the families under the poverty lines in 1999 (%)	109
Table 3.3	Educational, social and economic development in some provinces or municipalities in 1996	112
Table 3.4	The composition of university students from different family backgrounds (father's career): Wu's survey in 11 universities in Shannxi province	113
Table 3.5	International comparison of the percentage of governmental expenditure on higher education amongst GNP	123
Table 3.6	Non-traditional higher education system in China in 1999	128
Table 3.7	Numbers of students and institutions in adult higher education in 1999 in China	133
Table 3.8:	Population of the age group of 18-22 years old and estimation of total enrolment in 2010 and average increasing rate of enrolment in the next ten years, providing China realizes its 15% target	146
Table 4.1	Students	170
Table 4.2	Teachers	171
Table 4.3	Parents	171
Table 4.4	Official and Academic	172
Table 4.5	Employers	173

CHAPTER 1

1 INTRODUCTION

1.1 The perspective of China

China is a land of extremes in many respects, including size, climate, population, development and ideology (Lemmer 1995:273). In order to make an investigation into the field of Chinese higher education, it is necessary to understand the Chinese education systems and the contextual factors, especially its economy and society.

1.1.1 The administration of education and the higher education system of China

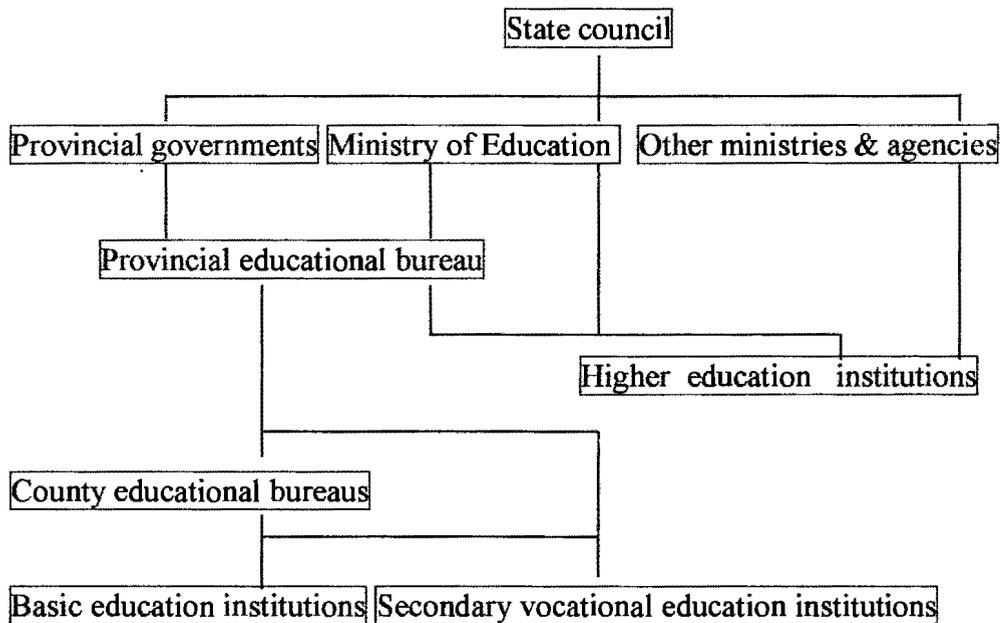
1.1.1.1 Administration of education

China's administrative units are currently based on a three-level system dividing the nation into provinces, counties, and townships (New Star Publishers 1999:65). On the provincial level there are also autonomous regions and municipalities directly under the central government. According to the Chinese Education Law (China 1995, order No.45), education at the secondary school level or lower shall be administered by the local governments. Higher education shall be administered by the State Council and the provincial governments. The Ministry of Education, under the leadership of the State Council, is in charge of educational work throughout the country and undertakes the overall planning, co-ordination and management of education. Under the State Council the different ministries, including the Ministry of Education and national government agencies are also responsible for higher education (cf Diagram 1.1).

1.1.1.2 Higher education

The Chinese higher education system includes traditional higher education institutions, higher vocational education institutions, adult higher education institutions, private

Diagram 1.1 The administration of education in China



Source: Chinese education law (China 1995, order No.45)

institutions and the self-study examination system. In 1999 China had 1071 traditional higher education institutions, with an enrolment of 4,085,874. Traditional higher education institutions offer degree education and non-degree education (Ministry of Education. Department of Development and Planning (DDP) 2000:12).

Adult higher education institutions comprise the second part of the Chinese higher education sector. They consist of the following: radio and television universities, institutions of higher learning for workers and peasants, institutions for administration, education institutions, correspondence colleges, adult education offered by traditional higher institutions (departments of correspondence, evening universities, advanced training classes for teachers) and television education via satellite. In 1998 China had 962 adult higher educational institutions with an enrolment of 2,822,200 (Ministry of Education. Department of International Cooperation and Exchanges (DICE) 2000d:15-16).

As the focus of this research, Chinese higher education is more extensively examined in Chapters 3 and 4.

1.1.2 Chinese economy

China has a long history of economic development. In about 2000 years from the third century BC to the 18th century A.D, China was in the forefront of the world in terms of economic, cultural, scientific and technological development. In the next several hundred years that followed, however, China's social and economic development was extremely slow, owing to the fetters of its feudal system and repeated invasions by foreign powers (Zheng 1999:32).

The economy of pre-modern China was agrarian. The vast majority of the population subsisted in rural areas where they worked small plots as tenant farmers and had to turn over a large portion of their crops to landowners and officials. Although there were urban areas and some large cities, China was industrially underdeveloped at the time of the Communist take-over in 1949. The new Chinese government's main aim was the rapid conversion of agrarian China into a powerful industrial nation (Lemmer 1995:288).

From 1952 to 1998 China's GNP increased to 7939.6 billion yuan, representing a yearly increase of 7.7% at constant prices, much higher than the world average of 3% in the same period. This rapid economic growth greatly narrowed the gap between China and the developed countries. A World Bank estimation in 1997 showed that China's GNP in that year ranked 7th in the world, after the United States, Japan, Germany, France, the United Kingdom and Italy (quoted in Zhai 1999:10).

In 1978 the Third Plenary Session of the Chinese Communist Party's 11th Central Committee, headed by Deng Xiaoping, the late general secretary of the Communist Party, formulated the policies for the development of the socialist modernization, the reform and the opening to the outside world. It was a turning point for the development of

modern China. Since then China has made remarkable strides in economic construction and social development (Hao 1999:33).

The 13th National Congress of the Communist Party of China (CPC) held in 1987, adopted the strategies for Chinese economic development in three stages. The first stage was to double the GNP of 1980 and to end the shortages of food and clothing, which were basically completed by the end of the 1980s. The second stage was to quadruple the GNP of 1980 by the end of the century, which was achieved in 1995, ahead of schedule. Thus the Chinese government adjusted its economic development plan which was to quadruple the per capita GNP of 1980 by 2000, while the population increased by about 300 million over that of 1980. The next stage is to double the GNP of 2000 by 2010 (New Star Publishers 1999:115-116).

Along with the economic development the enrolment of students in traditional higher educational institutions increased to 3,408,800 in 1998 from 625,000 in 1977. The average yearly rate of increase was 8.5%. The enrolment of students in adult higher education institutions increased to 2,822,200 in 1998 from 497,000 in 1980. The average of the yearly rate of increase was 10.3%. The gross enrolment rate in higher education increased to 9.17% in 1997 from 1.4% in 1977 (Zhai 1999:39). The development of higher education has been faster than that of the economy since 1978.

1.1.3 Chinese society

According to the Constitution Act (1982), the People's Republic of China is a socialist country, under the people's democratic dictatorship, led by the working class and based on the alliance of workers and peasants. The ruling party in China is the Communist Party, under the guidance of Marxism-Leninism, the Mao Zedong Thought and the Deng Xiaoping Theory.

A large part of the Chinese people, especially the younger generation are atheists. There are, however, over 100 million followers of various faiths. The main religions are

Buddhism, Islam, Christianity, China's Indigenous Taoism, Shamanism, Eastern Orthodox Christianity and the Naxi people's Dongba religion (New Star Publishers 1999: 47).

The foundations of Chinese society, and moreover education, are the precepts of the Chinese philosophers, the foremost of which was Confucius. Contemporary morality remains based on the Confucian philosophy (Lemmer 1995:289). One of the traditional social ideas is that those who work with their brain, rule, and those who work with their brawn, are ruled (Jin 1990: 150). Therefore, Chinese people view education as an important way of moving to higher social and economic status. As Lemmer (1995:307) indicated, traditionally Chinese parents want their children to become 'dragons', that is, college and university students. When a student is admitted to a university the event is celebrated by the whole village and by the proud parents. Parents are generally willing to do whatever they can, to get their children through school.

It is the researcher's observation that, influenced by market economy and the Western cultures the social values of Chinese people, especially the younger generation, have changed. The factors, such as careers and income, play a more and more important role in pursuing higher education.

In short, traditional values and the demands of modernization are two key factors, influencing parents and their children to make higher education their top priority.

The contextual factors in China are further discussed in Chapter 3 and Chapter 4.

1.2 Problem formulation

Since 1978 China adopted the reform and the open door policy, rapid changes have taken place in many areas, especially in the economy, society and higher education (cf 1.1). The developments of the economy and society provide opportunities and demands for the development of higher education. Zhu, R.J. (1999:25), the Chinese premier, states that,

after the living standards improved, the education of children is the top priority of the Chinese families now. Speeding up educational development is imperative.

The Chinese Ministry of Education (1999b: 4&5) promulgated "The Action Schemes to Vitalize Education Facing the 21st Century" in December 1998. The action plan is a strategic one which aims at accommodating the major issues of educational development and setting targets for educational reforms and developments, for the next five years until 2005 and ten years until 2010. Referring to development of higher education the action plan stipulates that, the gross enrolling rate in higher education institutions must reach 11% by 2000, and about 15% by the end of 2010.

Since the implementation of the action plan, China has started to increase the enrolment in higher education institutions. In 1999 the Chinese traditional higher education institutions enrolled 1.6 million students, 51,000 more than in 1998. The total number of students was 4.15 million, or 10.5% of the age group (18-22 years), 760,000 more than in 1998 (Ji 2000a:16).

Martin Trow (1974:63) was the first scholar to propose the model of phase development of higher education in his paper, namely 'Problems in the Transition from Elite to Mass Higher Education'. He suggests that higher education development can be divided into three different phases. The first phase is elite higher education if the gross enrolment rate is less than about 15%. The second phase is mass higher education if the gross enrolment rate is between about 15%-50%. The third phase is universal higher education if the gross enrolment rate is more than about 50%. According to this theory, China is in the process of the transition from elite to mass higher education.

Expansion of higher education is currently one of the top priorities for the Chinese education authority, and one of the key educational issues debated in China. It has attracted the serious attention of the Chinese society.

Expansion of higher education cannot take place by itself. It interacts with its contextual factors, such as economy, society, politics, population, science and technology (cf 2.2.5). The transition from elite to mass higher education in China is a realistic and complex process which deserves full investigation. The problem of this research is, therefore, formulated as such:

What are the strategies for the transition from elite to mass higher education in China?

The problem can be further subdivided as follows:

1. How does higher education interact with the contextual factors in the process of the transition from elite to mass higher education?
2. How does China reform its higher education to adapt to the transition?
3. What strategies must the Chinese government adopt to resolve the difficulties and conflicts caused by the transition?
4. How effective are these strategies?

1.3 Aims

China is now in the process of transition from elite to mass higher education. The research is designed to investigate the strategies of the transition. In doing so the following aims will guide this research project:

1. Interactions between higher education development and its contextual factors of economy, society, politics, population, science and technology.
2. The policies which the Chinese government has adopted to expand its higher education.

3. The policies which the Chinese government adopts to resolve the difficulties and conflicts caused by the transition.
4. The preliminary evaluations of the effectiveness of the strategies, by qualitative inquiry.

1.4 Motivation for the research

There are three important reasons for the present research to be conducted:

1. The researcher found a large body of research which investigated the transition from elite to mass higher education in developed countries, such as, America, Japan, Britain and other European countries. The literature would be more complete if the theories included some developing countries, especially China which is the largest developing country running the biggest higher education system in the world. The theories from the practices in China may contribute to the integration of the theories on higher education development. Furthermore, the experience of China may have implications for other developing countries which will transform their higher education systems sooner or later.
2. The research aims at obtaining knowledge about the transition of higher education and to understand the interactions of higher education with its contextual factors of economy, society, politics, population, science and technology, in the process of transition.
3. The research may be useful to Chinese policy makers when they make relevant policies in future.

1.5 Methods

The research adopted two major methods. One is a literature study and another is qualitative inquiry.

Literature to be studied includes:

1. Scholarly books and journals in the field of education.
2. The Chinese government documents
3. Historical books
4. Books and journals on the transition of higher education in China, Britain, Australia and other member countries of the Organization of Economic Cooperation and Development (OECD)
5. Legislation and regulations in China
6. Chinese educational newspapers
7. Dictionaries and encyclopedias, and
8. Theses and dissertations.

Literature study is used mainly to examine the strategies for the transition from elite to mass higher education in both China and other countries. The theories on the transition are also reviewed by using the same method.

Qualitative inquiry is used to investigate further the Chinese strategies for the transition, from the angle of informants' perspectives. Furthermore, it was as recent as late 1998 that China formulated policies to speed up the expansion of its higher education. There are few empirical data available to measure the effects of the policies at this stage. It is also too soon to draw any conclusion. In such a case, qualitative research is used to make preliminary evaluations of Chinese policies. The theories, reasons, designs and procedures of the qualitative inquiry used in the present research, are discussed in Chapter 4.

1.6 Definitions of terms

In China educational reform is one of the major themes. The policy of family planning is unique due to the Chinese realities. Finally, the gross enrolment rate is frequently used to indicate the level of higher education development. These three terms are closely related to the problems of the research. It is, therefore, necessary to understand their meanings.

1.6.1 Educational reform

According to Van Schalkwyk (1998:21), defining educational reform is complex, because it is a concept that holds different meanings for different people, and furthermore, all educational reform movements are historically contextualized and grow out of major sociological, political, intellectual, and economic currents (Cookson, Sadovnik & Semel 1992:2). Social reforms usually mean major changes in the economic, social, ideological and political structures of a nation. They usually take place after revolutions or violent political takeovers, but they can also happen more gradually (Fagerlind & Saha 1989:145).

Ginsburg (1991:6) observes that many equilibrium paradigm structural functionalist analyses, in defining educational reform, that the intended or unintended changes (or lack thereof) are necessarily 'for the better'. Popkewitz (1991:1) similarly maintains that the 'common sense' of reform is to assume that intervention is progress. A better world is to evolve as the result of new programs, new technologies and new organizations that increase efficiency, economy and effectiveness.

According to Cookson et al. (1992:4) there are four major theories about educational expansion and reform. Firstly, the evolutionary or neo-evolutionary theory suggests that somehow educational reform and social progress are naturally and positively correlated. Secondly, the modernization theory points out that change and reform should lead to high student participation rates and a standard curriculum that will meet the needs of developing societies. Thirdly, the dependency theory maintains a form of neocolonialism

that allows core countries to remain culturally and economically dominant over periphery countries, without having to resort to overt military occupation. Lastly, the Marxist theory states that true educational reform must aim at creating critical consciousness and help to mobilize the subordinate classes to bring about structural changes.

Fagerlind and Saha (1989:145) conclude that educational reform refers to a thorough change in the structure of the education system of a country. It means a fundamental alteration in national education policies. The aims of education reforms are to improve the quality of all citizens, to produce more educated people and more talents (Central Committee of Communist Party of China (CPC) 1985).

1.6.2 Family planning

After the founding of socialist China, the Chinese population increased dramatically. In order to slow the population growth China began to promote family planning in 1973. The main contents of the current family planning policy in China are as follows: advocating delayed marriage, delayed child bearing, fewer and healthier births; and advocating one child for one couple. Some rural couples with actual difficulties are allowed to give birth to a second child a few years after the birth of the first child (State Council. Information Office 1995:17). Due to differences of social and economic development, and population situations, there are practical differences in the family planning policy between urban and rural areas, and between the Han (major nationality) and the ethnic minorities, i.e. the policy for the rural areas and ethnic nationalities are more flexible than that for urban areas and the Han nationality (the majority) (New Star Publishers 1999:36).

After adopting the family planning policy the growth of population obviously reduced. From 1970 to 1994 the birth rate decreased to 17.7 per thousand from 33.43 per thousand; the increasing rate of the population decreased to 11.21 per thousand from 25.83 per thousand (State Family Planning Commission 1995:2). In 1990, the total fertility rate of women of the non-agricultural population in China's urban localities dropped to 1.26. In

the countryside, the total fertility birth rate of women was 2.8 (State Council. Information Office 1995:18).

1.6.3 Gross enrolment rate

According to United Nations Educational, Scientific and Cultural Organization (UNESCO) (1997:2.27-2.28), a gross enrolment rate for a given level of education, is derived by dividing the total enrolment for this level of education, regardless of age, by the population of the age group which according to national regulations, should be enrolled at this level. For higher education, a standard duration of five years following the end of secondary general education is used for all countries. According to the Chinese education system, the age group in China is from 18 to 22 years old (Zhang, L. 2001:43).

The gross enrolment rate for higher education is widely used internationally. It is a useful indicator which reflects the degree of opportunity of receiving higher education by the citizens of one country. It is also useful for comparing the higher education development levels between different countries (Ji 1999b:29).

But the gross enrolment rate is a very rough indicator since it does not take into account either the age distribution of the students or variations in the average length of study. But they are still used frequently for purposes of comparison (Pellegrin 1974b:23; Clancy 1996:358).

Another indicator for measuring enrolment, is the net enrolment rate. It is calculated by using only that part of the enrolment which corresponds to the age group of the level considered (UNESCO 1997:3.74). It seems that the use of the net enrolment rate is not as popular as gross enrolment rate in the discussions on massification.

1.7 Limitations of the research and explanation of language translation

1.7.1 Limitations of the research

The small sample size selected by judgement sampling, typical of the qualitative tradition (Lemmer 1989:14), is an obvious limitation. The data collected is of limited predictive value. However, the research using qualitative research method, is designed to be exploratory and descriptive in nature, and attempts were made neither to generalize or quantify the findings, nor to support or refute hypotheses (cf 4.2.1).

As the research was mainly conducted in South Africa, the lack of literature on China and its higher education is another limitation.

The research is focused on the mainland of the People's Republic of China (Mainland China), excluding Hong Kong, Macao and Taiwan as the education systems in these regions are run separately from that in mainland China. The names of China or the People's Republic of China used in this research, therefore, refer to Mainland China, with exception of otherwise stated.

1.7.2 Explanation of language translation

As the research is focused on China, the main body of data in the research is derived from literature and theories written in Chinese. In these cases, English translations made by the researcher, are used in the text for the reason of continuation of the investigations. Pinyin, the Chinese official phonetics writing system, is used for Chinese names. Both Pinyin and English translations made by the researcher, are used in the bibliography for Chinese literature.

1.8 Chapter division

Chapter 2 presents a theoretical review of the transition from elite to mass higher education and its contextual factors, such as economy, society, politics, science and technology. Two case studies are conducted to examine British and Australian transitions from elite to mass higher education.

Chapter 3 centers on examining the strategies for the transition from elite to mass higher education in China, the realities of the higher education and its contextual factors in China.

Chapter 4 contains further investigations into the Chinese strategies of the transition and preliminary evaluations of these strategies, by using the qualitative method.

The summary, conclusions and recommendations are made in the final chapter or Chapter 5. Suggestions for further research are also given in this chapter.

1.9 Conclusion

In this chapter, the Chinese education system and its contextual factors are discussed. The strategies for the Chinese education transition are identified as the research problem. Literature study and qualitative inquiry are methods used in the study. The aims and motivations are also clarified.

China is now geared to expand its higher education, which is influenced by its economic and social development. The expansion of enrolment could lead to the fundamental transition of the Chinese higher education from one stage to another. This transition brought about by multiple forces, could cause plural changes. It is a complex phenomenon. Therefore, it deserves thorough examination.

Before discussing the Chinese realities, the general theories on the massification of higher education, as well as British and Australian experiences are reviewed in the next chapter.

CHAPTER 2

2 STRATEGIES FOR THE TRANSITION FROM ELITE TO MASS HIGHER EDUCATION AND ITS CONTEXTUAL FACTORS

2.1 Introduction

This chapter presents a theoretical review on transition from elite to mass higher education and its contextual factors, such as economy, politics, society, science and technology.

The aims of this chapter are to investigate thoroughly the concepts of both elite and mass higher education; to discuss the policies adopted in mass higher education; to examine the relations between massification and its contextual factors; and lastly, to scrutinize the strategies for transition from elite to mass higher education.

Before one can examine the strategies for the transition in China, it is necessary to study the experiences of other countries such as Britain, Australia and other OECD countries. These countries have already realized their massification. The literature from these countries' experiences will be scrutinized. As China is in the process of massification, Chinese scholars' views on the subject will also be discussed in this chapter. Through these reviews, the researcher will get a better insight of the expansion of higher education, and also find out the reasons, consequences, dilemmas, and most importantly the strategies which other countries utilized to deal with the complex phenomenon of the transition from elite to mass higher education. In spite of some unique features in China, such theoretical studies are relevant and necessary, as argued by Scott (1995:IX), seeing that mass higher education is a much wider phenomenon beyond the borders of countries. The higher education systems in all developed countries are being transformed by the same pressures and in similar ways.

Secondly, the strengths and weaknesses of any educational enterprise cannot be properly assessed, nor can the future of education be rationally planned, unless one takes into

account the major contextual forces which influence education and shape its future (Coombs 1985:9). The major changes in society and the structure of its economy, the shifts in intellectual culture and in science and technology, are integral parts of the story of mass higher education (Scott 1995:IX). Thus, when examining the expansion of higher education the researcher will have to analyze the economic, political, societal, scientific and technical factors as these forces are most likely to influence the process of massification in one way or another.

Furthermore, the interaction of higher education with its contextual factors is complicated and multi-faceted. This research will focus only on those factors which are closely related to the transition from elite to mass higher education.

Population is another contextual factor, but there appeared to be a lack of discussion on this issue in the literature the researcher reviewed. The reason as Trow (1979:210) explains, is not because it is unimportant, but just because it is more or less known. The issue of population may have different influences on the transition in China, and, therefore, deserves examination which will be done in later chapters.

The rapid expansion of higher education in OECD countries, has been taking place since the end of the Second World War. There are many causes behind the expansion and many public debates about higher education policies (OECD 1983:3). Many Western academics have studied the issues since then, such as in the 1960s, 1970s, 1980s and so on. For instance, the phase development model of elite - mass - universal access to higher education itself, was raised in the 1970s (Trow 1974:63). It seems inevitable that the theories developed in these time periods, will be used in this research.

Before the in-depth inquiry into the problems on which this research focuses, the concepts of elite and mass higher education as well as the policies for the transition, will be scrutinized in the next section.

2.2 The transition from elite to mass higher education

2.2.1 The concept of elite higher education

According to the Dictionary of Education (1973, s.v. 'elite') and the International Dictionary of Education (1977, s.v. 'elite'), elite means a select sub-group which is considered to be superior in one or more ways to the large general group of which it is a part. Elite also means a group in society, which holds positions of power, status and leadership through certain activities or attributes of privileged birth or education, and whose ranks provide future holders of high office or high status.

Elite higher education, in contrast to mass higher education, is a system of higher education based on a restricted number of students and high entry qualifications (International Dictionary of Education 1977, s.v. 'elite higher education').

Newman (1996:ix & xiv-xv) defines, in his famous 'The Idea of a University' which was originally published in 1899, that a university is a place for teaching universal knowledge. Such a university should provide liberal learning, rather than vocational or professional instruction. The purpose of a university education is the achievement of a particular expansion of outlook, turn of mind, habit of thought, and capacity for social and civic interaction. In short, the university produces, through liberal learning, the person Newman describes as the Gentleman. These may be the typical expression of an elite university.

An elite university is a place for doing research work and academic activities as its top priority. The academic quality is likely to be regarded as the standard for judging the quality of the institutions (Guo 1999:29). It tends to train people for the elite professions (medicine, law and the church) (Barnett 1990:66). It is loosely linked to production and the local community. It contributes to the development of the best that has been thought and known. Those traditions of thought and experience can contribute most to people's potential for knowledge, expressiveness and self-understanding, instead of skill or

applied science (O'Hear 1989:22). An elite university tends to ask students to adapt to the traditional ways of learning and traditional curricula (Zhang, Y.Q. 2000:56).

Trow (1976:355 & 358; 1974:65) contends that elite higher education institutions are relatively small in size. Their functions are the preparation of the elite for polity and the learned professions. Their emphases are on the transmission of a general culture and lifestyle. Students ordinarily enter directly after completion of secondary schooling. These students may come from all social classes, but in very different proportions. Elite studies look at those at the top of particular professions. These studies are most problematic in the business world, for they usually look at bankers, chairmen or company directors, and rarely at professional managers, or the entrepreneurs who run small businesses and family firms which are so large a part of the economy (Anderson 1992:47-48).

After the above discussions, we may conclude that a typical elite higher education system has the following characteristics: a small number of participation; strict selection which discourages students from lower classes; monopoly in terms of teaching and learning; the educational idea of transferring general knowledge rather than skill training; close linkage between qualification and the profession with high social status.

These characteristics of elite higher education are in contrast with those of mass high education which will be investigated in the next paragraph.

2.2.2 The concept of mass higher education

According to the International Dictionary of Education (1977, s.v. 'mass education' & 'mass higher education'), mass education is the provision of publicly maintained education for all children or education in large groups or classes. Mass higher education is based on large numbers of students and freely available university or college places, as in open access or open admission policies. It is in contrast to elite higher education.

The term mass, as applied to education, developed after World War I and was not generally used in relation to higher education until after World War II. Provisions for mass education began in Massachusetts in 1642 and in Scotland in 1660, with relevant Acts. But both of them were not implemented effectively. A century later, in Prussia, Frederick the Great's Landschulreglement in 1763, initiated compulsory education. Mass education dates from then onwards (International Encyclopedia of Higher Education 1978, v.s. 'mass higher education').

America was the first country to have expanded its higher education to the mass stage. After the Second World War, there was a strong sense that the postwar era would demand more from universities. In order to reward the veterans of the Second World War and the Korean War, the American Congress passed the G.I. Bill. According to this bill the Veterans Administration paid the tuition for almost half the male college students in 1947-1948. The number of college students increased rapidly. Furthermore, the enrolment was also driven by other forces: a new awareness of the value of college degrees and the prospect of sustaining the ambitions of an expanding middle class. Because of these reasons the rate of the rise in college enrollment kept accelerating (Bender 1997:9). Under such a backdrop Martin Trow (quoted in Xie 2000:10), professor at Berkeley, put forth the term of mass higher education in 1962, to describe the great expansion of American higher education.

According to Guo (1999:29), mass higher education emphasizes more the application of knowledge as well as the link between education and the economy. It trains students to have the knowledge and ability to meet the demands of the local community. One of the characteristics of a mass system, is the diversity in terms of the levels, contents, methods and forms of the training, also the kinds of institutions (Yuan 1999:160). Mass higher education does not exclude elite institutions. They can co-exist to provide different services to meet different demands by society (Zhang, Y.Q. 2000:56).

Mass higher education tends to create new methodology and new curricula to meet the demands from different clientele (Zhang, Y.Q. 2000:56). Daniel (1992:116) describes

the features of mass higher education in North America as instructive. There is a choice of 60 different approaches. 50 US states and ten Canadian provinces are each responsible for education in their own jurisdiction. There are differences of emphasis, scale and support, but there are many features in common and these define what the North American mass higher education system is all about.

The most important features of the mass higher education systems are a less close linkage between qualifications and professions, permeability between disciplines, diversity in terms of studies and teaching, and the shift from closed to open intellectual systems (Scott 1995:10, 169 & 176).

Wang, Y.J. (1999:157) observes that along with the transition from elite to mass higher education in many developed countries, the functions of universities in these countries have changed from merely teaching to an integration of teaching, research and service to society.

Mass higher education is closely related to the economy and social demands. As Tang (2000:59) describes a mass system can be formed when a country's economic development reaches a certain level at which the government has the potential to fund such a mass system, and when there is increasing demand for higher education from both society and individuals.

Politically, the development of mass higher education was designed to improve the social equality in many developed countries, such as OECD countries. But, it was frequently found that the mass higher education did not reduce the inequality as much as expected. But it improved the general level of education, and thus promoted social and economic development (Zhang, Y.Q. 2000:55).

Mass higher education is also different from elite higher education in other facets, such as: admission, curriculum, quality, diversification, etc. These are examined later in this chapter (cf 2.2.6, 2.2.7, 2.2.8 & 2.2.9).

In conclusion, mass higher education grows from elite education, but it is in contrast with the elite in many ways. Mass higher education has a larger participation with regard to quantity as well as a high degree of diversity in quality. It is much more involved in society, while its service function becomes more and more important. In short, mass higher education is a new form of higher education and an inseparable part of modernization.

The development of mass higher education is a part of the transformation of the whole society. It is believed that higher education can develop from one stage (the elite) to the next stage (the mass). This phase development model is closely related to the present research, and is therefore discussed in the ensuing section.

2.2.3 Usage of the elite-mass-universal access model

Martin Trow (1974:61 & 63) was the first to propose the phase development model of elite-mass-universal access to higher education. According to his theory, if the gross higher education enrolment rate in one country, is less than about 15%, the higher education of that country is in the elite phase. If the rate is between about 15% to 50%, the higher education is in the mass phase because, at the point of about 15%, the system begins to change its character. If the rate is more than 50%, the higher education is in the universal-accessing phase because the system again creates new forms of higher education. He further argues, that mass higher education differs from elite higher education not only quantitatively but also qualitatively (cf 2.2.1 & 2.2.2).

Lingard, Bartlett, Knight, Porter and Rizvi (1994:5) claim that Trow's elite-mass-universal access model is largely arbitrary. It is the researcher's view that the turning points of the rates (15% or 50%) have not been duly justified. Additionally, this model was developed from the experiences of higher education development in the United States. Is the model accurate when we analyze the development of higher education in other countries?

International experiences show that mass higher education differs from country to country. Geiger (1979:5) states that the transition from elite to mass higher education has led to a complete restructuring of the predominant sector of higher education in France, which conforms to Trow's model. But Belgium, however, has made this transition without significant alternations in the basic structure of its institutions. Fang (2000:121) also observes, that Canada and America rapidly further developed to the phase of universal access after they had realized the transition to mass higher education. But in Japan, the gross enrolment rate remains at the mass stage level of about 31%, though the per capita GNP in Japan is higher than that of Canada and America. The gross enrolment rates in large parts of European countries remain at less than 40%.

Although Trow's model is imperfect, it still provides us with a way of raising questions in comparative context. The model has at least two broad uses. The first is historically orientated: it predicts developments in national systems over time, based on a phaseology, and on assumptions about changes, and the consequences of changes both inside and outside educational institutions. The second use illuminates the relationships between parts and elements of the systems and institutions (Trow 1979:216).

Lingard et al. (1994:5) observe that Trow's elite-mass-universal access mode is commonly used to classify developments in the higher education system of a nation. Scott (1995:XI) similarly claims that the idea of an elite-mass paradigm shift has become the standard account of how higher education systems develop. For instance, until late 1980s, British politics and public figures used the expression 'mass higher education' with apologies, embarrassment or distaste. By mid-1990s, however, it was already a term of political currency (Daniel 1993:197).

The Organization of Economic Co-operation and Development (OECD) (1983:75) also claims that Trow's model was no doubt extremely useful as a framework for the study of higher education systems in two different ways. One is in a comparative perspective and

another is in providing a basis for a more global and coherent analysis of a variety of dimensions within the field of higher education which are often treated in isolation.

In conclusion, it seems that Trow's phase development model is not necessarily accurate when describing the development in every specific country, but it does provide a tool to investigate the complicated development of a higher education system. It is for such a reason that the researcher was convinced to use the elite-mass-universal access model as an approach to inquiry into the development of higher education in China.

2.2.4 Other models of higher education development

Apart from Trow's phase development model there are also other models or approaches, used to analyze the development of higher education, which deserve a brief description.

One of these models is a chronological method which divides the whole span of the development of higher education into different phases. For example, McCollow and Knight (1993:9) use such a method to examine Australian higher education. They divide the history of Australian higher education into three periods: the period up to the Second World War, the post-war boom period lasting to the mid 1970s, and the post-boom period with radical changes since then.

Fulton (1991:589) similarly examines the British expansion of higher education chronologically in three time periods, in the context of broad social, economic and political change. The first, from 1945 to 1970, was marked by consolidation, increased government support, growth in numbers of institutions and students, and a broad consensus around the desirability of expansion. The second, from 1970 to 1987, was marked by political hostility and, until 1983, stagnation in the rates of demand for places by students and for graduates by employers. The third period, from 1987, suggests that Britain is committing itself, whether deliberately or not, to a system of mass higher education with a series of radical changes, especially in relationships between government and higher education.

While accepting the concepts of elite-mass-universal access higher education Scott (1995:35) further proposes four models of mass higher education as follows: dual system, binary system, unified system and stratified system.

Teichler (1988:29-31 & 98) creates two sets of models: the diversified model and the integrated model, to discuss the structure of mass higher education in some OECD countries. But as Teichler himself admits, the 'success stories' of the two models are not necessarily very impressive, compared with Trow's model of elite-mass-universal access to higher education. Furthermore, he also proposes four other models, namely, the elitist model, the vertical model, the unitary model and the model of 'recurrent education'.

As a tool for the analysis of different types of reform, Hayrynen (1979:173) advances four university models which represent entirely different climates of teaching and research. These are: technocratic, polytechnical-democratic, mass university and the Neo-classical, in a matrix according to internal quality or creativity and a connection with external demands or reaction to environment.

Shen (1994:1) uses a model, namely 'pendulum pattern', to investigate the Chinese higher education system. He shows that the Chinese policies on higher education were changed from one side to another by the radical political group on one hand, and the moderate political group on the other hand. These two political groups have their own backgrounds, goals, resources and strategies. Therefore, they followed different policies which made higher education develop in different ways.

In the researcher's view, the above mentioned chronological methods may be useful when investigating the development of a single country. Due to the different pace of development in different countries, these methods may, however, not be workable, when a study involves more than one country or the comparisons between different countries are required. These methods may, therefore, not be ideal ones to study massification

which is such a worldwide phenomenon. The other models seem to be more useful when they are used to discuss a concrete problem in higher education systems.

Massification of higher education is an international trend in modern times. The reasons for such developments will be examined in the next section.

2.2.5 Reasons for the expansion of higher education

In the 20th century, higher education in many countries achieved a great expansion along with the industrialization, rapid development of science and technology and radical changes of society (Wang, Y.J. 1999:157).

Reasons for the expansion of the higher education structure are multiple: the demands of economic development for more educated people (De Rudder 1994:208); the growth of new and semi-professions linked to the expansion of the service sector (Hayrynen 1979:177); increasing the opportunities for the employment of youngsters (Wen 1999:32); and above all, the rise of living standards in the whole population (Hao & Tan 1997:147).

Clancy (1996:362) observes that while considerations of economic growth and technological development have been the main forces behind the unprecedented expansion of post-compulsory education in recent decades, social justice considerations have also been important in legitimating this expansion. It was hoped that the expansion of education would facilitate the achievement of greater equality of opportunity, reflecting a happy coincidence between social and economic objectives. De Rudder (1994:208) also argues that governments tend to expand higher education to promote social equality in the education system.

Many students go to higher education because of the expectation of higher income, higher social status, job security, collective preferences and consumer behaviour with regard to the 'superior' service represented by higher education (Dougherty 1997:67). Pellegrin (1974b:27-28) makes an additional observation, that the economic growth and

the increasing societal wealth make it possible to conceive of higher education as a means of cultural enrichment.

Geiger (1979:2) claims that the great expansion of higher education was nowhere planned, or even fully anticipated. It sprang from individual desire for social betterment which was itself the product of profound and remote social forces.

Teichler (1988:24) adds that the expansion of science, conceived of as a totality of theories, methods and systematic knowledge, also promotes the development of higher education.

Pellegrin (1974b:27) finally claims, that then compulsory schooling is lengthened, a mass of people are forced into preparation for higher education, regardless of their demand for it. Clancy (1996:360) similarly observes that the most proximate influence on higher education admission rates, is the supply of qualified school-leavers.

In short, reasons for the expansion of higher education are multiple. They are economic, social, political, scientific and educational. So many forces behind the expansion make the process of massification complicated and unpredictable. Higher education has no choice but to diversify itself to meet plural requirements by different clientele. Such diversification is the key characteristic of a mass system. It is necessary to be further examined.

2.2.6 Diversification

According to Meek and Wood (1997:266), mass higher education must have diversity, as it is through diversity that both the range of choices for students and the accessibility to higher education for many different clientele groups, are increased. Diversity is also perceived to ensure that higher education is not only more responsive to the varying needs and abilities of students but also allows for specialization within the system. Diversification of higher education in a mass system includes the diversified institutions

and student origins, different methodology and meeting different demands (Tang & Yin 1999:65). It also composes different funding resources. Apart from governmental funds, seeking other resources is an effective way to support continuing expansion of higher education (Yuan 1999:160).

In the mass higher education system, there is evidence of a trend towards more professionally orientated education courses to improve the job prospects of young graduates entering the labour market. This trend contributes to the development of non-traditional institutions, alongside the traditional universities which are orientated more towards research and academic subjects. Higher education systems are therefore becoming more fragmented (Leroux 1997:118).

Cerych, Furth & Papadopoulos (1974:35) speaks highly of diversification which is advocated as a remedy to almost every problem faced by the expansion of higher education systems, whether in the field of curriculum reform, methods of study, degree structure, organization of courses or the institutional framework. It is also the way to establish more individualized and student-centered education. The main challenge for the diversification may be how to avoid a new split between 'noble' traditional and 'less noble' non-traditional patterns of higher education.

Mass higher education is diversified to meet different demands by different students. It is student-centered education. Daniel (1992:116) describes vividly how Canadians call going to university 'going to school', which itself reveals how much more it is seen as a continuum with their earlier education. They 'go to school' at one university knowing that if it is not a good fit for them, they can try another in the following year. If they find a summer job so appealing that they decide to stick with it instead of returning to full-time study, they can continue to build up credits part-time.

Yuan (1999:160-161) notes that in the 21st century, lifelong learning, especially part-time studies, is an international trend. The traditional one-time study no longer adapts to the social and economic development. Learning will accompany people during their

whole life. Li, Y. (2000:136) similarly states that education systems have been undertaking radical changes in many countries in today's world. Mature and part-time student numbers are increasing. Higher education is becoming more and more flexible and open. Distance education and open universities are accepted by more and more people.

The concept of lifelong learning as part of the educational process equips men and women to build on and enhance their skills, knowledge and understanding over many decades. Despite some of the scepticism, lifelong learning has maintained a persistent hold on educational philosophy (Candy & Crebert 1991:4).

McConnell (1973:25 & 28) further states that one possible consequence of the diminution of the social and economic rewards for graduates is for students to turn to different kinds of education to broaden their knowledge.

Mass higher education includes, among others, the elite form due to its characteristics of the diversity. Trow (1976:376) observes that modern systems of higher education must take into account the broad diversity of student interests and social functions. This requires a parallel diversity in the forms of higher education. Elite higher education is a part of that diversity.

In conclusion, diversification is the key feature of mass higher education. Student-centred education, lifelong learning and part-time studies are some of the new concepts associated with the diversity in a mass system. Diversity is created to meet the demands by different clientele and to increase the accessibility to higher education. But diversity makes it more difficult for the government to make higher educational policies, due to the complexity thereof. Enrolment is one of these policy issues and will now be examined.

2.2.7 Enrollment

According to Pellegrin (1974a:67), entrance requirements to a great extent, determine: increases in enrollments; the socio-economic background from which students are recruited; their choice of studies and subsequent student careers. Entrance requirements also reflect certain basic principles, such as the right to education and the freedom of choice. It would seem that new admission policies are an important prerequisite for other structural changes, and may provide a solution to several problems arising from the growth of higher education.

In the elite system, the access to higher education is largely decided on by meritocratic achievements measured by secondary school performance or grades on special examinations. In mass higher education, there is a general acceptance of meritocratic criteria where access is limited. But the enrolment policy is qualified by a commitment to equality of educational opportunity, leading to 'compensatory programmes' and the introduction of additional non-academic criteria. These are designed to reduce 'inequities' in the opportunities for admission of deprived social groups and categories (Trow 1974:68).

In many developing and newly industrialized countries, some form of student selection for higher education is essential, because the number of applications greatly exceeds the number of places available in institutions. Student selection and admission are of particular concern today in Asian countries in the context of rapid growth in student enrolments, increasing pressures on public funding, and rising aspirations of young people and their parents (Harman 1994:314).

In many developed countries, although the participation rates reached the level of a mass system in early 1980s, the enrolment policies were different. For instance in Britain and Ireland, the universities represented the selective sector while other higher education institutions remained open access. In most continental European countries the opposite was true. The majority of university faculties maintained an open access policy while all

other higher education institutions applied, in varying degrees, restrictions at entry (OECD 1983:113).

Within any nation, access usually varies between sectors and institutions, and between particular fields of study and course levels. Entry to elite universities is generally much more competitive than entry into other institutions. Entry to prestigious professional faculties in medicine, law, and engineering is usually much more difficult than entry to courses in the humanities and education. In many developing countries, individual institutions have little influence on selection, admission and the distribution of enrolments among different fields of study. These are normally the responsibility of the government. Institutions are often pressured to take more students than they can handle (Harman 1994:315).

Pellegrin (1974a:94) comments that the selection takes place chiefly on entry into higher education establishments. The selection methods such as: entrance examinations and aptitude tests, have very imprecise results, and are of little value in forecasting a student's future performance. They are also in danger of aggravating social inequalities by eliminating students proportionately from certain social groups. It was, therefore, hoped that non-selective education would put an end to the barriers which progressively excluded all but a small elite, increase the staying-on rate, and encourage diversity of choice (Anderson 1992:62). But Howarth (1991:7) otherwise argues that access must remain selective. Unrestricted participation in higher education would be self-defeating if it led to huge classes, high wastage and a high proportion of perpetual students. Harman (1994:313) insists also that effective student selection is important in any higher education system because the quality of students affects the quality and internal efficiency of the education programs offered.

The issue of selection is a policy dilemma. If universities adopt an open access policy, they may not be able to provide enough places for students, especially in some highly demanded fields. But, on the other hand, if students are selected to go to universities, competition will be created among school leavers. Schools and teachers tend to stress the

academic orientation of programmes in accordance with university requirements in order to increase the chances of their students in the competition for entry (OECD 1983:144). This is especially a problem prevailing in the Chinese education system, which is discussed later.

Even though higher education is expanded, some old problems of enrollment, such as competition and elite values, tend to prevail. Students still prefer to choose a course of study which promises entry into the higher professional echelons. Teichler, Hartung and Nuthmann (1980:100) explain that it is hard to conclude that expansion will ease the competition for higher education. In Japan, for instance, educational expansion has quite obviously not led to any fundamental change in the problems of 'examination hell'. The main differences between then and now is that a considerably larger number of students is involved in this competition today. The promise of status has been an important factor in any decision about education or training.

According to Pellegrin (1974a:92-93), three major criteria should be taken into account in determining future enrolment capacity: the resources to be allocated; the needs of the labour market and the structure of education. Two of them are economic, one educational. When the demand for higher education especially in certain subjects is more than the enrolment capacity, the issue of selection is inevitably debated.

There are several methods for selection. One is the selection based on secondary school records. In all OECD member countries secondary school leavers proceeding directly to selective higher education institutions or fields, are primarily determined on the basis of secondary school records. The second one is the selection based on entrance examinations and standardized tests. In some countries, such as Greece, Japan and Portugal, selection is based on the results of special entrance examinations used exclusively or more often in combination with school marks. The third one is that institutions use interviews to select students. Two other methods which are also useful to mention, are measures of preferential treatment and drawing lots (OECD 1983:146-162).

Along with the expansion of higher education, the proportion of different students changes. This will require some changes of enrolment policy. For instance, an increase in the admission of mature students will require more flexible admission criteria, the development of equivalencies to the leaving certificate, the provision of access courses and the development, within higher education institutions, of counseling and other academic support services for mature students, especially during their first year (Clancy 1996:365).

In conclusion, enrolment policy is an important tool for a government to design its scale of higher education or student numbers in certain fields. It is often a policy dilemma for a government. Selection may negatively affect the equality. But non-selection may lead to excessive demands for university placement, especially in certain fields which are more likely linked to higher social status or higher income professions. In a country, like China, where the demand for higher education is far more than the supply, it seems that selection is inevitable. But the fierce competition for university places, caused by the selection, has become a serious social and political problem in China.

Immediately after a student is admitted to an institution, the first matter he or she encounters is what to learn. This is the issue of curriculum, which is examined in the next section.

2.2.8 Curriculum

The curriculum and discipline structures must meet the demands of the developments in economy, science, technology and society. But such demands for a specific kind of manpower is normally unpredictable, due to rapid changes in these contextual factors today. Thus both government and higher education institutions find it more and more difficult to design curriculums and discipline structures. It happens frequently that the graduates in some fields are oversupplied while those in other fields are in shortage (Liu 2000:32).

Along with the expansion of higher education, students become more and more varied. At the same time greater diversification in other areas also exists in a mass system (cf 2.2.6). Therefore, the curriculum, teaching content, methods of teaching and learning must be diversified to meet the demands by society and individual students (Gou 2000:127).

Apart from the curriculum itself, the relationship between students and teachers has changed in a mass system. It differs from elite higher education which is teacher-centered. The mass higher education system is student-centered. The curriculum, teaching contents and methods are designed to meet different students' demands (Yuan 2000:21).

Tian (2000:25) notes that elite institutions place greater emphasis on transferring knowledge to students. But mass institutions emphasize more a combination of transferring knowledge and training students' abilities and skills. This is an important change reflecting the transition to mass system.

Bereday (1973: 106 & 143-144) argues that in mass higher education the curriculum must give most to those who have the least, in order to increase the academic comprehension of the mass, rather than simply reinforce already existing disparities. But the curriculum in all countries of mass higher education, even in the USA, is changing very slowly, and in Europe it has scarcely budged, even in the most innovative countries such as England or Sweden. There is little doubt that it is the universities which resist the change.

Li, Z.H. (2000:38) also maintains that diversity and flexibility are both characteristics and demands in a mass system. The credit system may be an ideal way to meet such demands as students can choose the courses they are interested in, from various options and in their own suitable times. The credit system was created at Harvard University in 1872. In about 20 years since then all universities in America adopted the method. The credit system provides students with flexible ways to study in institutions. In America, students can choose the institutions and courses. They can transfer from one institution to another

one which will then recognize the credit they obtained in the previous one. They can also stop their studies and resume them later (Zhang, H.M. 2000:35).

There are also shortcomings in the credit system. Taylor (1974:167) reminds us that the following pitfalls should be avoided:

- a. Exaggerated standardization or normalization, which blocks the system;
- b. Modules which are too small, leading to a fragmentation of knowledge and to a superficial educational experience;
- c. Random choice based on transient and facile interests;
- d. Class-hour accounting, which should be proscribed.

From the above studies we may conclude that the shift from teacher-centered to student-centered curriculum is an ideological change, and therefore it is a fundamental change in the process of the transition. The credit system seems a good way to give students maximum flexibility and diversity. But the shortcomings of the system should be prevented. Otherwise the academic quality of higher education could be compromised.

The quality of higher education is a crucial issue, especially when the participation in higher education increases rapidly. Thus this deserves close examination.

2.2.9 Quantity and quality

According to Ma, Guo and Shi (2000:33), during the processing of massification, institutions or even government are likely to emphasize more the quantity than the quality. Government's policy on expansion of higher education provides institutions opportunities to develop, but, at the same time, also places pressure on them to avoid any decrease in quality. Society, especially the employers, become more and more concerned about the

quality of graduates. In 1993 the Australian government launched a Quality Review program which was under the aegis of the Committee for Quality Assurance in Higher Education. 76 million Australian dollars were allocated in 1994 on the basis of judgments about institutional quality (O'Neil 1994:137). Hayryren (1979:174) argues that massification turns universities into a kind of vocational institutes or suppliers of semi-academic courses, because of decreased standard and prestige.

Pan (1999b:23) explains that in mass higher education diversification prevails in nearly every way, such as purpose, curriculum and methodology. Thus quality must be assessed according to different criteria. It is not appropriate to measure every student in a mass system with the ruler of an elite system. For example, although a graduate may not reach the same academic level required by an elite university, it is hard to conclude that the quality of the student is low if he or she has acquired the knowledge and the skills which is needed by society.

Wagner (1989:34-36) similarly observes that in Britain, employers seem to have had long-standing criticisms of the experiences of higher education as a preparation for work. They criticize not only declining quality but also the criteria by which such quality is measured. Employers would prefer a little less specialist subject knowledge, and a little more applied knowledge. Such quality should be regarded as different rather than lower. The argument that wider access leads to lower quality is essentially to maintain the privileges of the academic elite.

McConnell (1973:9) observes that in spite of the enormous increase in attendance at colleges and universities in the United States, the average academic ability of college students has not declined, but in fact has actually increased during the last 40 years. The basic explanation of this phenomenon is that in the 1920s, only about 60 percent of the most able high school graduates entered college, while in the 1960s the corresponding figure was about 90 percent. Bereday (1973:143) also contends, that the intellectual levels attained along with mass entry in Canada, Japan, and USSR provide reasonable proof that quantity need not damage quality. Open admission can be charged only in a

very short run with 'lowering quality'. In the long run, education ennobles and improves comprehension. Trow (1974:87) further states that at the beginning stage of the expansion in the 1950's in industrial countries, there was widespread concern about the quality of students. But this fear has declined and in some cases disappeared as numbers have grown with no demonstrable decline in overall student quality.

In short, when higher education expands, its quality is likely to be of concern. But it appears that the quality in mass higher education does not have to be lower than that of the elite system. On the other hand, due to the diversity of the mass higher education system, it is not appropriate to use criteria of the elite system to assess the mass higher education. Mass systems should be viewed in different ways.

Due to the complexity of mass higher education, there are several policy dilemmas and difficulties which influence governmental attitudes toward higher education. These dilemmas will be clarified now.

2.2.10 Dilemmas

According to Esnaut and Pas (1974:141), higher education is in the midst of a serious crisis, which is characterized by unemployment among graduates, unrest in the universities, misgivings among young people and their parents, and reticence on the part of employers. Governments are becoming less ambitious in their planning and even over-prudent. They are introducing important reforms in which the social aims are not always consistent with the economic objectives. Cerych, et al. (1974:17) maintain that these crises are created by: the massive growth of individual demand for higher education; the inability of the system to adapt and make itself relevant to this largely autonomous demand; the all-round failure to establish satisfactory relationships between the higher education system, the aspirations of students, and the needs and absorptive capacity of society for qualified people (Pellegrin 1974a:82-83).

One dilemma is regarding the organization of undergraduate curricula. On the one hand, it is essential that degree level programmes maintain the standards and research basis defined and required by the academic world. On the other hand, such programmes are under growing pressure, in a mass higher education system, to provide for a type of knowledge, methods of work and ethos, which are less 'academic' and more compatible with the requirements of changing work and life patterns (OECD 1983:58).

Private higher education institutions are an important part of a mass system, especially when higher education expands to such an extent that government can not afford it. Private institutions are normally created and managed by market mechanisms. According to the rule of a market, private institutions may make money from student fees. But, on the other side, higher education is also a public good. It should not be run for the purposes of benefit, because the high fee policy probably leads to social inequality. This is sometimes the dilemma of government policy. The resolution on the issue, in many countries, is dividing private institutions into two categories, beneficial and non-beneficial ones. Beneficial institutions are required to pay taxes like a corporation while the non-beneficial ones are exempted from taxes and also entitled to other preferential treatments, like those which are given to the other public services (Pan 1999b:22)

Trow (1979:213) concludes that a whole series of important educational problems arise out of the relations between these different forms of higher education co-existing within the same system or within the same institution. These systems or institutions have different standards, modes of instruction, and patterns of student-teacher relations.

OECD (quoted in Pellegrin 1974b:29) statistics shows that one of the major reasons for the expansion of higher education is to improve the social equality. The enrolments in higher education doubled, or even tripled in OECD member countries during the sixties. But such enlargement was accompanied by a very slow process of the equalizing of opportunities between the different social groups and sexes. The reason is that it is not easy to change people's ideology. Cerych et al. (1974:44) argue that diversification by itself, however, does not guarantee that the old rigidities will not be replaced by new ones,

and can also not guarantee that open and flexible structures will necessarily emerge. The deep-rooted values and attitudes of the different social groups concerned give rise to a strong propensity to reinterpret almost any innovation in traditional terms. Bereday (1973:142) also points out that people in search of dignity have always had the choice of feeling 'as good as most' or 'better than most'. As a rule Europeans and the others who share their university tradition, prefer the latter position. Even egalitarians in Europe shock American egalitarians with the many unconscious ways in which they voice opinions that are subtly elitist.

Dougherty (1997:68) explains, that even if the gap in college access closes, other forms of collegiate differentiation will still remain and may even get worse, particularly differences in type of college attended, and type and level of degrees secured. Hayryen (1979:173-174) pessimistically concludes that we can not consider the mass university in itself as democratic, although it means an expanded intake of students into higher education institutions.

2.2.11 Conclusion

Elite and mass higher educations are two different systems of higher education. They differ not only in quantity, but also in a fundamental way. A mass system is much more diversified, flexible, complicated and larger than an elite one. The transition from elite to mass systems seems to be a trend in modern world. It happens along with the development of the economy, society, science and technology in a country. Massification is, therefore, believed to be a part of the modernization. China is in the process of modernization which is accompanied by the massification of its higher education. The theories discussed in this section are useful to analyze the phenomenon in China.

In the whole of the massification scenario, besides higher education itself, the relationships between higher education and its contextual factors, like economy, politics, science and technology, are an important part which steers the processing of transition.

These relationships will be addressed hereafter. Economy is one of the contextual factors. It will be studied in the next section.

2.3 Economy

According to Chen and Qu (1999:27), the world is entering the new century which will be dominated by a knowledge-based economy. The form of economy has four major characteristics. Firstly, knowledge is consistently up-graded, and high technology is speedily transferred to industries. Secondly, knowledge becomes an important resource for social and economic development. It also becomes people's daily necessity. Thirdly, along with the coming era of information and globalization, a knowledge-based economy is an important factor influencing the international competition and cooperation. Fourthly, people's life style and values will be greatly changed. In short, the quality of human resources trained in higher education institutions will be the key factor influencing the knowledge-based economy and the whole society at large.

Tang and Yin (1999:63) observe that higher education is closely related to the economy. Economic development promotes the development of higher education in a way of providing higher education with financial supports and employment opportunities for its graduates (funding and employment will be further discussed in the next two sections). In return higher education provides the economy with qualified manpower and technology. Feng (1999:13) similarly notes that modern economic development is based on modern education. The higher the modernization level is in a country, the more its economy relies on the quality of manpower.

Mass higher education is an important condition for economic development. The experiences of many countries show that when the average of yearly income per person is between US\$300-1000, higher education may undertake rapid development (Huang 1998:58).

Zhu, K.X. (1999:4) describes that since the Second World War the United States, France, Germany, Japan and other countries, invested a lot in the expansion of higher education in order to develop their economy and increase their competitiveness in the world. Former Soviet researchers have evaluated that about 30% of the increase of productivity of the U.S.S.R. in the 1960s were attributable to increased skills (Hayrynen 1979:174-175). Similarly, the expansion of higher education in the Republic of Ireland was, to a large extent, legitimated by the needs of the economy (Clancy 1996:355).

One of the major outcomes of economic development is the increase of an individual's income. Hao and Tan (1997:137-138) discovered that the enrollment rates in higher education are closely related to the level of income measured by GNP per capita, in both developed and developing countries. The demand for education, like the demand for other services, increases with an increase in income.

According to the analysis of international experiences done by Wang and Gao (2000:31), when the average per capita GNP in a country is less than US\$1000, its gross enrolment rate is more likely to be less than 10%; when the average per capita GNP is between US\$1000-3000, the gross enrolment rate is more likely to be between 10%-20%; when the average per capita GNP is over US\$12000, the gross enrolment rate is more likely to be over 50%.

In a post-industrialized society, the tertiary or service industry composes a greater proportion of the total economy. The demand for highly skilled people is stimulated by the growth of the service sector in a society. This takes two forms. One is the growth of highly skilled occupations. Another is the increase of a whole range of new and semi-professions particularly those linked to the welfare functions of a government (Hayrynen 1979:173). Hao and Tan (1997:137-138 & 9) also argue that one of the characteristics of a modern society is the expansion of its service sector. For instance in China, the proportion of the service sector in total production, increased from 21.4% in 1980 to 31.8% in 1994. The expansion of higher education is closely related to the development of tertiary industries.

But the relationship between developments in the economy and higher education is far from clear. Murphy (1993:9) otherwise argues that higher education in developed countries had been expanded well beyond the threshold, where further expansion could be reasonably regarded as an investment and precondition for national prosperity. The expansion of higher education may be better regarded as a form of consumption. Tian (1996:2) shares the view and notes that the relation between the expansion and economic development has become vague in developed countries since the late 1970s. The supply of highly educated persons in the job market has in some cases grown more rapidly than the demand, and the surplus has resulted in an inflation of credentials.

Teichler et al. (1980:17) otherwise argue that there exists widespread doubt, whether the expansion of higher education noticeably spurs on economic growth, or whether the general raising of qualification standards automatically promotes more rational behaviour at individual levels. Especially in countries with a high level of income the effect of education on economic growth, appears to vanish (Hayrynen 1979:174-175).

As a conclusion we may argue that the economy and higher education are closely related because they rely on each other. It is difficult for higher education to develop without enough funds, or for the economy to grow without enough qualified manpower. But the relation between the two is not always so clear. In developed countries higher education sometimes comprises a consumption or individual enrichment rather than meeting economic demands. As China is a developing country with low enrolment rates, the interaction between the economy and higher education may still be obvious.

One of the issues related to the economy is the employment for the graduates of higher education. Employment influences students' choices of institutions and subjects, the motivation in their studies, their parents' attitudes toward higher education and so on. It is necessary to be examined.

2.3.1 Employment

According to OECD (1983:32), there were two main changes of employment when higher education expanded in OECD countries. One was that an increasing number of graduates have to seek employment in non-traditional, lower level jobs. Another one was that the sharp decline in the recruitment into the public services and teaching sectors, implies that most young graduates will need to find employment in the private sector.

Along with the expansion of higher education, the employment of the graduates becomes more and more problematic. Many universities realized that the way to resolve this problem is to enhance people's ability of creation and adaptation. The graduates will not only seek jobs, but also be prepared to create their own businesses (Ma et al. 2000:34). In addition, Leroux (1997:118) observes that at a time when there is massive youth unemployment, one of the goals of enhancing institutional performance is to train people in the skills required by the productive sector.

Esnault and Pas (1974:111) note that rapid technological progress and increased competition in international markets have brought major changes in employment structures: unemployment has risen; self-employment has increased; and the proportion of part-time workers has also grown.

Zhang, Y.Q. (2000:57), therefore, argues that the speed and scale of development of higher education must adapt to the level of economic development. The over expansion of higher education may cause the devaluation of qualifications and over-supply of manpower. Fang (1999:66) similarly comments that over-education may lead to high unemployment amongst graduates, waste of resources and social destabilization.

But many scholars disagree that there is over-qualification in mass systems. Teichler et al. (1980:21 & 46) maintain if expansion of higher education leads to a mismatch between purported value of a graduate's degree and the rank of the position his training 'buys' him, it is frequently interpreted as an oversupply of graduates. Geiger (1979:36) maintains that

though it is not as ideal as the era of the elite higher education, in general the more education an individual receives, the less likely that he or she will be unemployed.

Cai (2000:120) similarly argues the technology is being developed day by day in modern times. Technology becomes more and more important in the economy. Industries need high skilled people to use these technologies. Those who have lower qualifications will find it more difficult to find relatively ideal jobs. For instance, since the late 1970s, 90% of newly created jobs require from employees to have some kind of higher education training in America (Chen & Qu 1999:30).

It is, therefore, very difficult to distinguish 'adequate' qualifications from either 'over' or 'under' qualifications. There are no clear-cut notions about the demand for university graduates in terms of specific qualifications (Teichler et al. 1980:42). For this reason, it is neither possible nor desirable, for governments to plan the capacity of all educational programs so as to correspond to the demand in the labour market (Cerych et al. 1974:158-159).

According to the above investigation, we conclude that in mass higher education graduates may find it difficult to get jobs with privileged or high social positions, compared with those in the elite system. But this may not justify that over-qualification exists in mass higher education. It is rather true that such a mismatch between qualification and privileged professions is one of the radical changes in the transition from elite to mass higher education. It is therefore important for students and their parents to make psychological changes to adapt to the shift from elite to mass system.

Another issue related to the relationship between higher education and the economy is the policies of funding and fees, which will be investigated in the next section.

2.3.2 Funding and fees

Funding and fee policies are often used by a government to steer the development of higher education to fulfill the government's aims. Therefore, they are partially political issues. But such political issues are based on the levels of economic development and individual's income. For such reason they are discussed in the category of economy.

2.3.2.1 Funding

Reasons for a government to fund higher education are various. According to the OECD (1983:49), the great increase of funds for higher educational expenditure during the 1960s and early 1970s in OECD countries, had its roots in two widely held beliefs. One was that higher education helped to promote social equality by acting as a vehicle of social mobility. The second was that higher education helped to promote economic growth and social development by making the labour force more productive.

Wen (1999:33) notes as well that society may benefit from investment in higher education in several ways. Higher education produces highly qualified human resources which are crucial to social and economic development. It increases the general level of civilization in a society, and develops science and technology through the manpower it has educated and trained.

Daniel (1992:117) notes that governments are likely to use funding mechanisms to encourage the development of plans and policies adapted to the particular needs of each country. This well means that each country will adopt a somewhat different methodology of funding since funding rules, policies and plans go hand in hand. Badenhorst and Claassen (1995:11) contend otherwise that although the funds of higher education are normally from governments, the changes or transformations of higher education will not be effected in a top-down fashion, because the education structure is too complex to predict its evolvement in the future.

Although it seems justified that the public should fund higher education, determining the optimum level of social investment in higher education is a theoretical problem of great complexity in the discipline of economics. The actual amount invested in higher education is a practical problem that governments face on a yearly basis (Geiger 1979:35). One important consideration influencing the volume of resources available for higher education, is the relationship between higher education and the labour market (Magnussen 1974:224). Another one is the fact that the growth of productivity in higher education is almost inevitably slower than in the economy at large, which leads to a continuous increase in unit costs of higher education. This causes the disproportionate growth of higher education expenditure. For example, the expenditure on higher education in OECD countries increased more rapidly than on both other educational sectors and total government expenditure in the 1970s (Cerych et al. 1974:32).

Along with the expansion of enrolment, not only government, but also the public became interested in higher education. Just as Beraday (1973:120) maintains, in mass higher education systems mass enrollment was accompanied by increased demands for public involvement in the administration of universities. The central question raised by of the involvement is how well it solves the right relations between the university and the state.

Anyhow, government policies toward higher education change according to changes in contextual factors. For instance, in contrast to the great increase in higher education expenditure in the 1960s and 1970s, the OECD countries experienced the stagnation or even contraction in public expenditure on higher education in the 1980s. This change was due to the general economic situation and the pressures on public expenditure in general (OECD 1983:49). To resolve the funding problem, in the 1980s the British government used market mechanism to encourage the competition among institutions. It was believed that market forces were effective tools for improving the match between the services provided by the higher education system and the needs of its users and funders (Howarth 1991: 5 & 12).

Meek and Wood (1997:253) observe that a challenge faced by governments everywhere is how best to meet the costs of a mass system of higher education. A common policy response is, using market mechanism, to pressure the higher education institutions themselves into seeking funds from non-governmental sources. Market-orientated policies are designed to improve efficiency in universities and to reduce the inequities in the distribution of benefits from education (Stanford 1987:45).

Developing private higher education is another effective way to resolve the shortage of funds, especially in developing countries. For instance, in 1994, private institutions and their students composed respectively 86.6% and 66.7% of the total numbers in Indonesia. In Korea, 82.2% of institutions are private ones with 74.8% of total enrolment. In Japan these figures were 73.6% and 73.4 respectively (Pan 1999b:22).

Marginson (1997:463) also claims that to solve the funding problem, private institutions may be one of the options. In Latin America, the private sector's share of enrolments rose from 14% in 1955 to 34% in 1975, and to almost 40% by the early 1990s. This largely nonprofit private sector grew without public subsidies, substantial philanthropy or corporate funding, being almost entirely dependent on tuition.

Zhang, X. (2000:123) adds governments may adopt three methods to resolve the shortage of funds. One is that the government increases its funds to higher education according to the degree of expansion and the capacity of government resources. Secondly, institutions should be asked to improve their efficiency and maximally to use their resources and facilities. Thirdly, the fees may be increased properly, but due attention must be paid to the effects it has on equality.

In short, the problem of funding is a challenge which a government has to face. Along with the expansion of higher education the government may not afford the whole of expenditures on higher education, and have to use market mechanisms or other ways to seek non-governmental funds. Charging student fees is one of these options, which is necessary to investigate.

2.3.2.2 Fees

Should students pay fees? If so, how much should they pay? These are questions which are not easy to answer. It depends on whether higher education is regarded as a private good or a public good. It also depends on a government's capacity to fund a mass higher education.

It was believed that higher education could bring about social equality and promote economic development. These were the reasons for governments in OECD countries to largely increase funds to higher education in the 1960s and 1970s (cf 2.3.2.1). Meek and Wood (1997:257) also claim that higher education is more of a public than a private gain, thus the state should underwrite the cost of it.

Marginson (1987:15) also argues that a system in which education is treated as a private good (rather than a public good that is everyone's right), would weaken democracy and reduce social and individual freedom, as well as social equality. The provision of education as a public good widens knowledge and social interaction and thereby increases freedom. But Confucius believed that education benefits the private. He once said in the *Analects* that it was not easy to find a man who had studied for three years without aiming at pay (Stanford 1987:47).

Howarth (1991:7) observes differently that higher education produces individual as well as collective benefits. So the cost of higher education should be paid for by the taxpayer, by parents and by students themselves. Daniel (1992:118) similarly argues that mass higher education requires that the system be reformed to be fair to the participants in terms of fee policies and more affordable to the taxpayer.

Theoretically the fee policy may be made according to the rule that those who benefit from higher education, should pay for the fees. But in practice a government may make a decision according to how much it can afford. Wen (1999:33) argues that the reason for

charging student fees is that, individuals get the benefits from higher education because university graduates have more chances of getting better jobs, higher income and social positions, than the non-graduates have. Stanford (1987:47) similarly notes that it is clearly worthwhile for undergraduates to borrow money to finance their education. Their lifetime earnings will be sufficient to repay the debt and leave them better off than if they have not obtained the degree. But McConnell, Berdahl and Fay (1973:31) reason that a government may afford an elite system, but when higher education expands largely the public's economic burden could increase so high that the government may either introduce or increase student fees.

But the fee policies are far from clear-cut. The issue of equality must be given due consideration. Magnussen (1974: 213-214) observes that apart from direct costs of fees and living expenses, students also have to sacrifice earnings by choosing to continue education rather than work. Unless some kind of assistance or loan is established, these direct or indirect costs may discourage some students from undertaking their education, particularly those from low income families. It is, therefore, important to provide financial support policies when fees are introduced. These policies could comprise scholarship, financial assistance, loan and income from part-time work (Zhao & Qiao 2000:28). OECD (1983:198) describes how in all OECD countries student's aid policies provide some form of subsidy for students' living expenses, in the form of grants, loans or a combination of the two. One of the main objectives of student aid in most countries, is to ensure that poor students are not prevented from entering or continuing higher education, by inability to finance their living expenses.

In conclusion, there are often debates about whether student fees should be charged in a mass system. But as a matter of fact, when a government cannot afford the mass system, which is true in most of the cases, charging student fees seems inevitable. The danger of the fee policy is the negative impact it will have on equality. Therefore, it is very important to have financial assistance schemes to help disadvantaged groups.

2.3.3 Conclusion

The economy is a contextual factor which influences higher education in many ways. The development of the economy requires and supports compatible levels of the development of higher education to adapt to it. Higher education, in return, stimulates the economic development by providing it with high-qualified human resources and direct services which is a new function of an institution in a mass system. In mass higher education the structures of employment change radically. But there is no way to judge either 'over' or 'under' qualifications. Graduates have to adjust their expectations and adapt to the transition from elite to mass higher education. In the meantime, higher education institutions have to change study structures which will help students to adapt to their future careers. Apart from employment dissatisfactions, students will also be unhappy with the fact that they have to pay fees, as many governments can not afford a mass system. Students may need to pay even higher fees in private institutions which are established as an option of seeking non-governmental funds. When these fees are charged, the issue of equality must be considered and assistance programmes for the disadvantaged students must be initiated.

Some of the economic policies are also political ones, because it is the government who decides the funding and fee policies according to its priority. The political factor will be discussed in the next section.

2.4 Political factors

According to Trow (1979: 218), the great problem facing all of our systems of higher education is not financial or intellectual, but political - that of defining the delicate balance between 'autonomy' and 'accountability'. Although Trow's remark seems simplified because a mass system is complex and interacts with different factors, politics is one of the important contextual factors influencing the massification. A government's policies determine the direction and speed of the development of higher education.

Furthermore, equality has long been a political problem the government must focus on. These two issues will be scrutinized in the next two sections.

2.4.1 Government policies

The reasons for governments interfering in higher education are multiple. The OECD (1983:62) claims that the increase in the numbers of students leads to an increasing need for centralized national or regional planning, and also increasing pressures by the public for accountability on the part of institutions. Thus the governments would increase their engagement in the affairs of higher education.

In modern societies, the state is the major institution responsible for nation building and social development. Education is essential for teaching skills which are necessary for its citizens to engage in such nation building. The state therefore should play an important role in the educational development (Tian 1996:2).

Rising enrolment at post-compulsory level is one of the main features of higher education systems in the developed world today. Governments are aware of the importance of maintaining good higher education, and of the need to cater for the strong demand, but are encountering particularly acute budget constraints (Leroux 1997:117). Clark (1983:154) also observes that in many developing societies, regimes can hardly afford not to be deeply interested in the control of the higher education system. They tend to see it as a basic sector for nation-building efforts, from the training of essential experts to the building of national culture and consensus, as well as resolving practical problems, such as: poverty, land use and industrialization.

Trow (1979: 204-205) claims that governments often use financial policies, relating to funding, fees, grants and loans, to influence the development of higher education. They encourage or discourage the expansion of higher education by creating or not creating places, especially in subject areas of high demand. For instance, in Britain there were three different development periods since the Second World War. The first one was

marked by the large expansion of higher education until 1970, because of the full support given by the government. The second was the stagnation in the rates of demand for university places from 1970 to 1987, largely because of the lack of governmental funds. In the third period since 1987, the British government has brought about fundamental changes in its higher education (Fulton 1991:589). It is not difficult to conclude that higher educational changes in these three different periods were due to the changes of governmental policies.

The most significant political change in the modern time is the shift from a fiduciary state, or the state as trustee of the national interest, to the contractual state, or the state as market maker and all powerful contractor. In the contractual state the emphasis shifts from the state as provider to the state as regulator, establishing the conditions under which various internal markets are allowed to operate, and the state as auditor, assessing their outcomes (Scott 1995: 171 & 80). Taking still the development of British higher education as example, from the 1940s to 1980s the British government took the main responsibility to meet the increasing demand of funds by the institutions. As the student numbers continued to increase, the government could not afford to do so any more. Thus since 1980s the British government brought about radical changes and introduced market mechanisms to the higher education system. Institutions themselves have to seek funds from non-governmental sectors and compete with each other for the resources, according to the rules made by the government (Benn & Fieldhouse 1993:299 & 309).

But Yuan (2000:23) argues that how governments are involved in higher educational affairs is a policy dilemma. If governments do play a role in planning higher education and solving some problems in the sector, it may be possible to influence the institutional autonomy negatively. But if the government does not play an active role in resolving the problems, these problems may not be dealt with effectively and appropriately because some problems, such as funds or employment, can not be solved solely by the institutions themselves.

In conclusion, when higher education is expanding governments are requested to invest more in higher education for the purpose of developing the economy and eliminating inequality. Therefore governments tend to engage more in higher education. This is especially true in a developing country, like China. Funding is an important tool for governments to intervene in higher education. But in mass systems governments have to encourage institutions to seek private funds, which may weaken the government's influence. It seems that the relationship between polity and academy becomes more complex in mass systems.

Another key political issue is equality which will be examined in the following section.

2.4.2 Equality

According to Harman (1994:318), equality means that in a fair and just system, each person should have equal access to and equal participation in higher education, provided academic merit criteria are met. It could also mean the equal participation in the system by different social groups of people. Wu (1998:67-77) further explains that there are two quite distinct stands in egalitarian thought. One, stemming from the liberal tradition, presses for greater equality of opportunity for all social groups to receive equally higher education. It is committed to more equal access to higher education. The other, more radical type of egalitarianism, demands greater equality of results or rewards.

The selection function of higher education was regarded as an important cause of inequality, as argued by Bereday (1973:37), that the modern school system is a giant sorter which separates people into status compartments.

It may not be easy to find an ideal way to resolve the problem of inequality. Many countries, anyhow, adopted unprecedented expansion policies on higher education in order to improve the equality in the 1950's to 1970's and even 1980's. It was hoped that the expansion of higher education would facilitate the achievement of greater equality of opportunity (Pellegrin 1974b:27). The effects of these policies were positive, but far from

the policy maker's expectations. In this vein Clancy (1996:363-364) describes how during a time of expanding enrolments in Ireland, it was no surprise to find that most socio-economic groups were experiencing an increase in the proportion of students going on to higher education. But the degree of increase was different. Some of the lower white-collar groups did not experience the same proportionate increase in enrolments as the other groups. Furthermore, inequality still exists in the elite institutions and fields. The more prestigious the institution and the field of study, the greater the social inequality in participation levels.

Teichler et al. (1980:59 & 17) mention there are growing doubts that equal educational opportunity can be provided for all social classes. The more one has sought to achieve equal opportunities for educational success for children from all social classes, through the elimination of barriers that existed within the education system, the more conscious one has become of the inequalities that exist in other areas. Tian (1996:3) argues that competition for entrance to university is in fact the competition for social status among students from different groups. Because education is closely linked to power and status, different groups will seek to improve their position by seeking more education. Therefore, Bereday (1973:43) declares that policies designed to bring about equal opportunity or social equality through educational reorganization, have failed.

Although these pessimistic attitudes prevail, Bowen (1993:43-44) gives a positive example, that in Australia it has long been the platform of the government to promote social justice throughout its policy initiatives. In 1990 the Australian government issued a document, namely "A Fair Chance for All: Higher Education That's Within Everyone's Reach". This document was designed to promote social justice and was very influential. There were massive injections of funds into programs such as the Disadvantaged Schools Program and the Participation and Equity Program. These programs played important roles in contributing towards the construction of a more equitable society (McNamee & Maxwell 1993:221).

While class distinctions in higher education are the major determinant of inequality there are, anyhow, other distinctions influencing equality as well. These are geographical and racial inequities, and the discrimination against women (Wu 1998:363-364).

The Irish experience reveals real progress in the reduction of gender inequality because of the higher educational expansion. In the mid 1950s, females constituted only 27% of total enrolments; by 1983/84 this had increased to 45%. This progress has continued over the past decade, with females accounting for almost 49% of enrolments in 1993/94. Females are more likely to benefit from the expansion (Clancy 1996:362).

Tian (1996:1) also claims that the degree of expansion of women's enrollment in higher education during the last two decades has been remarkable. In 1970, only a few of the industrialized nations had women's enrollment above 40%. By 1986, however, women's enrollment in most countries represented in the OECD approached 50%. Several countries, including the United States, have pushed women's enrollment above 50%.

Bereday (1973:47) maintains that today's technological societies are always starving for more talent. So the core problem is not what proportion of university seats are reserved for working-class sons, but how to make all talent, wherever it can be found, available in society's managerial positions. The countries with mass higher education systems strive to ensure minimum frustration of latent students flowing from the lower strata, and minimum displacement of talent found in the upper levels.

In short, the issue of equality is a political challenge. It was believed that the increase of participation in higher education could improve the social equality. But the facts were not so positive. The previous competition for university entrance has become the competition for prestigious universities or fields, where inequality still exists. It seems helpful to design policies to directly assist the disadvantaged groups. Australia and China have adopted such policies which are investigated later.

2.4.3 Conclusion

No other contextual factor is as directly involved with the steering of higher education than the political factor. A government can make higher education policies to fulfill its economic, social and equality aims. But the mass higher education system is so complex and diversified that the government may find itself from time to time, facing policy dilemmas. As the government puts more money into mass systems it must engage in higher education on behalf of its taxpayers. But, on the other hand, the autonomy of institutions should be respected. The relationship between the government and institutions may be the key issue which the government has to address properly. One important purpose for expanding higher education in many developed countries was to improve equality. But the results have been far from satisfactory. Furthermore, new inequalities, like social disproportion of participation in prestigious institutions or fields, have emerged. This may be the reason that the policies on equality are sometimes believed to have failed.

China is a centralized country. The government is not only responsible for the allocation of funds, but also for the concrete planning of development scales and speed. It is not difficult to find that the political influence on higher education in China is more powerful than that in many Western countries, which will be studied later.

Together with economy and politics, society is another contextual factor which is examined in the following section.

2.5 Society

Society, as a contextual factor, interacts with higher education in many ways. According to Jin (1990:11), education is only one of the sub-systems of the whole system of society. Other sub-systems of society include politics, economy, culture, etc. The relationship between education and society is interactive and inter-permeable. Halsey and Trow

(1970:31) also find out that changes in social structure create changes in the structure and functions of universities, which in turn promotes or impedes further changes in society.

Badenhorst and Claassen (1995:7) comment that the changes in education happen in their deepest sense due to a change in values. Thus, when considering the transformation of education, one has to consider the relevant values. Barnett (1993:35) claims that contrary to an elite university, the university in the modern world has become more and more a place in which knowledge is viewed as a commodity or product. Students go to universities to acquire the latest technical competence, professional insights and analytical capacities with a practical value on the labour market.

Hayrynen (1979:157) maintains, that mass higher education institutions interact as a community with other social groups, trying to meet certain demands, which form the basis of their popularity and of their material resources. The service function of a mass university becomes more and more important. These services are composed of consulting works, technology supports and help to resolve some social and economic problems (Chen & Qu 1999:27). Bereday (1973:136) also notes also that all mass higher education institutions are chartered organizations to which certain functions have been entrusted by society.

In the relationship between society and higher education, social justice is always a key issue of a democratic government. OECD countries therefore, largely increased the funds for higher education in the 1960s and early 1970s. One of the purposes of funding higher education was to improve the social equality in their countries (cf 2.4.2). Esnault and Pas (1974:157) also observe that educational expansion in OECD countries since the Second World War was partly promoted by 'social demand'. An increasing proportion of the population was striving for higher levels of education, in order to gain access to higher levels of the occupational and social hierarchy.

But Teichler et al. (1980:72) contend that the expansion of higher education has not led to corresponding equalizing tendencies with regard to job hierarchies and life chances.

Along with the increasing numbers of university graduates, those who are not only university graduates but also from top universities or top departments, are likely to get the jobs with high social status. These top universities or departments are still highly selective, and therefore inequality remains.

Beyond the issue of social hierarchy, higher education also has other broad implications for society today.

Wang (2000:137) maintains that a modern university has one basic and two important social functions. The basic one is providing professional manpower to society. The two important ones are developing science and technology, and providing services directly to society. The society in contemporary times is a knowledge society or a learning society. Its educational apparatus becomes crucial not only to its reproduction but also to its continuing reformation, as demanded by the pressures of world markets. It is reasonable to say that modern society is in favour of instrumental and operational knowledge. Hermeneutic, expressive and communicative forms of knowledge are marginalised (Barnett 1993:35-37). In other words, the modern society is in favour of learning in a mass system, rather than that in an elite system.

Esnault and Pas (1974:156) argue that society expects institutions to provide education adapted to a great diversity of individual qualifications, motivations, expectations and career aspirations. To meet such demands, a mass system in the modern society should be composed of diversified higher education, as well as flexible and open life-long learning (Yuan 1999:159).

Fundamental changes in universities are taking place in the modern time. Universities have become academic industries which create, transfer and use knowledge. They are no longer the previous 'ivory tower' institutions in the elite systems (Wang 2000:138). Mass higher education systems are no longer simply 'knowledge' institutions, reproducing the intellectual and human capital required by industrial society. They are themselves becoming key parts of the modern society (Scott 1995:117).

2.5.1 Conclusion

In the process of massification, higher education institutions tend to interact more closely with society, and eventually become an important part of it. This is especially true in the era of a knowledge-based society in which knowledge, like information technology, closely links to people's daily life.

Equality is both a political and social issue. The public, especially those from the lower classes, demand equality in the participation in higher education. The expansion of higher education is a normal option to meet such demand. But the effectiveness of the option is questionable.

Modern society prefers institutions to train students with applied knowledge which is socially and economically useful, rather than with communicative knowledge which is typical of the elite system. For this reason it can be concluded that the transition to mass higher education is a demand from society.

We have studied three contextual factors of the economy, politics and society. In the next section the last factor of science and technology will be examined.

2.6 Science and technology

In the modern world today, the rapid development of science and technology, especially the development of information technology, is creating great changes in the economy and society. It is also the major catalyst for educational changes in values, contents, methodology, administration and the system as a whole (Hao & Tan 1997:162). Zhou, H.R. (1999:151) similarly observes that the series of scientific breakthroughs and the emergence of high technology in the 20th century, promoted the transformation of society and changed people's values. These brought about the fundamental changes in education in terms of ideology, policy and structure.

It is the argument of Zhu, K.X. (1999:4) that, in the era of knowledge-based economy today, the competitiveness of a country largely depends on the level of development of science and technology, and the quality of manpower. Higher education plays an important role in the development of human resources and the use of science and technology. In return science and technology provide higher education with new methodology of teaching and learning, such as advanced facilities, the wide use of the Internet and the emergence of on-line university tuition (Li, Y. 2000:136). Higher education helps the industry in its internal technical training and provides specialized knowledge and expertise. In return, higher education gains first-hand knowledge of the needs of the industry and the latest technical achievements which have obvious benefits for teaching (Harding & Kington 1989:71-72). But Scott (1995:155) otherwise argues, that an university has thus become a more powerful institution socially, economically and politically, because of mass expansion, but a less important institution in intellectual and scientific terms. This is because the provision of services is more emphasized in a mass university.

According to Teichler (1988:24), science, conceived of as a totality of theories, methods and systematic knowledge, is expanding fast. It seems that innovation in and diffusion of systematic knowledge were linked, to a considerable extent, with the expansion of the higher education system. Furthermore, the fast changes in science and economy also require universities to provide diversified educational services to adapt to the needs of different students for different purposes (Yang 1998:33). Wang, Y.J. (1999:157) similarly states that the revolution in information technology is rapidly changing the society and the economic structure. The traditional higher education must be reformed to adapt to such changes. The rapid development of information technology makes it possible for all people to gain access to education in any subjects, at times and places of individual convenience. People can participate in lifelong learning at home and in the workplace through computers and the Internet (Trow 1999:307-308).

2.6.1 Conclusion

In the era of a knowledge-based society, science and technology, especially information technology, greatly influence the economy, society and higher education. Science and technology are producing structural changes in the economy and employment. Such changes create more positions which demand higher qualifications (Teichler 1980:77). In such a way the development of science and technology promotes the expansion of higher education. Information technology changes the ways of study in higher education and strengthens the concept of lifelong learning. People can use the Internet to receive higher education any time and anywhere, instead of going to university. Such openness and flexibility in higher education will naturally accelerate the process of massification. China has already established degree courses on line through four universities in order to expand its higher education (Zheng 1999:302).

Up to now the researcher has investigated the theories dealing with mass higher education, the transition and the contextual factors. Through these reviews the researcher has established a better understanding of the general principles of the problems. To enhance such understanding and to make a more opt comparison with Chinese realities, it is necessary to inquire into two concrete cases: the process of the transition from elite to mass higher education in Britain and Australia. The reason for choosing these two countries is the fact that the researcher worked as an educational diplomat in Australia for two years from 1988 to 1990 and in Britain for three years from 1993 to 1996. These first-hand experiences could be useful to the present inquiry.

2.7 Some aspects of the transition from elite to mass higher education in Britain

2.7.1 Introduction

Like other developed countries, British higher education experienced rapid development since the Second World War. But the development has not been consistent in terms of speed and functional changes since then, which will be discussed in the next section.

The British government adopted different policy approaches during different periods of development. As the trend of higher educational development is an international one, the researcher suggests that these policies adopted by the British government may have implications for Chinese higher educational development. Therefore, it is meaningful to investigate the British policies adopted to massify its higher education system.

Britain has transformed its elite higher education system to a mass system since the Second World War (Fulton 1991:589). Therefore the developments of British higher education since the war, are most relevant to the present research, and will be examined.

This inquiry will be subdivided into three sections. The first will analyze the process of transition from elite to mass higher education in Britain. The British policies on funding and fees will be discussed in the second section. In the last section, the creation and the elimination of the British binary system will be scrutinized.

2.7.2 Process of the transition from elite to mass higher education in Britain

The general reasons for the rapid expansion of higher education in the 1950s and 1960s in most developed countries including Britain, have been analyzed (cf 2.2.5). Therefore some of the major reasons will only be briefly mentioned here.

After the Second World War the British government fully supported the expansion of its higher education because of economic, political and social reasons. Economically, a large proportion of scientific and technological manpower was demanded to build the country (Benn & Fieldhouse 1993:299). To meet political aims, the then Labour Government attempted to reduce social inequality through the enlargement of enrolment. It believed that, in doing so, it could allow more working-class children to receive higher education which was dominated by upper and middle class offspring. Just as Shattock (1981:381) describes, an important element in the pressure for expansion in education is the need to eradicate inequalities. Socially, the expansion was also aimed at meeting the demand

from society. Many young people applied to university in order to enhance their professional opportunities and enrich their personal and social lives (Becher & Kogan 1992:1).

But after large expansion of higher education in the 1950s and 1960s, the British government found that the expansion failed to increase the proportion of working-class students at universities and the substantial economic investment had not exactly yielded a quick, visible pay-off in increased national prosperity. Thus the government policy became thoroughly unfriendly (Fulton 1991:595).

To analyze such different, even sometime contradictory, policies, Benn and Fieldhouse (1993:299) used a model of governmental approaches. They observe that there were two distinct governmental approaches toward the expansion. One was the policy adopted by the Labour Government in the post-war expansion of the late 1940s. The large increased government funding for universities led to a 60% increase in student numbers between 1945-46 and 1950-51. But the changes then were quantitative, the Labour Government showed no desire to change radically the nature of the universities or their relationship with the state. It tried to ensure a greater degree of planning in higher education or tried to control universities. Therefore, Neave (1985:356-357) argues that in spite of the great increase in student numbers, the British drive towards mass higher education was not accompanied by a significant change in values and attitudes toward higher education. They were still in the elite stage.

The second approach was the policies adopted by the Conservative Government in the late 1980s. The government brought about radical changes in universities by imposed expansionist policies which encouraged greater accountability, accessibility and vocationalism for the universities. Radical and fundamental changes took place in British higher education in the 1980s (Benn & Fieldhouse 1993:299).

There is another model which can be used to explain the development of the British higher education, Fulton (1991:589) divides the expansion into three different periods.

The first, from 1945 to 1970, was marked by increased governmental support, growth in numbers of institutions and students and a broad consensus around the desirability of expansion. The second, from 1970 to 1987, was the stagnation in the rates of demand for places by students and for graduates by employers. The third period, from 1987 and afterwards, was that Britain committed itself, whether deliberately or not, to a system of mass higher education.

In the beginning of the first period, the Barlow Committee proposed a doubling of output of scientists and technologists. It argued for an increase of the university system from 50000 to 90000 places as soon as possible. Two years after the Barlow recommendation, in 1948/49, there were already 83000 students. In the early 1950s the net enrolment rate of the age group (18-20 year old) in higher education institutions, increased from 1.7% to 3.2% (Becher & Kogan 1992:24).

The pressure from the expansion of higher education led to the setting up of the Robbins Committee. Being the first of its kind, the committee devoted itself almost entirely to a comprehensive survey of basic facts in British higher education. Its work between 1960 and 1962 provided the first 'systemic' view of the sector (Premfors 1981:260). In 1963 the Robbins Committee presented a report which made 178 recommendations. One of the most important recommendations was the famous Robbins principle. The principle stated that places in higher education should be provided for all people who are qualified and wanted to go to university (Stewart 1989:100 & 137). The government endorsed the Robbins principle and publicly welcomed several other major recommendations of Robbins (including the expansion proposals, promotion of Colleges of Advanced Technology to university status, and the creation of a national degree-awarding body) (Godwin 1998:176).

The binary higher education system, university sector and polytechnic sector were established by the then Labour Government in 1966. The polytechnic and other non-university institutions were often alluded to as the 'public sector' (Mahony 1994:73). The binary system was criticized by many supporters of integrated comprehensive higher

education. They argued that the elite universities fed into the long-term strategic requirements of high-level personnel, and the polytechnics would occupy a complementary role. Thus, a new type of inequality would be created by producing non-university students from polytechnics who were mainly from blue-collar origin (Neave 1985:348-350).

In the second development period (1970-1987), the expansion of the British higher education became moderate. In 1971-72 the net enrolment rate (excluding overseas students) was 14.2% of the age group (18-20) in 1972-73. The rate decreased to 12.7% in 1977-1978, and 12.4% in 1979-1980. The decrease might have been caused by the economic crisis in the middle of the 1970s and the reduction in real terms of the financial support from government (Steward 1989:157-158). Shattock (1981:381 & 385) also illustrates that there were two other reasons for the slowdown of the expansion. One was the decrease of the birth rate since 1946. Another was the disillusion amongst parents, young people, teachers and politicians over the benefits of higher education both to individuals and to society.

Since the mid 1980s, however, the Conservative Government adopted the so-called second policy approach. In this period the British government implemented policies which aimed at encouraging expansion, increasing university's efficiency and accountability while reducing costs (Green 1995: 225 & 227). In the 1990s the changing culture of the British higher education was dominated by the phenomenon of massification. Restructuring created a new environment which challenged many of the intellectual values, professional practices and institutional arrangements. Among others the binary system was replaced by a unitary one (Mackay, Scott & Smith 1995:193). Although the governmental funds were reduced, the total student numbers increased. Between 1989 and 1994, for instance, enrolments increased by over 50% and governmental expenditure per student fell by 30% (Williams 1997:275 & 276). McLean (1990:157) indicates that a market mechanism was created by the British government. Students were seen to be the consumers of teaching in higher education. The funding mechanisms were changed so that the allocation of public money for higher education

was to be tied to the capacity of institutions to meet student choices. This revolution signaled, at last, an attempt to apply a new philosophy of public service to higher education. Such strategic formulation was an appreciation of the crucial significance of competition between universities. Universities and former polytechnics, with their objectives of excellence and influence, compete with one another for financial resources and for higher quality staff and students (Moore 1989:119). Differentiation, both between and within institutions, was likely to characterize post-binary higher education. Along with this differentiation went both heightened competition between institutions and a search for secure niches in the developing mass higher education system (Mackay et al. 1995:194).

Watson and Bowden (1999:245) conclude the expansion and changes in British higher education had been achieved through huge efficiency gains. Between 1979 and 1996 the total student numbers were up from 777800 to 1659400. The net enrolment rate of the age group (18-19) rose from 12.4% to 32%.

2.7.2.1 Conclusion

The central feature of British higher education was the increase in the participation rate from an elite 5% in the early 1960s to a mass 30% by the mid-1990s (Barr & Crawford 1998:45). The development of British higher education experienced three different periods marked by fast expansion, stagnation and fundamental changes. British higher education reached a mass system in terms of quantity in the 1970s, but it may have transformed its system to a mass higher education in a fundamental way only in the 1980s and afterwards. The binary system in Britain can be interpreted as a transition stage in the movement to a mass system of higher education (Mahony 1994:71).

It seems that the different periods of the expansion reflected the different governmental policies on higher education in Britain. In the process of the transformation, the governmental strategies shifted from the Labour Government's university planning policies, to the Conservative Government's policies of giving universities greater

autonomy. The relationship between government and institutions has played a very important role in the development of British higher education.

Although the preliminary conclusions have been drawn above, the discussion on higher educational policies would not be complete without examining those policies concerned with funding, fees and structural changes. These factors have important implications for the transition to a mass higher education system. Therefore they deserve close investigation.

2.7.3 Funding and fee policies in Britain

Along with the large expansion after the war, the British Government rapidly raised the funds to universities. During 1947-52 the recurrent grant from the University Grants Committee (UGC) to the universities, increased by about 90%. For these five years £13m was spent on buildings, sites and equipment for universities. The total budget grew from £24.3m in 1953 to £41.5m in 1958 and £90.2m in 1963 (Stewart 1989:49).

The public sector had received strong financial support from the Labour Government since its establishment, which made it possible to grow rapidly in the 1960s. Just as Eustace (1982:287) notes the central government had accepted an open-ended commitment to provide whatever the public sector required as it expanded.

One of the effects of the increased funding was that universities became more dependent on the government. On the other hand, the government tended to use funding mechanisms to influence institutions to achieve its aims. For instance, the Labour Government tried to plan student numbers in certain subjects for the reason of manpower requirements. Between 1947 and 1952, 29% of the recurrent grant was specially earmarked to encourage developments in science and technology, medicine, and others which were needed by economy and society (Benn & Fieldhouse 1993:305).

The period between 1979-96 was one of radical changes in British higher education. The concern about numbers was beginning to be replaced by a concern about costs. The dominant themes of the British government were changed from student number targets, to concepts of productivity, efficiency, rationalization and financial control (Shattock 1984:471). Expenditure on higher education was cut severely during this period. The government subsidies for overseas students were withdrawn in 1980, reducing most universities' incomes by 5 to 10 per cent. In 1981 the public Expenditure White Paper announced further reductions in higher education expenditure by 15% over the next three years (Watson & Bowden 1999:244). The new Conservative Government of 1979 moved rapidly to end the open-ended commitment to the public sector. They cut the overall real resources to the public sector (Eustace 1982:287-288). Ball and Wilkinson (1994:417) observe that the British government moved towards a performance-orientated culture and striving for 'value for money'. University performance was linked to funds from the government.

Williams (1997:275 & 276) similarly states that the marketization policies were adopted in order to encourage universities and polytechnics to undertake research and consultation work for industries and to seek private donations.

Along with the changes in funding, the policy on student fees changed as well. Before the 1980s the British government adopted a means-tested grant policy. Students paid only a small amount of tuition fees. In 1968, for example, average fees for students of British origin were about £80 a year (Magnussen 1974:207). But in the 1980s the Conservative Government cut back sharply on funding for higher education, and was forced to introduce a loan system through Robert Jackson's White Paper of 1988 together with two Acts of the Parliament. Half of their means-tested grant converted into a loan administered through the Students Loan Company. The British government justified it that students should pay some of the fees because they benefit personally from their education. (Watson & Bowden 1999:253). The government also reasoned that loan-bearing customers (students) would use their consumer power to demand higher quality.

But the real reason was that the government could not afford the cost of continuing expanded higher education (Fulton 1991:601).

In conclusion, funding and fee policies have largely been changed in Britain since the wars. When the student numbers expanded dramatically, the expenses of higher education increased so much that the government had to press universities to find other financial sources. Universities had no choice but to link more closely with society. Universities provide services to society; in return they get material resources to develop. The demands of society in the modern time are diversified, thus higher education is required to provide different levels and different kinds of education. The establishment and later the elimination of the British binary system, were designed to meet such demands. These structural changes will be discussed in the next section.

2.7.4 The rise and the fall of British binary system

According to Shattock (1984:480), the period from 1963 to 1966 was crucial in establishing the modern structure of British higher education, culminating in the creation of the polytechnics. From the late 1960s to the late 1980s the pattern of British higher education was known as the 'binary system'. It was a dual system of autonomous universities on the one hand, and on the other hand, polytechnics and colleges offering sub-degree work and possibly some degree courses under the auspices of a central accreditation body (Godwin 1998:171). Mahony (1994:73) maintains that much of the growth in higher education occurred in this sector because it was less costly to government and access was usually easier. For instance, in 1989, the public sector had an enrolment of 595000 (of whom 280000 were in polytechnics) while the university enrolment was 380000.

There were three major differences between the university sector and the public sector. The universities were financed from central government while the public sector was funded by the Local Education Authority in which they were located. The universities were held to be autonomous, self-governing corporations, exercising complete control

over the content of their courses and validating their own individual degrees. This was not the case with the polytechnics or other establishments in the public sector. These differences in financing, validation and course structure were the main characteristics of the British binary system (Steedman 1982:194)

The polytechnics increased their access particularly through part-time provisions. Their links with industry were close, notably through the provision of sandwich courses. They were more directly responsive to community needs (Mahony 1994:72). Moore (1989:110) notes the strange phenomenon of polytechnics accepting students in different fields. They took arts and social study students in great numbers from amongst those who could not get into universities. At the same time, the polytechnics failed to enroll would-be scientists and engineers for which the polytechnics were originally intended, because these groups of students went to universities.

Watson and Bowden (1999:252) maintain that, through the really significant expansionary period of the late 1980s the university sector and public sector consciously behaved differently. The university sector resisted the temptation to grow by enrolling students at a marginal cost of tuition fees. The polytechnics apparently met the challenge as if growth had no end. Those failing to obtain university places sought refuge in the polytechnics, which caused the huge increase of enrolment in polytechnics (Neave 1985:359).

The increased success and the influence of the polytechnics led to a turning point of another structural change in British higher education. In 1989 the polytechnics became independent corporations, no longer under the control of local government. In 1992, the polytechnics upgraded to universities and were merged with the old universities into a single system (Green 1995:229). In the same year, legislation was passed by Parliament, creating a new funding framework for higher education. Universities, former polytechnics and the Open University all would be funded using a single funding methodology. This new framework ended the binary system and created a unitary one. These changes were revolutionary because it would allow Britain to develop a mass

higher education system (Daniel 1993:197). Benn and Fieldhouse (1993:309) maintained that the ending of the binary divide and separate funding, was a reward to the polytechnics for being more flexible, accessible and cheaper. The move was part of the ongoing process of pulling the universities which had opposite characteristics, into line. But Watson and Bowden (1999:246) argue that much of the contemporary rhetoric about the ending of the binary system was about 'leveling the playing field'; or enforcing value for money through overt competition for student places between the two former sectors. The intention of the move was described as 'letting the lean rats (the polytechnics) into the cage to chase the fat cats around'.

The establishing of the unitary system was affected by an increasing emphasis upon higher education as a vital national economic resource, and the need to make higher education institutions more efficient. As a result universities had a much closer relationship with government than ever before (Mahony 1994:71).

In a mass system student composition changes as well, with the increase of mature and part-time students. In Britain the numbers of mature, i.e. over 21, entrants to higher education increased by 50% between 1966 and 1980 while young entrants only increased by about 27%. In 1980 mature entrants comprised 24% of the home entry to higher education. Since 1969-70 part-time higher education grew by 79% and its share of total higher education numbers rose from 26% to 37% over the period (Shattock 1981:381). The Open University was established in the early 1970s. It provides for part-time studies. The establishment of the Open University is both a cause and an effect of the development of mass higher education (Daniel 1992:115; 1993:199). But Premfors (1981:256) argues otherwise, that although the Open University was a radical structural innovation, it was in many ways non-radical. This was particularly true in respect of what was taught, in contrast with the innovatory nature of how it was taught (although even here it should be remembered that the classical textbook dominates).

Up to now we may conclude that both the rise (1960s) and fall (1990s) of the binary system stimulated enlargement of intakes in British higher education, but in different

ways. In the binary system, the public sector played an important role to provide the second best choices to those who could not go to universities. In the unitary system, both old universities and former polytechnics were thrown into a 'battle field' where they have to compete for students. It seems that such market mechanisms led to the fundamental changes in British higher education.

2.7.5 Conclusion

The policy of providing all who qualify, with higher education (cf 2.8.2), the Robbins Principal, may have been the threshold to massify British higher education. Thereafter, there were many initiatives and debates in the process of the development of higher education. Among them, finance (funding and fees) and structures were two important issues which influenced British higher education. Contrary to the Labour Government policies, since the 1980s, the Conservative Government introduced student fees and market mechanisms to reduce governmental costs and to increase the efficiency in higher education. It seems that the Conservative Government achieved its goals.

The Labour and the Conservative Governments reached a consensus on the diversification of the higher education systems. But they adopted two different, even contradicted, approaches. The Labour Government created the binary systems in the 1950s to diversify its higher education. The Conservative Government otherwise eliminated the binary systems and established a unitary system in the 1990s (cf 2.8.4). In the unitary system the former public sector or non-university sector, was up-graded to the status of a university in terms of name and ways of funding. In the meantime, the former public sector seems to have retained its character of flexibility in study, strength in applied sciences and in-expensiveness in costs. These successful British experiences may be valuable to developing countries, such as China, which are about to transform their higher education systems.

As another successful example of the transition from elite to mass higher education, Australia underwent similar as well as different higher educational expansions. Its

experiences will enrich the understanding of the complex scenario of massification, and therefore, is worthy to be examined in the next section.

2.8 Some aspects of development of higher education in Australia

2.8.1 Introduction

It may be because of the historical link with Britain, or may be because of the international trend, or both, the Australian higher education experienced similar developments to that of Britain, though with some differences. Australia's higher education underwent a rapid quantity expansion since the Second World War. But the fundamental changes only took place since the 1980s when the Australian government adopted policies to compel universities to be more responsive to the needs of society. Funding is an important tool for a government to influence institutions. It is also the key issue which decides the expansion scale of higher education. Besides, in the process of the transition, the higher educational structures were changed in Australia to adapt to the mass system.

The higher education system of Australia has expanded considerably since the Second World War. This expansion has been accompanied by significant funding and structural changes (Ledgar 1996:106). The development period since the war, is mostly related to the topic of massification. Therefore, the postwar period is the time boundary of the present research.

In this study the process of massification, the policies on funding and fees and the changes of structure in Australian higher education, will be discussed in the following three sections.

2.8.2 Process of the transition from elite to mass higher education in Australia

In Australia, like in other OECD countries, the expansion of higher education was demanded by the economic development to supply more skilled manpower, to adapt to

technological changes, as well as by the shifting of industrial structures characterized by the increase of the service sector (Dawkins 1987:1-2 & 8). Gallagher, Osborne and Postle (1996:435) also maintain that the development of access policies must be seen as part of a wider process of changes, in which the higher education systems are being encouraged to expand, and to reorganize, in moves towards 'mass' systems of higher education. These changes were driven by underlying economic agendas. While influenced by economic factors, the Government also placed an emphasis on social justice or equality. As a matter of fact, equality retained a stronger presence in the Australian educational policy than it did in many other comparable OECD nations (Lingard et al. 1994:2).

The development of Australian higher education can be roughly divided into two periods since the Second World War. The first was the post-war boom period, lasting from the end of the war to the mid 1970s. The second was the post-boom period, from the mid-to-late 1970s until present, marked by a significant reorganization of higher education, beginning in the late 1980s and continuing into the 1990s (McCollow & Knight 1993:9).

In the first development period, the student numbers increased more than ten times from 15000 in 1944 to 154000 in 1976 (Karmel 1978:1). The proportion of the age group (17-22 year old) enrolled in higher education, quadrupled, from 3.75% in 1955, to 16% in 1975 (Ledgar 1996:106-107).

In this period, there were two important governmental initiatives. One of them was the Murray Report of 1957. According to this report, the Commonwealth Government substantially increased its funding to universities. Another one was the establishment of the Colleges of Advanced Education (CAEs) as a result of the Martin Report in 1964 (McCollow & Knight 1993:10-11). Since then the Australian binary higher education system was formed, which will be further discussed later.

In the second development period, Currie and Baldock (1989:7) observe that the long boom came to an end in the late 1970s. The government's funds were restricted and cutback due to depressed economic circumstances. Enrolments leveled off. In the 1970s

and early 1980s the participation rates of the age group of 17 years old, actually declined from a high of 18% in 1974 to 14% in 1982. In about 1983 the retention rates at Year 12 started to improve, along with an increase in the demand for higher education, but the numbers of students enrolled in higher education in that year (168639 university students and 179893 CAE students) were only marginally above the mid-1970 figures (Meek 1991:467). Since then, the participation rates increased rapidly again, and reached 30%. Overall numbers of students increased to some 600000 in 1995 (Ledgar 1996:106-107).

The growth in numbers of foreign students, mainly from other Asian countries, was dramatic, nearly doubling during the same period. What were once 19 public universities became 37, largely through the metamorphosis or upgrading of previously specialized technical or teacher-training institutions (O'Neil 1994:136).

McCollow and Knight (1993:14) also observe that the impact of the fund cuts was obvious. Higher education institutions had to compete with each other for scarce funds. Programs were retracted or revised in order to provide value for money.

Meek (1991:467) notes the Australian government's Green Paper proposed profound changes in higher education in 1987. A marketized mechanism was introduced to improve the efficiency of higher education and to increase the participation. Higher education was requested to become more adaptive and responsive to societal needs and demands, and more instrumental in bringing about the economic upturn which was necessary to retain Australian's competitive position in the world market. These policies have led to many changes in the higher education sector. Economic rationalism was all pervading throughout this period. Higher education was clearly used by the Labor Government as one of the instruments for micro-economic reform (Bowen 1993:42).

In 1988, the Government abolished the binary system of universities and colleges. The Unified National System was created. The number of institutions was reduced by about a third. The effects of this on Australian higher education as a whole were far-reaching (Carpenter & Hayden 1993:201), which will be discussed later.

O'Brien (1990:256) argues that the Dawkins agenda placed much greater emphasis on instrumentalist considerations than on more 'traditional' notions of higher education institutions. Traditional ways might not be favoured if their research and teaching took place without undue emphasis being given to the relationship of those activities to the needs and demands of the broader society.

These new policies contributed to a substantially expanded provision of higher education places. But it also precipitated a number of policy dilemmas. On the one hand, these marketized policies sought to provide more efficient and effective higher education geared to the government's macro and micro economic reform agendas (Lingard et al. 1994:2). But on the other hand, increasing the participation in higher education was seen by the government as an important mechanism for the reduction of educational inequalities (Currie & Baldock 1989:5). These two objectives are sometime contradictory.

The way the Australian government adopted to resolve these dilemmas, was by implementing the marketized policies to improve the efficiency of the higher education on the one hand, and introducing a range of more direct measures to improve access to education by disadvantaged groups on the other hand (Dawkins 1987:22). But Lingard et al. (1994:4-5) observe although there was some effectiveness of these direct policies, the disadvantaged groups were still not represented proportionately to their numbers in the total population.

2.8.2.1 Conclusion

The transition to mass higher education in Australia followed similar patterns to that in Britain. The fast expansion of higher education since the Second World War was created by the increasing of governmental funds and establishment of the binary system. The fundamental changes took place when the government adopted marketized policies. The implications of the policies for institutions were that they had to change themselves to be more adaptive and responsive to the needs and demands by society and economy. In return

they got enough resources to support further expansions. Although the policy was successful in terms of massification, it may raise concerns about the issue of equality. This is an unresolved policy dilemma which needs to be considered by any government.

Funding and fee policies are the key instruments for government to influence institutions. They therefore deserve investigation.

2.8.3 Funding and fees

During the long post-war boom in higher education, the Australian government substantially increased its funding to higher education, and at the same time increased governmental intervention as well. Two policies among others were adopted in 1974. According to the first, the Commonwealth Government assumed the total responsibility for higher educational funding. According to the second, tuition fees were abolished in order to increase the numbers of students from disadvantaged families (McCollow & Knight 1993:9).

But towards the end of the 1980s, though participation in higher education was increasing, the reduction of inequality was not obvious. This gave the government an excuse to resume the fee charge policies (Meek & Wood 1997:257). In 1996, public funding to public universities was reduced by 12-15% over the 1997 to 1999 period. This forced all student fees to increase from 35% to 125%, varying by different courses (Marginson 1997:467).

The ravages of sustained levels of funding were compounded by government's demands to enroll substantially more students in 1994. Thus the universities had to seek private support from alumni, corporations, and others (O'Neil 1994:135). Smart (1986:16-17) also observes that apart from government funds, institutions were pressed to seek non-governmental funds as well. Institutions may export their services by recruiting full-fee overseas students and offering offshore educational services. They may also get funds by doing research or consultant work for the private sector. Furthermore, the government

eventually resumed student charges, which became an important part of the institutions' incomes.

In 1987 a higher education administrating charge (\$250 in 1987) and the Higher Education Contribution Scheme (\$1800 in 1989) were introduced for all full-time and part-time higher education students in 1987 and 1989 respectively. These were the first two direct charges on higher education students since the abolition of tuition fees in 1974. Students from less well-off backgrounds were either exempt from the charges or assisted by a means-tested financial support scheme, namely AUSTUDY (Carpenter & Hayden 1993:200-201).

Meek and Wood (1997:253) conclude that the privatization of public higher education and the introduction of market-like relationships to achieve both greater institutional efficiency and adaptability, have been key features of the Australian higher education policy since the late 1980s.

Although partial privatization was implemented, the Commonwealth Government still directly funds almost all higher education institutions. It provides the operating and capital funds for the 36 institutions and, in total, about two-thirds of the income of the higher education system. Other sources of income for these institutions include grants from the State and Territorial Governments for specific purposes, student payments under the Higher Education Contribution Scheme, fees for postgraduate programmes, overseas student fees, contributions from industry, bequests and donations (Ledgar 1996:105). In the five years after 1987, enrollments grew 42% (from 393734 to 559365). The growth was partly financed by the introduction of the Higher Education Contribution Scheme (HECS) at one fifth of the average course costs. International students and some postgraduate students began to be charged full fees. Because of these changes, governmental funds were reduced to 60% of the total funding by 1995. Higher participation and mixed public-private funding, the aims of the government, had been achieved (Marginson 1997:466).

Currie and Baldock (1989:7) argues that despite the expansion into a mass system in Australia, its social composition in higher education may not be altered because of two countervailing forces: Dawkins' introduction of student charges which was likely to discourage working-class participation and the resistant attitude of many tertiary institutions to make a dramatic change to their admission criteria.

The Australian government's policies of fund cuts and fee resumption in the 1980s were in contrast with its policies of fund increasing and fee abolishing in the 1970s. It is the researcher's judgement that the policy changes may not indicate that the previous ones were wrong. It is rather that such policy in-consistencies reflected the changes of the contextual factors and higher education itself, especially its great expansions. The government had no choice but to change its funding and fee policies to achieve its economic and political aims.

It is not difficult to see that these changes in higher education policies and contextual factors caused the structural changes in Australia's higher education system. These structural changes will be examined in the next section.

2.8.4 The structural changes in Australia's higher education: the binary system and the Unified National System

According to Meek (1991:466), the political and social pressures to further expand higher education intensified in the early 1960s. In 1961 the Committee on the Future of Tertiary Education in Australia (Martin Committee) was appointed to charter the course of development of Australian higher education. The Martin Committee wanted to expand higher education in a way of less expense rather than enlarging universities. According to the proposal of the committee, Colleges of Advanced Education (CAEs) were created in the mid-1960s. Thus the existing universities and newly established CAEs formed the Australian binary system. CAEs were intended to cater for students who wanted access to higher education but could not go to the traditional universities. Compared with universities the CAEs emphasized teaching rather than research and had a more localized

and specifically vocational focus. They were also considerably cheaper to fund (McCollow & Knight 1993:11).

Mahony (1994:73) observes that the binary system had a profound impact on the expansion. 70% of the increase in higher education enrolments, during the period 1977-87, in Australia, was absorbed by the CAEs. Such a development contributed to successful pressure for parity of awards with the universities, notably in replacing a diploma with a degree, in courses of similar length, in which CAEs used to be different from universities.

Although the CAEs had success in the past, the binary structure of higher education had probably reached its limits, both in terms of its capacity to absorb further expansion and in terms of the structural and philosophical contradictions it expressed. The elimination of the binary system was proposed. The government hoped that the destruction of the binary system and its replacement by the Unified National System would promote diversity and equity (Meek 1991:482 & 488). Dawkins (1987:30), then the Minister for Education, also noted that there was no longer any structural reasons for universities and CAEs in close proximity to remain as separate entities, particularly where existing facilities were contiguous. It was in the area of consolidating adjacent campuses that the greatest potential existed for savings in administrative costs. The full benefits of consolidating institutions would also require appropriate rationalization of course offerings.

According to the Dawkins Green and White Papers, the binary system was replaced by the Unified National System. Universities and CAEs from around 70 institutions rationalized or amalgamated to around 40 universities (McCollow & Knight 1993:14). Mahony (1994:71) concludes that the binary system in Australia, like in Britain, can be interpreted as a transition stage in the movement to a mass system of higher education based upon one type of institution, the university.

Since the establishment of the Unified National System, Ledger (1996:107) maintains that universities became larger, more diverse and more efficient. The student numbers in Australian higher education increased 35.8% over the four-year period 1987-91. However, this increase in access did not necessarily reflect a widening of access to previously disadvantaged and under-represented groups (Gallagher et al. 1996:430). Dawkins (1987:22), therefore, contended that along with the expansion of the higher education system, a range of more direct measures needed to be taken to improve access to education by these disadvantaged groups.

Apart from the universities, it may be worthwhile to mention that distance education institutions were another means of increasing and widening access to higher education. In Australia the geographical disadvantages suffered by a large section of the population, led the government to emphasize distance education as one aspect of its equity programme. As a result of the 1988 White Paper eight distance education centres, in existing campus-based universities, were set up across Australia, with the aim of providing total coverage (Gallagher et al. 1996:429-430). Open Learning Australia operates as a broker of educational services, linking students and universities. The numbers of students who undertook study through distance education increased. In 1995, there were 75198 students taking university courses externally (12% of the total national university student population) (Ledgar 1996:110).

2.8.5 Conclusion

In this section the process of the massification of higher education in Australia has been studied. The policies on the changes in structures, funding and fees, have also been identified. The process of massification in Australian followed similar routes to that of the British. The rapid expansion of higher education was followed by radical changes, and eventually transferred to a mass system. It seems that the higher education can expand without fundamental changes until the government can no longer afford it. When the higher education further expands the government will have to change its funding and fee policies, which will then influence other aspects of higher education as well. The

policy which the Australian government adopted to further the expansion, was introducing a market mechanism into higher education. Under such a mechanism the institutions had to compete with each other for the limited funds. It is remarkable that such a single policy brought about such radical changes. The institutions must diversify and change themselves, in terms of study, teaching, research and administration, to meet different needs from society and economy. They must emphasize applied science and skills to train such highly-qualified and skilled manpower for society. They, in return, get from society the material resources which are necessary for further development. We may conclude that, due to these broad changes, Australia, like Britain, realized its transition from elite to mass higher education.

After the investigation of the phenomenon of massification and the case studies on Britain and Australia, the strategies for the transition from elite to mass higher education will be investigated in the next section.

2.9 Strategies for the transition from elite to mass higher education

2.9.1 Introduction

In the previous sections the researcher reviewed the general theories on the transition and the interactions between higher education and its contextual factors. The case studies of the experiences of the massifications of Britain and Australia were presented. In addition, the strategies for the transition from elite to mass higher education are identified in this section. Such identification may also be regarded as the findings from the previous investigation. These strategies will be directly relevant to the following study concerning the strategies which are adopted by the Chinese government to massify its higher education.

In this section there are six sub-sections: introduction, strategies in general, equality, studies, research and the conclusion. In the next sub-section the general strategies will be discussed.

2.9.2 Strategies in general

According to Huang (1998:57), there are two ways to massify higher education. One is to expand and improve the efficiency of existing institutions. Another one is to establish new ones, including encouraging the development of private institutions. In the 21st century the shortage of funds for higher education is a common problem in the world. An effective way to resolve this problem is to develop a private higher education sector, which is especially important for a developing country. Along with university system, a non-traditional university sector can be established to enlarge the enrolment. In Britain much of the growth in higher education occurred in this newly established sector, because it is less costly to government and easier to access (Mahony 1994:73; cf 2.7.4). A similar policy has also been adopted by the Australian government (cf 2.8.4).

Before the above concrete policies can be made to expand higher education, it is important for policy makers to understand the real meaning of the transition from elite to mass higher education. They need firstly to change the elite ideologies. Scott (1995:9-10) explains, that the transition from elite to mass higher education cannot be understood simply in terms, either of the evolution of higher education systems, such as the expansion of student numbers or structural reforms; or of the substitution of one paradigm, labeled 'mass', for another, labeled 'elite'. Instead it must rather be interpreted in the context of the restless synergy between plural modernizations of the academy, polity, economy, society and culture. A thousand years of building and treasuring high-level intellectual fortresses have made such a deep impression, that it is impossible to dismiss the sentries at the gate. In contemplating changes in higher education, elitist planners must first address themselves to their own psychological reservations (Bereday 1973:142).

Cerych et al. (1974:48) argue that massification, characterized by a more open, flexible and diversified system of higher education, will not come about spontaneously. It will need to be supported by a governmental planning process. It should be encouraged to

create a system of incentives, rewards and other devices, necessary to promote the acceptance of change in the face of established values and social inertia. Unity or co-ordination and planning, and diversity are two essential, but contradictory, characteristics of the structures of mass higher education. These two facets have to be reconciled and balanced.

Mass movements in higher education seem to proceed according to two stages. At the beginning, problems of university entrance loom large and pressure for admission dominates the scene. Since universities nearly always resist the masses, the masses must first assault the structure itself. Secondly, once the masses are within the university they turn their attention to other issues: curriculum, relevance of content, and the methods of presentation (Bereday 1973: 12).

Teichler (1988:19-22) describes chronologically, that all Western industrialized countries have gone through more or less the same stages of debate on higher educational policies. The first stage occupied most countries in the latter half of the 1950s and the early 1960s. People believed that the expansion of higher education could promote technical, economic and social progress. In this period OECD countries rapidly expanded their higher education without changes in the institutional structure or in the pattern of course programmes. The second stage was from the latter half of the 1960s and early 1970s. The debate concentrated on the search for a modern structure for higher education systems which could absorb increasing numbers of diversified students. The third stage was experienced in the 1970's. Higher educational policies were characterized by a loss of grandiose concepts when 'over-education' and no substantial enhancement of the social chances of the disadvantaged were prevalent. During the 1980s, a new stage of higher educational policies has emerged. More flexible planning took root again.

Taylor (1974:157) adds that the following policies should be adopted: flexibility in, for example, admission; innovation in the structure and organization; content of courses are linked by all kinds of research and development activities; cooperation among institutions

regarding teaching and research; transferability of credit for work done in different places and at different stages of an individual's career.

The Australian government introduced market mechanisms into the higher educational system. Institutions are encouraged to seek non-governmental funds and improve the efficiency because funds from government are normally far from sufficient (Meek & Wood 1997:270)

Marginson (1997:468) also observes, that the relative autonomy of the British and Australian model of public university, was crucial. It allowed individual universities to develop as entrepreneurial corporations without losing continuity of function. The government steered the system via financial mechanisms and quality audits rather than by prescribing activities directly. This enabled the emergence of a competitive national market of self-managing institutions, in which elite institutions and elite enclaves within institutions coexisted flexibly with massification.

In short, transition from elite to mass higher education is a radical change. People, especially the policy makers, need to change their traditional views on the mass system, which is important for making and implementing relevant policies. A market mechanism seems an effective way to promote the transition, because it encourages institutions to seek and compete for additional funds to expand its learning and teaching. British and Australian experiences have revealed the effectiveness of such a policy. Developing the non-traditional higher education sector, including private institutions, is an important way to expand higher education with less governmental investment.

Apart from these general strategy discussions, there are also strategies with regard to the aspects of equality, diversification, study, teaching and research. These policy aspects will be discussed separately in the following sections.

2.9.3 Equality

According to Bereday (1973:143), equality means that mass universities can not remain elitist and cater only for the best, it also means that they must not cater to all in equal measure. Mass institutions are not egalitarian but compensatory. All human beings are infinitely educable, and when they are not, the reasons are not innate but environmental and therefore curable. It is the researcher's view that such an argument is especially important in China. Some social groups, like ethnic nationalities or those in rural areas, are in a disadvantaged position when they compete with students from cities for a placement in higher education. Therefore the inequality will remain unless the government introduces compensatory policies. Australia adopted such policies (cf 2.4.2) and so did the government of Ireland. According to the recommendations of the Steering Committee of Ireland, each institution designates an equality officer to coordinate affirmative action within the institution and to liaise with other equality organizations. The Ireland White Paper states that each institution will be responsible to the Higher Education Authority for developing direct policies to improve access from disadvantaged areas and groups to the system. The Steering Committee recommends a stronger form of affirmative action suggesting that a pool of reserved places for students from disadvantaged backgrounds be kept. There would then be alternative entrance requirements for these students (Clancy 1996:366-367).

In 1989 the Australian government created the Higher Education Equity Programme which aimed at increasing the access and participation of groups who were traditionally under-represented in higher education. One of the ways it does this is to support compensatory programs to improve disadvantaged students' ability to compete for university places. Nearly every university in Australia has one of these programs (McNamee & Maxwell 1993:207).

But Sillitoe and Toomey (1989:22) observe that the unequal access is more difficult to address when there is a large demand on the education system to provide places for those who are eligible to join higher education, but for whom there are no available places.

Tuition fees are big obstacles for equality. In 1995 the Irish government announced its intention to abolish all undergraduate fees from 1996/97. An important rationale advanced for the abolition of tuition fees was that it would remove important financial and psychological barriers to participation at higher education (Clancy 1996:367). But as has been discussed, most governments cannot afford the mass system. Charging tuition fees is one of the ways to resolve the shortage of funds (cf 2.3.2.2). It is especially the case in developing countries.

Dougherty (1997:70) comments that educational reform is a rather indirect means to combat the many macroeconomic forces that are widening class inequality. To be sure, educational reform is an important device in the pursuit of social equality, but we should never take it to be the primary one.

We may conclude that it seems the mere expansion of higher education cannot largely improve equality. Some direct compensatory policies are needed to support the disadvantaged groups. When a government cannot afford the expansion of higher education, a policy of charging fees, seems inevitable. But such a policy should be accompanied by some kind of student assistance scheme to minimize the negative influence on equality (see also cf 2.3.2.2).

Diversification is a key characteristic in a mass system. It will be discussed in the next section.

2.9.4 Diversification

Different countries adopt different policies toward diversification. The government of Ireland strongly endorsed the binary system, arguing that, because of the multiple purposes of higher education, there was a need to have a diversity of institutions with distinctive aims and objectives. The non-traditional university sector offers the more practically orientated or applied degree programmes while the university sector offers the

more academic programmes (Clancy 1996:365-366). De Ruder (1994:208) also discovers, that the policy of expansion was connected with a major structural reform of the higher education system in West Germany. It founded polytechnic colleges as a second sector of higher education. But in Australia, in order to achieve economics of scale, the government redefined all the colleges as universities in exchange for their agreeing to form alliances with existing universities or other colleges. Thus the binary system was replaced by a unitary one (Lowe 1990:13). This does not mean that the Australian government opposes diversity. Although the former colleges were entitled to or merged with the universities, the characteristics remained the same. They are still different from the former university sectors (cf 2.8.4).

McConnell and Berdahl (1973:81) maintain that anything approaching mass higher education will ultimately require diversified institutions, to serve students encompassing a wider range of academic ability, as well as special aptitudes, interests, and expectations.

Lifelong learning as another form of higher education, is characterized by its unstructured nature, and is based on the philosophy that education should be openly and easily accessible to all at any time of life; it establishes that self-improvement and enrichment are goals that are equally as important as the need to update professional and vocational skills; it relies on the understanding that such an educational experience should be available either on a full-time or part-time basis when required; and it implies that some government funding is necessary to facilitate these opportunities (Candy & Crebert 1991:7).

As one aspect of diversification, continuing education can make a major contribution to both individual and social prosperity. Expanded and nationally-coordinated provision of continuing education in the distance mode, would be a cost-effective means of increasing access, particularly for those disadvantaged by geography, family commitments or physical disability (Neumann & Lindsay 1986:46-47).

Private institutions are another form of higher education. They are an important option, especially when governments can not fund the expansion to meet the social demand for higher education. Japan and India adopted the policy to encourage private institutions. But in Australia, instead of creating a private sector, the government partially marketizes the public universities, introducing the market mechanism into higher education (Marginson 1997:464 & 467; cf 2.8.2)

Up to now we may conclude that higher education is diversified, in mass systems, to meet the multiple demands from society. Along with traditional universities there should also be other forms of higher education, like technical institutions, lifelong learning, distance learning and private institutions. The danger of such endeavours is the emerging of new inequalities between the traditional university sector which may be regarded as noble and the newly established non-traditional institution sector which may be regarded as less noble. There may be two approaches to resolve such dilemmas. The first, the new institutions or patterns of study could be given a certain number of attributes which make their image slightly resemble that of the traditional, prestigious institutions. For example, the word 'university' can be included in the name of the institution; the standards are considered to be as high; the degrees awarded are of the same kind; the duration of study is more or less equivalent to those in universities. The danger of this approach is obvious: by trying to resemble the traditional 'noble' model of higher education, the new schemes might rapidly miss the very purpose for which they were created (Cerych et al. 1974:44-45). According to the second, devices and mechanisms could be provided which closely link the old and the new patterns. This implies in particular the creation of transfer possibilities for students between the traditional and non-traditional forms of study (Bereday 1973:60).

Apart from the structural changes which have been discussed in this section, the pattern of studies is changing in the process of massification, which should be discussed.

2.9.5 Studies

In the 21st century, the modernization of society, science and technology requires that students must learn new technology and a broad range of knowledge. The curriculum which used to focus on the old existing knowledge, should be changed to one which focuses on old and new knowledge, also trends in the future (Chen & Qu 1999:29).

In the process of massification four broad shifts can be identified in teaching: from courses/qualifications to credits/outcomes; from discipline-based departments to looser frameworks; from subject-based teaching to student-centered learning; and from knowledge to competence (Scott 1995:154-162).

Esnault and Pas (1974:166) emphasize that study policies should be reflected in a strengthening of the vocational components of education. It will not be designed to raise all students to the same level, but rather to one which corresponds to their abilities. It follows that a career education policy should take the form of a qualitative adjustment, in terms of curricula, structure and the criteria governing streaming. Policies should be avoided which make education more selective or restricted. It is vital not to educate students for too narrow a career. The pace of technological and societal change requires an education designed to enable students to change careers, as well as to acquire a career (Taylor 1974:161). Yan (2000:57) also argues that institutions should require students to learn broad knowledge, instead of focusing on too narrow subjects. Students in one field, such as liberal arts, should learn some science, and vice versa. In doing so, students will easier adapt to the changes of future job markets when they graduate.

The curricula and study content must be adjusted consistently to adapt to the changes in manpower markets. Institutions should be closely in contact with industries, governmental planning or information departments to get updated information about the employment demands (Liu 2000:32).

When higher education is expanded, the differentiation of students' academic background becomes larger. Thus the methodology of learning and teaching must be reformed to adapt to these changes. The credit system is an effective way to meet the needs from different students. In the meantime, some kind of bridging courses could also be introduced to improve the basic knowledge of the students who may need assistance. The emphasis of learning should be put on the training of ability, rather on highly specialized knowledge, especially in undergraduate levels (Ma et al. 2000:34; Yan 2000:57).

Scott (1995:186) argues that quality systems must be devised to reassure those alarmed about academic standards. Credit systems must be introduced to enable students to drop in and out and to chop and change courses. Explicit teaching and learning strategies must be introduced to make the best use of new technologies. Taylor (1974:167) agrees that the 'credit system' remains the only method which can fulfil the difficult requirements of mass higher education.

Along with expansion, the quality of education must be given due emphasis. Increasing and improving facilities of institutions and training enough qualified teachers are foundations to guarantee such quality, especially in developing countries where educational sources are limited (Ma et al. 2000:34).

We conclude that, in the process of massification, the pattern, content and emphasis of studies will be changed. Teacher-centered or subject-based learning is shifted to the student-centered learning. This is an ideological and fundamental shift in the studies in higher education. The credit system is an ideal way to carry out the new ideology of learning. Students can choose the courses they are interested in, the time that will be convenient to them and even the institution they would prefer. But the shortcomings of such a system, should be avoided (cf 2.2.8).

While the emphasis of mass higher education has shifted to applied knowledge and skill training, the research, especially the basic research, is a matter of concern for scholars and policy makers. Thus the strategies related the issue deserves an examination.

2.9.6 Research

According to Dawkins (1987:65), Australian Minister for Education, research and postgraduate studies have a vital role to play in the continuing development of the Australian economy, in enhancing its national capacity and to adapt to changed social, cultural and economic circumstances. He further describes that, in Australia most fundamental or basic research is undertaken in universities. Applied research efforts are more widely distributed across universities, some colleges of advanced education and other government agencies.

Research and learning are interactive and mutually related. A rigid separation of research and learning, especially at the level of higher education, should be prevented (Smelser 1974:87).

Budgetary policies relating to basic research should be tailored to avoid short-term fluctuations in patterns of support. The American experience has indicated, that the institutional position of the basic-research establishment, is a particularly vulnerable one, and cannot be expected to thrive, or even survive, if policy-makers respond mainly to short-term political pressures (Smelser 1974:88).

Governments should encourage institutions to establish democratic political decision-making mechanisms. This represents the precondition for making research and learning processes responsive to external problems. Interdisciplinary or interdepartmental research should be emphasized although departments of institutions normally resist it (Weingart 1974:111).

McConnell and Berdahl (1973:95) state that the American experience suggests that since not all universities can become distinguished centres of research and postgraduate education, all the institutions should not expend precious resources in trying to attain such status. The British government's response to the funding deficiencies throughout the 1980s was to concentrate limited resources on the large units. It built centres of

excellence, special research centres and key centres. But it is fair to say that there is little evidence that the concentration of resources achieves measurable disproportionate productivity (Lowe 1990:15).

Barnett (1990:122) argues that research is not a part of what we understand higher education to be. Institutions of higher education do not need to conduct research in order to justify the title 'institution of higher education'. Nor are institutions of higher education or their staff obliged to conduct research. If we are really concerned about higher education, it is to higher education that we must turn, rather than research. But, Dawkins (1987:65) insists that basic research, with outcomes that are long-range and often unpredictable, continues to be an important activity of higher education institutions.

It might be concluded, that research, especially basic research has a long term influence on the development of economics and on institutions themselves. In a mass system, where market mechanisms are applied, basic research is particularly venerable as it cannot bring the institutions immediate benefits. So a government should pay special attention to it when making budgetary policies. As a mass system is so diverse, it may not be effective and economical for every institution to engage in basic research.

2. 10 Conclusion

In this chapter the general theories regarding the strategies for the transition from elite to mass higher education have been reviewed. The transition experiences of Britain and Australia have also been examined. These studies enabled the researcher to obtain a broad view on the phenomenon of mass higher education and the complexity of massification.

The strategies for the transition must be made not only inside a higher education system itself, such as: enrollment, curriculum, studies, teaching, research and administration, but also in the context of plural modernizations of polity, economy, society, science and technology. An important, but most difficult change to make, may be the changes of

people's values and ideologies. The traditional value and psychological reservations of elitists must be shifted to adapt to the transition.

In practice there may be two major methods to expand higher education. One is expanding existing higher education institutions. Another is creating new ones. To meet diversified demands from modern society, a greater emphasis should be placed on less traditional forms of higher education, such as private institutions, part-time courses and lifelong learning. For social and political reasons governments, should continue and even increase this investment on higher education, and at the same time students must contribute to their studies in the way of paying fees.

The experiences of Britain and Australia showed the success of market mechanism policies in the process of the transition. The strategy succeeded in two ways. The first one was the improvement of the efficiency of higher education systems. The second was that institutions were pressed to be more responsive to the society. In return they got material resources for further development. Such strategies may be particularly important to China because the efficiency of higher education is poor and funds for higher education are very limited in the country. The danger of the policy is the possibility of increasing inequality because there are often conflicts between issues of efficiency and equality. Therefore, some compensatory policies should be made to support the disadvantaged groups.

Massification has both positive and negative consequences. With regard to positive consequences, the expansion of higher education improves the overall level of the quality of human resources, which contributes to the economic and social development of a country. It will also have positive impacts on equality. The social-class gap in access to higher education may begin to close to a certain extent. The most negative consequence of mass higher education, is perhaps the expense. It will cost students, their families, and a society a huge amount of money to finance a large increase in participation in higher education.

Massification is one of the phenomena of modernization of a country. The literature and theories on the issue, therefore, largely come from the experiences of developed countries especially in OECD countries. It seems inevitable that there are both similarities and differences between these experiences and the realities of China, some of which have been mentioned in the beginning of this chapter. It is the next chapter's aim to examine these similarities and differences with regard to the realities in China.

CHAPTER 3

3 STRATEGIES FOR THE TRANSITION FROM ELITE TO MASS HIGHER EDUCATION AND ITS CONTEXTUAL FACTORS IN CHINA

3.1 Introduction

The relevant theories on the massification of higher education in some developed countries and the experiences of Britain and Australia have been reviewed in the last chapter. Through the comprehensive literature study, the key relevant issues have been identified. This literature serves as a theoretical basis for examining Chinese strategies for the transition.

In the present chapter, according to the aim of the research (cf 1.3), the researcher uses the literature study method to investigate the strategies for the transition from elite to mass higher education in China. These strategies comprise those relating to economic, political and social motivations, and also those relating to higher education itself.

The focus of the present research is on the macro policies which the government or institutions adopted to expand and eventually transform higher education to a mass system. Therefore the emphasis is on these policies, instead of the internal administration and curriculum of institutions or individual institutional operations.

In order to provide a systematic discussion, the problem was divided into three sub-problems:

- a. Interaction between higher education and its influential factors: economy, politics, society and population in China.
- b. Strategies for the transition from elite to mass higher education in China.

c. Prospects for the development of higher education in China in the next ten years.

China has a long history of civilization. A culture and tradition of higher learning has existed for thousands of years. But modern higher education originated from the West only in the 19th century. To understand Chinese higher education of today, a brief review of its history is necessary.

3.1.1 History of Chinese higher education

The historical development of higher education in China can be traced back to more than 3000 years. Bi Yong in Western Zhou dynasty (1100 - 770 BC), Tai Xue in Han dynasty (206 BC - 220 AD), and Guo Zi Jian in Sui dynasty (581 - 618 AD), were all institutions dedicated to the training of high-ranking officials. The content of training was mainly Confucianism, the feudal ethical code, music, poetry, hunting skills, numeracy, etc. Nevertheless, although of high educational status, these were not institutions of higher learning in the modern sense (Zhou, M.X. 1999:83-84). The history of modern higher education in China is very recent, of not more than 130 years duration. The Chinese modern higher education system was developed firstly, in order to study Western languages and science. The establishment of the institution, namely Jing Shi Tong Wen Guan, in 1862, was regarded as the start of Chinese modern higher education. Jing Shi Tong Wen Guan aimed at teaching English, French and Russian at the beginning. There were altogether only three teachers. There were ten students each in English, French and Russian. It was equivalent to the primary level of today's education. In 1866, Jing Shi Tong Wen Guan added subjects, such as astronomy and mathematics. A chemistry laboratory and a museum were set up later. The student numbers increased to about 100. The level of learning also improved (Zheng 1994:3 & 30-33). In 1903 the government of the Qing dynasty proclaimed the Gui Mao system of higher education. The system was borrowed from Japan. In 1922 the Bei Yang warlord government proclaimed the Ren Xu system which was borrowed from the United States. The Ren Xu system existed until the liberation of China in 1949. The higher education in China, before the liberation, was merely an embellishment for the ruling class, and contributed very little to the

development of society. The development of talent and human resources was achieved mainly by sending young Chinese abroad to study (Mingyuan 1984:141). Before the liberation the development of higher education in China was very slow. There were only 205 higher education institutions in the whole country. Some belonged to the former government and some were established by foreign religious organizations. There were altogether 117,000 students, 16,000 teachers including 4785 professors, and 185,000 graduates (Zheng 1999:2).

Chinese higher education has been developing rapidly since the establishment of the new China in 1949. The development mode and scale are analyzed later.

There were, however, two distinguished events which affected the Chinese modern higher education system. One was the thorough reorganization of Chinese institutions shortly after the establishment of the new China. Another was the serious interruption and turmoil during the Cultural Revolution. In 1949 the new Chinese government took over institutions formerly owned by either the old government or the foreign religious organizations. All Chinese higher education institutions became state owned. The new government implemented a series of new policies to expand enrolment and to serve the building of the new country better. In 1952 the Chinese government reorganized the institutions in order to resolve two major problems. Firstly, higher education over-emphasized on the field of humanities, with inadequate attention to engineering and science. Secondly, there was a shortage of technologists and specialists as well as secondary school teachers. The reorganization of institutions or fields was implemented according to, or was just a copy of, in some cases, the former Soviet Union's systems (Ye 1995:28). The comprehensive universities adjusted and enlarged. The emphasis was put on the development of specialized colleges, especially the colleges of technology. The reorganization was systematic and complete. Nearly all the institutions were involved in the reorganization (Ministry of Education:1952). The reorganization played an important role in establishing the Chinese higher education systems.

Like many other areas in China, Chinese higher education experienced a major set back during the Cultural Revolution from 1966 to 1976. Normal learning and teaching in institutions were stopped or seriously interrupted. Only in 1977 did the Chinese government resume normal university learning and teaching, as well as the yearly entrance examinations to universities. Since then the Chinese higher education has been undergoing an even faster expansion (Zheng 1999:4) and has made huge progress.

In conclusion, the history of the higher education systems in China is short. It originated from the Western systems and was later influenced by the former Soviet Union. The greatest development has occurred since the founding of the new China in 1949.

Although the foundation has been paved since 1949, it was only in recent years that China geared to massify its system. The major forces behind such a process seem no different from other countries. They are economic, political, social, and others. The economic contextual factor is examined in the next section.

3.2 Economy

3.2.1 The economic influence on the expansion of Chinese higher education

The general economic situation in China was described in Chapter one (cf 1.1.2). So this section focuses mainly on the economic issues which interact directly with the massification of higher education.

According to Lewin and Hui (1989:8), in terms of development level, China can be placed between the rich countries such as the USA, the white Commonwealth countries, etc., and the poor countries. This does not match the aspirations of the Chinese people. They maintain that, as long as they work hard and keep making progress through reforms, they can re-enter the ranks of advanced countries. Since 1949 the Chinese people have never given up the hope of catching up with the advanced countries. China has changed a lot since 1978. It has become a more open society and people's living conditions have

been improved. In the last four decades (except during the Cultural Revolution), China attempted to create economic modernization by consistently stressing science and education (Law 1996:385). In the 1990s, the Chinese government proposed the strategy of 'Invigorating China through Science and Education'. Education is regarded by the government as the foundation of the development of the economy and society. Therefore, science and education are regarded as the top priority in the modernization drive in China (Ministry of Education 1999b). Weifang (1991:151) also claims that education is considered the strategic foundation for economic success, because there is a growing recognition of the importance of the availability of well-educated manpower, especially higher level specialized personnel. Thus, higher priority was given to higher education in China.

According to Hao and Tan (1997:7), up to 2010, China is expected to realize basically its aim of industrialization. During the 1990s, the basic characteristics of an economic takeoff emerged in the Chinese economic development. These included: the economy developed at a consistently high speed; big changes took place in the structures of industries; rapid development in technologies; urbanization and improvement in the quality of economic development.

As investigated in the last chapter (cf 2.3), the development of higher education is closely related to, the economic development indicated by GDP, personal income indicated by per capita GDP, and tertiary industries. The increase in these three areas demanded the expansion of higher education, and at the same time, provided higher education with material resources and employment opportunities.

Chinese higher education, like its economy, has had some ups and downs before, mainly due to political reasons or even political turmoil, like the Cultural Revolution. In the early period of the new Chinese government, the GDP increased from 67.90 billion yuan (1 Chinese yuan is about 1 Rand) in 1952 to 145.40 billion yuan in 1964, an increase of more than double. Higher education developed faster and more soundly at the same time. The enrolment increased from 198,045 in 1952 to 1,124,847 in 1964, up nearly six times

in 12 years. During the ten year Cultural Revolution (1966-1976) Chinese GDP increased from 171.61 billion yuan in 1965 to 299.73 billion yuan in 1975. But the higher education then decreased from 1091598 in 1965 to 1032343 in 1975. Since 1978 when China adopted the reform and the open door policy, Chinese GDP increased from 362.41 billion yuan in 1978 to 7939.57 billion yuan in 1998, soaring more than 20 times in 20 years. In the meantime Chinese higher education enrolment increased from 1321929 in 1978 to 8156545 in 1998, up more than six times (Zhai 1999:515; Xie 2000:95-96).

The structural changes which took place in the industry and employment in China had the basic characteristics of the early period of industrialization. These are the decrease of production and labour force in primary industry, and the increase of secondary and tertiary industries (Hao & Tan 1997:7). The development of the tertiary industry was closely related to the expansion of higher education. It provided a range of new and semi-professions for university graduates (cf 2.3). The tertiary industry in China increased from 28.6% to 32.8% of the total production from 1980 to 1994 (Zhai 1999:4). The labour force in the tertiary industry increased from 13% to 23% of the total labour force from 1980 to 1994 (State Statistics Bureau of China, quoted in Hao & Tan 1997:9).

China's industrialization, especially the economic development, paved the way for the development of higher education. The Chinese government's modernization drive and emphasis on education, created a favourable environment for the expansion of higher education. Apart from the above-mentioned influences in general, there are three specific economic issues which are examined in the following sections. These are employment, funding and fees.

3.2.2 Employment difficulties when higher education expands

According to Hu (1999: 101), Chinese university graduates find it more and more difficult to get jobs. This is a common feeling amongst university graduates, their parents and universities. Taking Beijing as example, there were 6000 graduates who could not find jobs when they graduated in 1997. This figure increased to 8000 in 1998.

Universities belonging to the Ministry of Education are normally of higher quality. The employment rates of their graduates are higher than those from universities of both other central government departments and provincial governments. Among 89617 graduates from universities of the Ministry of Education in 1998, 90.12% of the degree graduates and 44.9% of short cycle higher education graduates, found jobs as soon as they graduated. Among 164000 graduates from universities of other central government departments in the same year, 76.9% and 45.8% of degree and short cycle education graduates found jobs. Among 756000 graduates from universities of the provincial governments, 70% and 30% of degree and short cycle education graduates found jobs as soon as they graduated (Qu 2000:3). Compared with that in the era of the planning economy in China, the employment rates for university graduates were lower than expected by students and their parents. In the past under the planning economy, all the graduates of institutions were assigned a job by the government. But now under the market economy and the expansion of higher education, the government is no longer taking the responsibility for arranging jobs for graduates. Graduates have to find jobs for themselves (Zhou 2001:4).

Does China have too many university graduates? The answer may be negative. University graduates composed only 3% of the total population in China in 1996. Even in high percentage areas, such as Beijing, this figure was only 13%. Comparing with 30%-50% in developed countries or the average of 8.8% in lower middle income countries, China was still far behind (Hu 1999: 101). Such being the case, why does a university graduate still have difficulty to find a job? There are four reasons:

- a. Some of the graduates preferred to postpone employment, rather than to take a job that they did not like. These graduates compose 2% of the total (Sun 2001:2). But it is the researcher's opinion that because China was changing its economy from a planning to a marketing one, and also expanding its higher education, the decrease in the employment rate or the changes of employment patterns for university graduates, seems inevitable (cf 2.3.1).

- b. Some of the subjects in universities or the quality of graduates, can not meet the needs of economy and society. These include over-enrolment in certain subjects, and narrowness of students learning. In 2000, only 16% of the graduates in science and engineering, 30% of graduates in business and 42% graduates in foreign languages, could find jobs relating to their learning fields (Zhang, X.M. 2001:5).
- c. The expectations of graduates and their parents remain the same as that in the elite stage. Graduates expect normally to work in government departments, state enterprises, big cities or rich areas. For instance, 50% of the graduates from coal mining institutions were willing to work in the coal industry before 1998, but this figure decreased sharply to 14.4% in 2000. The shortage of qualified human resources in the industry is serious. In one job market in 2000, one coal company could not recruit enough graduates with an offer of 7000 yuan per month. In contrast, many more applicants were interested in jobs in IT companies, although some of the IT companies offer only 3000 yuan per month (Yang, G.Q. 2001:5).
- d. Employment capacities in state enterprises and government departments have reduced. Many state enterprises cut jobs to increase efficiency. The central government departments reduced about 50% of their employment in 1998 (Research Group on Employment of University Graduates 1999:108).

To resolve the above mentioned employment problems, three policies should be considered:

- a. Under the planning economy, every graduate was assigned a job. But now the government is no longer responsible for assigning jobs for graduates. Therefore, employment consultant and information systems, need to be established or improved to help graduates find jobs by themselves (National Center for Education Development Research 2000:126-127).

- b. The numbers of enrolment in certain fields must be adjusted and planned according to the demands of the economy and society (Zhang, X.M. 2001:5). But the researcher believes that, in the era of information technology, the needs of manpower from the economy and society, are changing too rapidly to predict beforehand. Therefore, it is not easy to plan.
- c. Graduates should consistently adapt themselves to the quick changes of work, knowledge and technology in the modern world. They must accept the concept of lifelong learning. They should also change their expectations of the types of employment (Research Group on Employment of University Graduates 1999:109-110).

In conclusion, Chinese parents and students got used to the elite stage in which jobs for graduates were secured. But in the process of massification, such privileges disappeared. Along with the expansion of higher education, employment will become more and more problematic, unless the Chinese government and institutions adopt some policies to deal with the issue. Job information and career counseling should be established in institutions as well as nation wide. Curriculum and learning contents should be changed to meet the demands by society and economy. Students should change the ideology about employment to adapt to the coming mass system. As was discussed in the last chapter, the relationship between qualifications and the positions with high social status changes in the process of the transition to the mass system (cf 2.3).

3.2.3 Funding

The majority of funds for Chinese higher education institutions is from the government. Thus the funding policy strongly influences the expansion of Chinese higher education. In China, higher education institutions are affiliated to, the Ministry of Education, other different central government ministries, provincial governments and some corporations. These different government departments and corporations are responsible to fund their own institutions (Ministry of Education. Department of International Cooperation and

Exchanges (DICE) 2000e:4). According to the researcher's working experiences in the Chinese Ministry of Education, there are funding disparities, among institutions, due to the disparities of financial situations between regions and sectors.

There are two sources of funding for Chinese higher education institutions. One is the state appropriation, which accounts for more than 90%. Another is the revenue generated by institutions themselves, through research contracts, consultations and other services to industries and communities, private donations and student tuition fees. In recent years, institutions have increased the proportion of funds generated by themselves, since they were given more autonomy to do so. The revenue generated by institutions increased from 64 million yuan in 1978 to 692 million yuan in 1987 (Weifang 1991:152-153) and 4.2 billion yuan in 1994 (China Statistics Bureau, quoted in International Bank for Reconstruction and Development & World Bank 1998:49).

The Chinese government has increased its expenditure on education as a whole and on higher education specifically, since the late 1970s, both in absolute value and relative to government revenue and GNP. For example, from 1978 to 1998 the Chinese government's yearly expenditure on higher education increased 12.4 times, from 1.5 billion yuan to 22.4 billion yuan. The percentage of education expenditure to GDP increased from 2.1% in 1978 to a peak of 3.1% in 1989, and then dropped to 2.6% in 1998. The percentage of higher education expenditure to education expenditure as a whole, increased from 19.7% in 1978 to a peak of 29% in 1984, and decreased to 14.8% in 1998 (cf Table 3.1).

The percentage of education expenditure to GDP in China is lower than the 2.8% in under-developed countries, 4.1% in developing countries and 5.3% in developed countries. But the percentage of expenditure on higher education to the education expenditure as a whole, in China, was higher than other Asian countries (11-17%), such as Japan, Korea, Thailand, Malaysia and Indonesia. The reason was that the higher education fund from private resources in China, was less than the other countries

(International Bank for Reconstruction and Development & World Bank 1998:47 & 49; cf Table 3.1).

Weifang (1991:156-157) observes that the Chinese higher education system has faced increasing financial constraints. The financial difficulties of the Chinese higher education systems are caused by the two major factors. Firstly, the higher education systems expanded too fast and the increase of state appropriation for higher education could not keep up with the growth of the cost. Secondly, the financial situation has been exacerbated by inflation and the low efficiency of the systems.

Table 3.1: 1978-1994 indicators of educational expenditures from government (%)

Year	Higher education fund (billion)	Education fund to GDP	Education fund to government expenditure	Higher education fund to government expenditure	Higher education fund to total education fund
1978	1.5	2.1	6.2	1.2	19.7
1984	5.2	2.6	9.2	2.7	29.2
1989	8.8	3.1	13.5	2.4	17.9
1994	18.6	2.2	16.9	3.2	19.0
1998	24.4	2.6	15.4	2.3	14.8

Source: Editorial Department of China Education Yearbook (1999:138, 2000:94 & 290-292); Chinese State Statistics Bureau and State Education Commission, quoted in International Bank for Reconstruction and Development and World Bank (1998:115)

To resolve the shortage of funds in higher education, two strategies may be adopted. One is the government should increase the investment in higher education. Compared with other countries including those with similar economic development levels as China, the percentage of the education expenditure to GNP in China is much lower, only 2.79% in 1999. It is also less than the level of 4% which is stipulated by the Chinese government (Zhang & Zhang 2001:9; Central Committee of CPC & State Council 1999). The second strategy is to develop private higher education. Pan (1999a:161) argues that the

development of private institutions is an effective way to mobilize resources to expand higher education. Private higher education is an important part of mass higher education (cf 2.3.2.1). Tuition fees are one of other financial resources. But the fee levels are limited by the issue of equality and the capacity of the ordinary Chinese families. The problem of the fee policy is scrutinized in the next section.

3.2.4 Fees

Chinese higher education was highly planned by the central government. Only a small number of school leavers could go to universities. There was no tuition charge to students before 1989. Instead, institutions provided free dormitories and a stipend for food and other subsidies to students (Weifang 1991:153). But from 1989 universities began to charge student fees. The amount of the fee was 100 to 300 yuan, which varied in different areas. The fee was increased from 300 to 600 yuan in 1992 (Xu 2000:16), and increased again to 2500 to 3000 yuan in 1997 and 1998, 3000 to 4000 yuan in 1999 (Zhang & Zhang 2000:73).

There may be two reasons for the increase in fees. One is due to changes in the government's fee policies. Another is due to the increase of unit costs of higher education. According to the International Bank for Reconstruction and Development and World Bank (1998:47), the average yearly unit cost of Chinese higher education increased from 5087 yuan in 1978 to 8160 yuan in 1994. In the same period the numbers of Chinese higher education students increased from 0.9 million to 2.8 million. On the contrary, the unit costs in East Asian countries reduced when student numbers in higher education increased. This may be because increasing student numbers lead to increased efficiency. But according to the investigation in the last chapter, the growth of productivity in higher education is almost inevitably slower than in the economy at large, which leads to a continuous increase in the unit costs in higher education (cf 2.3.2.1). The reasons for these contradictory effects do not seem to be clear.

The fee policy was debated among policy makers and academics. There are two main reasons for charging tuition fees. One is that individuals benefit from higher education. Therefore, higher education is partially private good (cf 2.3.2.2). The second reason is that Chinese families can afford higher education for their children. This reason is supported by the fact that there are huge private deposits in the Chinese banks. Just as Zhai (1999:7) describes that the individual bank deposits in China reached 5341 billion yuan in 1998. Zhu, R.J. (1999:26), the Chinese Premier, claims that investing in children's education is a top priority for Chinese families. About 30% of the individuals' deposits are prepared to invest in education. The educational consumption increased at a rate of as high as about 20% a year. But the Research Group of Peking University (2000:202) otherwise argues that the huge deposits are not the whole story. The gap between the rich and the poor is large. About 20% of the poorest families' income composed only 4.27% of the total, while 20% of the richest families' income composed 50.24% of the total in 1994. This gap became even larger at present (Kang 2000:9). A survey conducted by the Information Centre of the Ministry of Education (quoted in Zhao & Qiao 2000:27) in 1999 shows that 15.5% of students in the Chinese higher education institutions in 1999, were from families under the poverty line (the average monthly income per person is less than 128 yuan).

While charging student fees is inevitable in the process of massification, some assistance schemes are essential to improve the equality (cf 2.3.2.2). To assist the needy students, the Chinese government introduced several student assistance schemes, such as scholarships, loans, stipends and part-time jobs. The amount of student loans ranges from 2000 yuan to 50000 yuan. The government stipends 50% of the interest of the loan. The principle of the Chinese government is that 'no student needs to drop out of higher education because of financial reasons' (Ministry of Education. DICE 2000e:10-11).

Although the government made the above policies, Zhao and Qiao (2000:27-28) conducted a questionnaire survey in 100 universities and found that financial supports to poor students were mainly from parents and relatives, composing 80% of the fees and 72% of the living expenses. Students get no support for their fees, from scholarships or

part-time work. Support from scholarships and loans are also relatively weak (cf Table 3.2). It seems that the Chinese governmental support level is very low. This may lead to inequality against students from low-income families as argued by Magnussen (cf 2.3.2.2; 1974:213-214).

Table 3.2 Origin of the fees and living expenses of the students from the families under the poverty lines in 1999 (%)

	Parents	Relative	Loan	Institution subsidies	Scholarship	Part-time work	Others
Fee	63.3	17	10.2	5.5	0	0	4.1
Living expense	62.5	9.7	4.9	5.3	2.9	10.8	3.9

Source: Zhao and Qiao (2000:27-28)

In order to improve and complete the Chinese fee system, the following policies may be introduced:

- a. The introduction of tuition fees is important and necessary for the expansion of higher education, especially in a developing country like China. But the amount of fees should not be more than the affordability of the average income families. The equality of higher education must be considered (Ni 2000:10).
- b. Governmental supports for needy students should be increased. The effectiveness of the loan system must be improved (National Center for Education Development Research 2000:107).
- c. A flexible study credit system should be introduced (cf 2.2.8). Thus students are able to suspend their studies if necessary, in order to find a temporary job to support their learning.

3.2.5 Conclusion

The Chinese economy influences its expansion of higher education in a number of ways. The increases of national economic strength, personal income and service industries are accompanied by the increase of the participation in higher education institutions. This phenomenon in principle conforms to the general rule discussed in the last chapter (cf 2.3). A different aspect in China is its highly centralized planning for its economic system, as well as its higher education system, in certain areas. China is transferring its planning systems to market systems (Qiping & White 1994:217). Many conflicts and policy difficulties are emerging in the process of the transition. Employment of graduates has been marketized, but many Chinese parents and graduates' ideology on the issue may still remain outdated. Due to the funds' constraints, the Chinese government introduced fee policies, but its student assistance systems have not been well developed. The students from poor families can not get support effectively. These realities inevitably affect the social equality.

These policy difficulties are the concerns of both economics and politics. It is for the government to decide its funding and fee policies. Therefore, the political factor is examined in the next section.

3.3 Political aspects of the expansion of Chinese higher education

Chen, Z.L. (1999b:52), the Chinese Minister for Education, claims that the Chinese government promulgated two important documents in 1998 and 1999. One is "The Action Plan for Vitalizing Education Facing 21st Century". Another one is "the Central Committee of the Communist Party of China and the State Council's Decision of Furthering Educational Reform and Promoting Quality Education in Full Round Way" which was decided upon during the Third National Education Conference in 1999. In these two documents the Chinese government called for changes to be made to its whole education system, shifting from examination-oriented education to quality education. It was also declared to largely expand its higher education. A quantity target is to increase

the gross enrolment rate from 9% in 1999 to 15% in 2010 through a variety of ways. The effectiveness of the policies is obvious. After the promulgation of these two documents, the Chinese government increased the enrolment for new entrants in traditional universities and colleges from 1088000 in 1998 to 1600000 in 1999. The rate of increase was as high as 47% (Ji, B.C. 2000:8).

According to the theories of Trow (1974:63; cf 2.2.3), 15% of the gross enrolment rate is the turning point from elite to mass higher education. Therefore, Chinese policy makers and scholars regard this decision of the government, as a threshold for the drive to massify the Chinese higher education. The rapid economic development, universalizing of basic education and the demands by society, are favourable conditions for the massification of Chinese higher education (Kang 2000:12-13). There are, however, some challenges that the Chinese government may have to face. Firstly, the Chinese higher education system is short of funds (cf 3.2.4). Secondly, employment for university graduates becomes more and more difficult, along with the greater expansion of higher education (cf 3.2.3). There are also problems in the higher education system itself, which is discussed later in this chapter.

Like in other countries, equality is an important political motivation for the expansion (cf 2.4.2). Inequalities in China are mainly caused by two main factors. Firstly, the large income gap between the small numbers of the rich and the large numbers of the poor who are mainly in rural areas or laid-off workers in cities (National Center for Education Development research 2000:94-95). Secondly, the disparity of economic and educational development between different regions. China can be divided into four regions, according to the level of development. The most developed regions are three municipalities directly under the central government, namely Beijing, Shanghai, and Tianjin. The second most developed regions are in the eastern part of China. The third are the central part, and the fourth are the most undeveloped regions which are located in the western areas (Dong & Shen 2000:81). The per capita GNP and education funds in the above mentioned three municipalities, are about 3-6 times of that in undeveloped areas, such as Guizhou, Jiangxi, Sichuan, Guansu and Anhui. The numbers of university students per ten thousand in the

three municipalities is about 4-15 times of that in some undeveloped areas (cf Table 3.3). Yang, D.P. (2001:28) also claims that inequality in receiving higher education between cities and rural area, as well as between different regions, is serious. This inequality became one of the most negative realities in the Chinese higher education systems. One of the major reasons for the disparities is that higher education institutions are distributed unevenly. There are more institutions in cities and the eastern developed areas than in the rural or western undeveloped areas.

Table 3.3 Educational, social and economic development in some provinces or municipalities in 1996

Region	Per capita educational fund (yuan)	Per capita GNP (yuan)	Number of university students per 10 thousand population
Beijing	424.31	12828.67	150.88
Tianjin	306.96	11628.69	75.27
Shanghai	566.46	20452.43	104.25
Anhui	109.37	3853.79	14.73
Jiangxi	97.22	3696.13	20.61
Si Chuan	102.09	3687.66	18.24
Gui Zhou	69.85	2024.84	10.06
Gansu	103.65	2894.93	19.29

Source: Chinese State Statistics Bureau of and Ministry of Education, quoted in Dong and Shen (2000:81)

Apart from the regional inequalities, social inequalities exist in China as well. To find out the degree of inequality of university students from different family backgrounds, Wu (1998:351-362) made a survey amongst 2000 students at 11 universities in Shannxi province. These students were all enrolled at university in 1989 and randomly chosen as the sample. It was found that the fathers' career influenced the children's opportunities for higher education. Members in the first two categories: professional personnel, and officials from government departments, organizations and state enterprises, composed

only 6.2% of the total work force, but their children composed 55.56% of the total higher education enrolment. On the other hand, the members in the last two categories: the workers in the sectors of agriculture, forestry, husbandry, fishery, and production and transportation, composed 86.9% of the total work force, but their children only composed 31.04% of the total higher education enrolment (cf Table 3.4). There are two reasons for the inequalities. One is that high tuition fees and insufficient student assistance programs prevent disadvantaged students from going to universities. Another is that poor facilities and conditions of schools in rural and undeveloped areas, put students in unfavourable positions when competing with better off students for university placements (Yang, D.P. 2001:28).

Table 3.4 The composition of university students from different family backgrounds (father's career): Wu's survey in 11 universities in Shannxi province

	Professional personnel	Official from government, organization and industry	Staff in offices	Staff in commercial sector	Service worker	Labourer in agriculture, forestry, husbandry and fishery industry	Worker in production & transportation sector	Others
% of total work force	4.5	1.7	1.4	2.7	2.4	70.9	16	0.23
% of students' father	29.99	25.57	5.37	1.81	0.95	22.45	8.59	5.32

Source: Wu (1998:254)

Wu (1998:353-354) further discovered that the father's career not only influenced their children's opportunities to higher education, but also the types of universities they

attended. The students whose fathers were in the first two categories, were more likely to attend comprehensive, foreign language, famous science and technology universities. Graduates from these universities have more chances to get the jobs with higher social status and income. On the other hand, the students whose fathers were in the last two categories, were more to be found in the universities specializing in mining, oil, teacher's training or agriculture. Graduates from these institutions were more likely to have jobs with relatively poor working conditions or low income. It was also discovered in the last chapter, that old types of disparities may reduce, to a certain extent, when participation in higher education increases, but new types of disparities emerge, such as inequality with respect of access to prestige universities or subjects (cf 2.4.2).

Furthermore, there is also inequality in higher education between genders in China. In 1980 the composition of female students at universities was only 20%. This figure increased to 35% in 1994. In primary and secondary schools, female students now already compose about 50%, but in higher education women still experience inequalities (International Bank for Reconstruction and Development & World Bank 1998:24).

The Chinese government adopted two major policy approaches to improve equality. One is that the central government increased the investment on higher education in underdeveloped areas and made preferable policies to assist higher education development in these areas (Chen, Z.L. 2001:2). Zhu (2001:2), the Chinese Premier, states in his government annual report, that China will speed up its educational development pace in the undeveloped western areas in the next five years, and try to achieve better. Another one is the establishing of student assistance schemes to help the students from disadvantaged groups. The Chinese government will adopt different ways to support needy students and guarantee that no student would drop out because of financial problems. The government will enlarge loans and other assisting schemes to support needy students (Ministry of Education 1999b).

3.3.1 Conclusion

The Chinese government not only decided to expand its higher education, but also set a quantitative target for its expansion. The increase of 47% in the enrolment for new entrants in 1999, demonstrates the Chinese government's decisiveness to accelerate the expansion of its higher education. But too fast an expansion may lead to some problems if government does not make relevant policies to support and adapt to the increase of student numbers. The situation of the financial constraints in higher education would deteriorate, if the government cannot increase the investment on higher education at the same pace, or an alternative cannot be created to seek extra funds.

The Chinese policy makers are concerned about equality in higher education, especially the disparity between regions. It is the researcher's observation that the government gives too little attention to social equalities, such as disparity between different professions and different social classes. According to the ideology of communism there are no classes in a socialist country. It is believed that all people are equal in the society. But the reality is that inequality in participation in higher education among different social groups, does exist in China (cf Table 3.4). As long as higher education expands further, the issue of inequality among different social groups in China, may become more and more problematic politically and socially, like in other countries when in the process of massification (cf 2.4.2).

The expansion of Chinese higher education is also demanded by the society. The social influence on massification is discussed in the next section.

3.4 Social reasons for the expansion of the Chinese higher education system

China enjoys 5000 years of civilization. Confucius, whose thinking dominates Chinese culture, laid great emphasis on learning. The theme of learning is repeated on numerous occasions in Confucius's dialogues with his disciples: Is it not a pleasure to learn and to practise from time to time what has been learned? He believed that by nature men were

alike, and it was through learning and practice that they became differentiated. He also believed that every one could succeed if one worked hard. Confucius' pragmatic attitude towards life and his emphasis on learning have had a tremendous influence on the minds of the Chinese people. Chinese subsequently have become known for the value they place on effort and education (Wong 1998:120). Although these are positive values, there is another side of the coin. Traditional Chinese people tend to emphasize examination-orientated education more than quality orientated education; to emphasize humanity or theories learning more than the technical and vocational education; to emphasize the universalizing of education on one hand, and then educationally discriminate against women or working classes on the other hand (Hao & Tan 1997:19). These positive and negative customs still influence Chinese society and education today.

There are still several other social forces to promote the expansion of Chinese higher education. Higher education has been an important way of improving the mobility of young people to higher social and economic status in China since the old times (cf 1.1.3). It may especially be the case today when the knowledge-based economy becomes more and more important.

Additionally, as we discussed in paragraph 3.3 there is a large disparity in economic and social development between eastern and western areas, cities and rural areas. China implements a residence permit policy. If one wants to move to a new area you must apply for a residence permit to the local government of the receiving side. It is normally very hard to get the permit, especially in the big cities or rich eastern areas, as these places already have a dense population. But the limitations for university graduates are very flexible. They may easily move to other areas. Because of this policy, young people regard higher education as an effective way to move to a city or a richer area (Gui 2001:8).

Furthermore, since the 1970s China has adopted a family planning policy. One family is expected to have only one child. At the end of 1984, 28 million children were registered as an only child. Taking Shanghai as an example, the rate of only child among the

newborn babies, increased from 64.49% in 1978 to 95% in 1992. There was a total of 810000 'only children' in the city by the end of 1982. The Chinese family, therefore, attaches even more importance than before, to the education of their only child. They are prepared to do everything to send their child to university (Jin 1990:309).

Lo (1991:715) observes, that aside from the prestige and privilege associated with membership amongst the social elite, students also have family expectations to fulfil. Having a child who is academically successful is a major source of parental pride. For this reason, the pressure of entering higher education is felt equally by the students' parents. Because of the above-mentioned social and economic reasons, and also because of the shortage of spaces in higher institutions, competition to go to university is fierce. Zhu, R.J. (1999:25), the Chinese Premier, addressed the Third National Education Conference in 1999. He described how in China today, there are about 14 million graduates from junior secondary school every year, half of them cannot go to senior secondary school due to limited places; there are 3.5 million graduates from senior secondary school every year, 70% of them cannot go to university for the same reason. The competition for going to both senior secondary school and university is unbearably fierce. The society, especially the parents of the only child, is strongly dissatisfied. The government has no choice, but to expand education rapidly. He further reasons that the expansion of education can ease the competition, improve the quality of life of citizens and the level of civilization. The expansion of higher education is hailed by parents, students and the society at large (Li 2001:24).

3.4.1 Conclusion

Mobility to a high social and economic status is a common motivation for a student in both China and the OECD countries (cf 2.5), to pursue higher education. In spite of this similarity, there are some unique features prevailing in the Chinese society. Influenced by Confucius's philosophy and ideology for more than three thousand years, Chinese society developed a strong tradition, which attaches importance to their children's education. Additionally, a very high proportion of 'only child', caused by the family planning policy,

is phenomenon unique to China only. Families tend to concentrate their financial capacity to send their children to universities. These exclusive features may influence the massification in many ways. On one hand, they may accelerate the expansion of higher education. On the other hand, due to the very old ideology which is not easy to change, Chinese parents and students may prefer elite institutions and subjects rather than mass ones, which may decelerate the transition to a mass system in a fundamental way. When the Chinese government makes its policies for the development of higher education, these positive and negative sides of the social influences, should be considered.

Another aspect of society is the problem of population. The Chinese population, especially the population of the age group from 18 to 22 years old, directly affects the gross enrolment rate in higher education. This is studied separately in the next section.

3.5 Influence due to the scale and structures of Chinese population

China has the largest population in the world. The increasing rate and the composition of the population directly influence and constrain the scale and the speed of its educational development.

During the 20th century, the Chinese population increased nearly twice, from 450 million to 1.28 billion. Among this total, 200 million of the population increased in the last 50 years. About 70% of the population live in rural areas, which are normally much less developed than cities. The agricultural product composes only 20% of the GNP. The consumption per capita in cities is 3.5 times of that in rural areas (Zuo 2000:16-17). Such a disparity and underdevelopment in the large rural areas would increase the difficulty of the massification.

Along with rapid economic development, urbanization is accelerating in China. It is also expected that the population in cities will increase to 47.8% by 2010 and to 68.1% by 2025. The average proportion of city population in the world was 51.1% in 2000, and is expected to increase to 64.6% in 2025. It is predicted that China would reach the average

of the urban population level in the world by 2020 (Tian 1999:11). Urbanization, as part of modernization, is expected to influence the development of higher education positively.

The direct population impact on the massification are the changes of the population of the age group from 18 to 22 years old, because this age group, together with the participation numbers, decides the gross enrolment rate in a higher education system.

If the Chinese government wants to realize its goal, that of higher educational enrolment reaching 15% of the age group (18-22 years old), it must take into account the changes in the population of the age group. As estimated the population of this age group will increase to 116.251 million in 2010 from 89.209 million in 2000. The student numbers would then reach to 17.438 million if the gross enrolment rate reaches 15%. Among the total student numbers, 4.056 million students will be contributed solely by the increase of the population of the age group. The population of the age group will reach its peak of 117.173 million in 2009. If considering the population factor only, the end of the next decade would be an unlikely deadline to fulfil the aim of 15% gross enrolment rate (International Bank for Reconstruction and Development & World Bank 1998:128).

The National Center for Education Development Research (2000:102 & 104) concludes that, according to the population changes of the age group and 10.5% of the gross enrolment rate in 1999, it is predicted that the gross enrolment rate would reach the government's target of 15%, if the yearly rate of increase remains 7%, which is close to the average rates of increase in the 1990s.

Up to now, the Chinese contextual factors, like economy, politics, society and population, have been investigated. Science and technology is also a contextual factor which influences the process of the transition. The general theories about the interaction between science and technology, and massification have been examined in the last chapter (cf 2.6). The development of science and technology is an international phenomenon. Its influence on the massification in China, is similar to that in other

countries, which were discussed in the last chapter. Therefore, the science and technology is not discussed in the present chapter.

After the examination of the contextual factors, the system of higher education itself is the focus of the latter part of this chapter.

3.6 The strategies for transition from elite to mass higher education in China

3.6.1 Massification of the Chinese higher education system

Since 1992 Chinese higher education has been growing as fast as its economy. The numbers of students in traditional universities increased by 1.23 million, or 56.4% from 1992 to 1998. The average of the rate of increase was 7.7%. In 1999 the Chinese government increased the enrolment in traditional higher educational institutions to about 510000. The rate of increase of the new students was 47% over 1998. The total student numbers in traditional institutions increased by 22% in 1999, doubling the number of 1992 (Ji 2000b:147). The total student numbers including those in both traditional and non-traditional institutions, increased from 4.4 million in 1992 to 9.54 million in 1999. The gross enrolment rate increased from 3.47% in 1992 to 11.2% in 1999. The highest yearly rates of increase were 19.4% in 1993 and 15.7% in 1999, while the lowest yearly rates of increase were 5.7% in 1992 and 5.3% in 1997 (Xie 2000:96). It is interesting to note that the two years (1992 and 1997) with the lowest rates of increase were closely followed by two years (1993 and 1999) with the highest rates of increasing. This may indicate the instability of the Chinese government policies because the yearly enrolments in state institutions were strictly planned by the central government.

Li (2001:24) argues that the sudden and largest expansion ever in 1999 was warmly welcomed by parents, students and the society at large. But the policies were not fully discussed beforehand. The society was not fully aware of, non-understood the policies properly. Institutions and local education authorities did not have enough time to prepare for the large expansion. These factors affected the implementation of the policies and

participation of society. Du (2000:159) similarly describes that Chinese institutions were not well prepared for the unexpected large expansion in 1999, therefore they experienced pressures from a shortage of facilities.

To ease such pressure the central government took 1.46 billion yuan from bonds and 3.7 billion yuan from local governments, to supplement the institutions. This was the first time the Chinese government used bonds to support education (Du 2000:159). Additionally, Zhu, R.J. (1999:28), the Chinese Premier, declared that the Chinese central government decided to increase the proportion of educational appropriation in the central government budget by 1% every year for five consecutive years from 1998-2002. The central government also called on all local governments to increase their educational budgets in the light of local conditions.

Albeit these efforts, the shortage of funds is still the major problem in Chinese higher education. The financial issues are further discussed in the next section.

Along with the increase of student numbers and funds, the structures of the Chinese higher education have also been changed through adjustments and amalgamation of existing institutions, or establishment of new ones. According to the Central Committee of CPC and the State Council (1999), the aims of structural changes are: to rationalize the Chinese higher education's administration systems - decentralizing powers to the provincial governments; to improve efficiency and quality; to promote cooperation between higher education and local economic and social developments. The number of the traditional institutions reduced to 1022 in 1998 from 1080 in 1994. The average student numbers in one institution increased to 3335 in 1998 from 3122 in 1997. The ratio of student to teacher increased to 11.6:1 in 1998 from 9.81:1 in 1997. The number of adult higher education institutions reduced to 940 in 1998 from the highest number of 1321 (Ministry of Education. DICE 2000e:73). In 1999, 45 new higher vocational and technical colleges were established. 11 private institutions were authorized with the power to award certificates or degrees. Some institutions formerly belonging to central government departments, were transferred to provincial governments (Du 2000:153). In

spite of this adjustment, the scales of Chinese institutions are still small. It is not ideal regarding cost effectiveness. On the other hand, the small scales indicate that Chinese higher education institutions have potential to expand.

In conclusion, it is interesting to note that the decentralization policy adopted by the Chinese government, is in contrast with the centralization policy adopted by Britain when Britain massified its higher education. In Britain, the central government strengthened its power by having taken over the responsibility of former polytechnics from local governments in the late 1980s (cf 2.7.4). According to the researcher's experiences of working in the Chinese Ministry of Education, these policy differences may be ascribed to two reasons. One is that the Chinese higher education system is on such a large scale that the central government finds it difficult to fund and manage it well. Another is that some rich regions, like Shanghai and Guangdong, are willing to take over the responsibilities in order to promote the development of their own local economy and society.

China is now in full swing of massifying its higher education. There are, anyhow, some challenges, positive and negative effects, which the Chinese government has to consider when it makes relevant policies. These challenges and effects are discussed in the next section.

3.6.1.1 Challenges China faces in massification of its higher education and the debate on the issues

There are some challenges which China will have to face in the process of massification. Firstly, as a developing country the Chinese economy is still backward. Disparity, in economic and educational development, is very large between regions (cf 3.3). This large disparity requires the government to adopt different speeds, scales and forms to develop its higher education in different areas (National Center for Education Development Research 2000:95). This may make the process of massification in China even more

complicated than that in some developed countries, like Britain and Australia, where there were no such problems (cf 2.7 & 2.8).

There is always a conflict between increasing demands for higher education, and a shortage of supply for university placements, due to financial constraints. The government investment in higher education in China, is lower than some developed countries (cf Table 3.5). Large increases in the tuition fees may not be possible, because it will increase the inequality experienced by the poor from rural areas, less developed western areas, or families of laid-off workers in cities (cf 2.3.2.2 & 3.2.5). In 1999, due to the financial constraints some institutions enrolled some students on full fees or high fees, which were contrary to the Chinese government's regulations (He 1999:13).

Along with the expansion of higher education, employment for university graduates becomes more and more problematic. The employment in tertiary industries composed only 26.4% of the total employment in 1997. More than 70% of the total population live in rural areas, where it is difficult to provide positions for such a large number of university graduates. If this issue cannot be addressed properly, it may hinder the expansion (Ji 2000a:17).

Table 3.5 International comparison of the percentage of governmental expenditure on higher education amongst GNP

Country	China	USA	Japan	UK	France	Germany
Year	1997	1992	1993	1993	1993	1993
Percentage of governmental expenditure on higher education to GNP (%)	0.45	1.2	0.7	1.4	0.9	1.6

Source: The Department of Education of Japan, quoted in National Center for Education Development Research (2000:94)

Raising fees increased the burden on poor parents. Such increases, together with the employment difficulties, discouraged some students, especially in rural areas, to pursue further education. This may increase inequality between the rich and the poor, eastern and western areas, if the government cannot effectively make certain adjustments (Zhou, D.P. 1999:6).

According to National Center for Education Development Research (2000:95), there are many factors inside the Chinese higher education system which cannot meet the requirements of a mass higher education system. These factors include higher education structures, enrolment, teaching, studies, administration and services. The government needs to further reform its higher education system on a large scale, so as to adapt to the transition from elite to mass higher education. Expansion of higher education can accelerate these reforms and speed up the transition (Ji 2000a:16).

Because of these challenges and difficulties, there are some debates among Chinese academics and policy makers on the idea of massification in China. The issues of funding, competition, employment and quality are specifically focused on.

Han (1999:157) argues the level of the Chinese economic development is still low. The labour-intensive economy is still a major form in Chinese economy. The emphasis of education should be put on training skilled workers in secondary education, instead of on tertiary level. Expansion of higher education would require increases of funds. But increasing investment on higher education may reduce the funds for primary and secondary education (Hu & Jiang 1999:58).

To resolve the funding problem, Chen and Li (2000:74) suggest the development of private universities. Preferable policies may be to encourage the private sector to invest in higher education. But Ouyang and Xie (1999:14) contend that private institutions in China are still in a beginning stage. The revenues of private higher education are not stable, which affects the stability of institutional operations. Besides the quality of private higher education institutions is lower than the state ones. Furthermore, some of the

private institutions may be motivated by commercial interests, rather than academic achievements. Kang (2000:24) adds that because of the traditional institutions expanding their enrolment in 1999, the private institutions could not enroll enough students. Some private institutions had to reduce their fees and lower the entrance requirement.

Apart from the funding, competition is another issue debated. Han (1999:157) claims, that massification may not be an ideal way to ease the competition for going to universities. The competition for university placement is the reflection of the competition for membership of the social elite. Kang (2000:23) describes, that the large expansion in 1999 eased the competition. Students had more chances to go to universities, which positively influenced their enthusiasm for learning in schools. But then some students and schools began to compete for prestigious universities. For these students the competition did not ease at all. Such a phenomenon also occurred in the OECD countries, like Japan. The expansion did not ease the competition for higher education in these countries (cf 2.2.7; Teichler et al. 1980:100).

Employment is also one of the key issues. Fan (1999:116) and Xia (2000:23) observe that massification may cause over-qualification, and it, therefore, is a waste of precious resources in China. It may also cause some kind of social instability, due to large numbers of unemployed university graduates. But as discussed in the last chapter, in a mass system it is hard to conclude that over-qualification exists. It may only mean that the link between qualification and a profession with high social status, changes (cf 2.3.1). Besides, university graduates composed only 3% of the total population in China in 1996, compared with 30-50% in developed countries. The numbers of university graduates in China are far less than other countries (cf 3.2.2).

The last issue concerned is the quality of mass higher education. He (1999:13) argues that quality of education decreased during the expansion in some institutions, due to lack of enough qualified teachers or facilities. But Chen, Y.K. (2001:4) maintains that the quality in a mass system, unlike an elite one, should not be judged by academic criteria only. Skills and knowledge which are needed by society, should also be appreciated and taken

into account. At the beginning stage of the expansion in the 1950s in developed countries, there was also widespread concern about the quality of students. But this fear has declined and in some cases, disappeared (cf 2.2.9).

Massification is a complex process. It seems to be normal that there are many debates on relevant issues.

3.6.1.2 Conclusion

Compared with developed countries, it seems that China has to face more challenges when it transforms its higher education to a mass system. A lack of funds may be the biggest obstacle in the process. Chinese governmental expenditure on higher education as percentage of GNP is far lower than that of some developed countries, like USA, UK and Germany. Therefore, the Chinese government may have to invest more in higher education. At the same time, the government may also need to create other mechanisms to raise funds for higher education. Establishing private institutions and introducing a marketized mechanism are two options. The marketized mechanism has proved an effective way to resolve the financial constraints in Britain and Australia (cf 2.7 & 2.8). Furthermore, social and economic underdevelopment, especially in rural and western regions, is another factor which negatively influences the development of Chinese higher education. Equality issues must be given due consideration. The balance between the development of rich and poor regions should be kept.

Generally it could be said, that the Chinese higher education systems seem to be backward, especially some local institutions. They cannot adapt to the modern world. The Chinese government realizes these problems and has been reforming its higher education system in a comprehensive way (Ji 2000b:151), which is a positive step in the process of the transition.

As investigated in the last chapter, diversification is an important feature of a mass system (cf 2.2.6). Therefore, the Chinese different forms of higher education, especially the non-traditional higher education systems, are scrutinized in the next section.

3.6.2 Non-traditional institutions in China

The Chinese higher education system is comprised of traditional and non-traditional higher education institutions. The non-traditional higher education includes higher vocational education institutions, adult higher education institutions, self-study examination systems and private higher education institutions (Lin 2001:44; cf Table 3.6). In some countries, like the USA and Japan, the private institutions may belong to traditional institutions. But in China, private institutions are different from the traditional ones in terms of curriculum, administration and criteria of enrolment. Therefore, it may be better to discuss them under the non-traditional category.

All together, China has as many as 2272 non-traditional institutions. But these institutions are normally small. The average of student numbers in one higher vocational education institution, adult higher education institution and private institution are 1455, 3007 and 955 respectively (cf Table 3.6). This indicates that Chinese non-traditional higher education institutions need to be expanded in order to achieve the economies of scale or cost effectiveness.

Before the non-traditional institutions are scrutinized their origins are briefly described.

Higher vocational education started late in China. In 1980 the Chinese government decided to establish specialized classes and courses in higher education institutions. The aims were to train a large number of specialized personnel and to improve the educational level of government officials (Ministry of Education, State Planning Commission & Ministry of Finance 1980). In 1996, China passed the Vocational Education Law. The law stipulates that vocational education should be extensively developed. People are

required to undertake some kind of vocational education before being employed. Albeit these policies, Chinese higher vocational education developed slowly until recent years.

Table 3.6 Non-traditional higher education system in China in 1999

Institution	Institution number	Graduates number (000)	Student number (000)	Entrant number (000)
Higher vocational education institutions	161	41.4	234.2	N/v
Adult education institutions	871	782.3	2619.1	998.5
Private institutions	1240	778.3	1184.4	903.9
Adult higher education in traditional institutions		476.5	1828.4	667.3

Source: Li, Y.M. (2000:1) and DDP (2000:16-57)

Adult higher education has developed since the establishment of the new China in 1949. In 1958 the Chinese government made a policy, namely 'walk on two legs', which means training manpower both in traditional institutions and adult institutions (Deng 1998a:821). Since then Chinese non-traditional higher education grew fast. But during the Cultural Revolution from the late 1960s to early 1970s, like all other kinds of education, adult education was also interrupted. In the last 20 years, the Chinese adult higher education came back on track and developed fast again (cf 3.7.2.2).

The self-study examination system is one of the non-traditional learning systems in China. It was established in 1981. The aims of the system are to create more chances for more people, especially for working people, to pursue higher education, and to train specialized labour forces, who are needed by the modernization drive (State Council 1981). The self-study examinations are a way for students to study higher education courses by themselves, under the guidelines made by the government. If students finish certain courses, they can attend national unified examinations which are held twice a year. If they pass these

examinations they can get diplomas or degrees. Many of the students normally attend assistance classes offered by adult, private or traditional higher educational institutions (Lin 2001:44).

The last form of non-traditional institutions is private ones. The earliest private higher education institutions in China were built in the 19th Century by foreign churches. St. John University was the first private university in China. It was established by American Christ Church in 1877. The earliest two Chinese own private higher education institutions were Fudan Gong Xue and China Gong Xue (Gong Xue means institution in Chinese). They were built in 1905 and 1906 respectively. All of these old private institutions were later transferred to state universities (Zheng 1994:175, 208 & 225). The private higher education institutions existing in China today emerged in early 1980. Rapid development has taken place since 1992 when China accelerated its transition from the planning economy to a market economy. But the Chinese newly established private institutions are different from traditional institutions. They usually offer non-degree courses and are catalogued by the Chinese government under the adult higher education system. They can only enroll students after the traditional universities' enrolment. Many of them are not authorized to award qualifications (Pan 1999b:21).

As examined in the last chapter, the growth of higher education depends on greater diversity. Such a diversified system is marked by lower costs, and is more responsive to market demands (cf 2.2.6). Hu and Shi (1999:81) point out that capacity to expand Chinese traditional universities is limited unless a large amount of funds is invested. On the other hand, the potential for expansion of non-traditional institutions is huge. Chen, Z.L. (1999a:5), Chinese Minister for Education, claims that the expansion of Chinese higher education will mainly depend on the development of non-traditional institutions, especially the higher vocational education institutions.

For the above reasons the researcher puts emphasis on non-traditional higher education institutions rather than on traditional ones when Chinese massification is discussed in the latter part of this chapter.

3.6.2.1 Higher vocational education

Considering the low level of social and economic development in China, Wan (1999:51) maintains that China should largely develop higher vocational education institutions. The length of studies in the institutions is normally two to three years. Because of the shorter period, higher vocational education needs less investment and yields quicker effects. Chinese higher vocational education institutions have a short history (cf 3.7.2). In the early 1980s some Chinese cities began to establish vocational universities to meet the demand of applied manpower for the economy and society. Having developed these for twenty years there were 161 higher vocational institutions in 2000, with a total enrolment of 234200. In 'The Action Plan for Vitalizing Education Facing the 21st Century', the Chinese government calls on local governments, institutions and society to actively develop vocational and adult higher education (Ministry of Education 1999b). To respond to the central government's call, in 1999 local governments and institutions rapidly increased the enrolment in higher vocational institutions and adult higher education institutions. Some traditional universities established higher vocational colleges, namely new higher vocational colleges. But the students' response to vocational education was not as positive as the government had expected. For instance in 1999, in Henan province, only 50-81% of the accepted vocational education students, actually entered the institutions. That figure was 55-75% in Shanxi province and 79% in Jilin province. In the 2000's spring enrolment, some universities in Beijing planned to enroll 1755 vocational students, but there were only 1100 students who applied to take the entrance examinations (Xie 2000:116).

There are two major reasons for students' unwillingness to enter higher vocational institutions. The first one is ideological. The concept of higher education in many people's minds, is still that of elite or traditional institutions. People tend to regard vocational institutions as less noble than traditional ones. Influenced by such prejudice, the vocational institutions try to imitate traditional universities rather than develop their own strengths (Shi 1999:8; Qu et al. 2000:31). The second one is due to the education

system itself. Huang (1998:59) describes, that there were no mechanisms created for graduates from vocational institutions which normally offer non-degree courses, to further their studies for bachelor degrees or even higher degrees in traditional institutions, if they wished to do so. Furthermore, the majority of higher vocational institutions were established in the last few years. Many of them were established in 1999. Facilities in some institutions are far from sufficient. The scales of some institutions are small. For instance, the facilities in each of 50 institutions are worth less than 10 million yuan. There are 12 institutions which have less than 100 teachers each (Dai 1999:14).

Because of the above reasons and the short history, the Chinese higher vocational education institutions seem to be under-developed. They have not yet built their own strength. But the importance of vocational institutions is obvious. In the document of "The Central Committee of CPC and the State Council's Decision on Deepening Education Reform and Fully Promoting quality Education", the Central Committee of CPC and the State Council (1999) maintain that higher vocational education is an important part of the whole of the higher education system. China should largely develop higher vocational education to train a large number of people who have certain theoretical knowledge, as well as practical skills. Such manpower is so urgently needed by the economy and society. Beijing Higher Education Inspection Group (2000:33) made a survey in 2000. According to the survey, 91% of the students in higher vocational institutions believe that higher vocational education arose from demands by society and is an effective way to train an applied technical labour force. They also believe that higher vocational education is different from traditional education. It emphasizes training students' practical abilities and skills.

To develop Chinese higher vocational education, several policies are useful for consideration. Firstly, the characteristics of vocational higher education should be emphasized. These characteristics include applicability of knowledge, flexibility and diversity of studies in terms of contents, methods and length. Teachers in vocational institutions should have both academic backgrounds, as well as working experiences. Students should be allowed to transfer from the vocational system to the traditional

system. Some of the cities, such as Shanghai, Tianjin, etc., have already begun to implement such policies (Wan 1999:52).

Secondly, higher vocational institutions may merge or cooperate with some adult higher education institutions. Vocational institutions can share resources and facilities with the adult education institutions which already have facilities, but cannot enroll enough students. This could be of great benefit to both (Qu et al. 2000:31).

Thirdly, as Fanyu Vocational and Technical College (2000:33) argues the vocational institutions can be run like a higher vocational education 'super market'. Institutions offer different courses to meet the demands by different clients in local areas. Open access, flexibility of study and combination of learning and working experiences are the core of these institutions.

In conclusion, the development of Chinese higher vocational education institutions is emphasized by the government, which is a favourable factor to develop vocational institutions. This phenomenon is similar to that in Britain and Australia, when Britain developed its polytechnics in the 1960s (cf 2.7.4), or Australia developed its Colleges of Advanced Education in the same years (cf 2.8.4). But some further difficulties or shortcomings in the Chinese systems have to be overcome. The scale of institutions should be enlarged for the reason of cost effectiveness. Its own characteristics need to be developed to attract more students. The transferring of students between vocational institutions and traditional ones should be allowed.

One of the other forms of non-traditional higher education is adult higher education which is discussed in the next section.

3.6.2.2 Adult higher education

Adult higher education institutions in China include Radio/TV universities, workers' colleges, peasants' colleges, institutions for administration, education colleges and

independent correspondence colleges. There are altogether 871 adult higher education institutions, with a total enrolment of 3.1 million students. Traditional institutions also offer adult higher education in their correspondence divisions, evening schools and short-cycle courses (Editorial Department of China Education Yearbook 2000:95).

Table 3.7 indicates that although there are as many as 871 adult higher education institutions, adult education programs in traditional institutions, enrolled as much as 58.9% of the total student number in adult education. It can also be noticed that the Chinese adult higher education system is largely diversified in terms of form and the numbers of students. There are seven different types of adult institutions. The student numbers range from an average of 318 in one institution, like peasants' colleges, to an average of 10870 in one university, like radio and TV universities (Ministry of Education. Department of Development and Planning 2000:16-57; cf Table 3.7).

Table 3.7 Numbers of students and institutions in adult higher education in 1999 in China

	Institution number	Graduate number	Entrant number	Total enrolment
Radio/TV universities	45	170210	196230	489155
Workers' colleges	507	101741	143953	348215
Peasants' colleges	3	481	428	953
Institutions for administration	146	66259	90274	189336
Educational colleges	166	68624	103568	234735
Independent correspondence colleges	4	4372	4201	12395
Adult education run by traditional institutions		476542	667330	1828362
Total	871	888229	1205984	3103151

Source: Ministry of Education. Department of Development and Planning (2000:56-59)

The Chinese government promulgated 'The Outlines of Education Reform and Development in China' in 1993. In this document the Chinese government defines adult education as a new education system, reflecting the transition from traditional higher education to lifelong learning. It is very important for improving the quality of Chinese citizens and developing the Chinese economy. The emphasis of adult higher education should be put on in-service training and further education. It should build its own characteristics (Central Committee of CPC & State Council 1993).

Adult higher education in China can either be open access or selective. But, those who enter with open access, need to pass the unified national examinations if they want to get diplomas or degrees when they finish their studies (State Council. Degree Commission 1988). In 2000 adult higher education institutions enrolled 1.51 million students. There were 3.06 million people who attended the entrance examination to adult higher education, an increase of 0.8 million or 33.3% from 1999. About 90% of the applicants had jobs. 89% of the adult students applied to attend part-time studies (Duan 2000:1; Lin 2001:44).

The total enrolment in adult higher education increased to 2822000 in 1998 from 413000 in 1965 (Ministry of Education 1999a:168). But Hu and Shi (1999:81) argue that the scale of adult higher education is not large enough, China should largely develop its adult higher education. China has 2.7 million adult students, but only 86% of the traditional university students. According to the international experience, adult education students should be two to three times that of traditional university students. Enlargement of adult education is an economical way to expand higher education because the per capita cost in adult institutions is much lower than that in traditional institutions.

It is worth mentioning that China has the largest radio/TV distance learning network in the world. The establishment of the Chinese Radio/TV universities was proposed by Deng Xiaoping, former Chinese leader, in 1978 when he learned about the Open University in Britain. During the Second National Education Conference in 1978, the Chinese government stressed that China should use TV, radio and other modern methods

to develop Chinese education economically and rapidly (Deng 1998a:1606). After more than 20 years of development, China has now completed its radio/TV learning network. In 1999 China had 45 radio/TV universities, with a total enrolment of 489155 (cf Table 3.7).

Although Chinese adult higher education developed fast, there are still some problems. On the one hand, the scale of adult higher education is not large enough to meet the demands of the local economy, especially in the under-developed areas. On the other hand, many students are reluctant to go to adult institutions because the quality of adult higher education is relatively low (Feng, X.J. 2000:47). Like higher vocational education, adult higher education also tries to imitate the traditional education systems, in terms of curriculums, teaching-learning methods and administration. Enrolments in some institutions lack openness and flexibility. There is a shortage of qualified teachers and necessary facilities. Many people can not enter adult institutions because they do not pass the entrance examinations. Many of those who enter the institutions may not learn what they need to, or what they want to learn (Li, J. 1999:28 & 29). Chinese adult higher education institutions are diversified in terms of the forms and the scales. But if an institution is too small, like one with an enrolment of about 300 (cf Table 3.7), it is not cost effective.

It seems that such problems would hinder the development of Chinese adult higher education, unless effective policies are made to address the problems. Li, J. (2000:38) argues that emphasis on skills and vocational training are essential and necessary for the development of Chinese adult higher education. Differing from traditional universities, adult higher education institutions should be based on in-service training for professional personnel. Their curriculum, teaching methods and contents should focus on vocational training and applied science. They must cooperate closely with society. Eventually, adult higher education institutions can be marketized. They can be run like companies.

Liu, J.A. (2001:3) maintains that using the Internet for adult training is a way to improve the facilities and flexibility. Since 1998, 31 Chinese universities have established on-line

education colleges. Students in the colleges are mainly employed adults or school graduates who failed to enter universities. The advantages of the on-line education colleges are obvious. There are no limitations of time and place. The tuition fee is as low as 2000 yuan a year in some colleges.

Chen, W.N. (1999:2) mentions that some adult higher education institutions in Jiang Su province merged with some higher vocational institutions, or even some high quality secondary vocational institutions, in order to rationalize the structures of adult institutions.

The third form of non-traditional higher education is the self-study examination system. It is discussed in the next section.

3.6.2.3 Self-study examination system

According to the State Council (1981), the self-study examination system is a complete open access, self-learning and national examination system. The only criterion for getting certain qualifications is passing relevant unified graduation examinations. The Self-Study Examination Office of the Ministry of Education is responsible for making curriculums, examination planning, recommending textbooks and also organizing examinations. If students attend and pass the stipulated examinations they can get diplomas or degrees. The purpose of establishing a self-study examination system is to create a broad way to train high quality human resources for China's socialist modernization. The qualifications obtained through this system are equivalent to those obtained in traditional higher education institutions.

The self-study examination system was established in 1981. It was firstly implemented in Beijing, Tianjin, Shanghai and Liaoning as a trial. The experiment proved that the system was an economical and effective way to expand higher education. Therefore, in 1983 the Ministry of Education held a working conference on the self-study examination system and decided to implement the study system in the whole of the country (Ministry of Education 1983). After 20 years' development, the self-study examination system offers

courses in 239 subjects on the levels of bachelor degree and diplomas. There are altogether 2.9 million graduates. More than 16.8 million students registered for the system in 2001. The numbers of students in the system compose 22.3% of the total enrolment in Chinese higher education systems in 2000 (Cui 2001:1). In 1999 the number of students in the self-study examination system were equivalent to 1593500 full time students, compared with 3408800 in traditional institutions and 2822200 in adult higher education institutions (Editorial Department of China Education Yearbook 2000:140).

Yang, X.W. (1999:163) eventually argues that China has already realized massification of higher education, if the self-study students are included. He takes 1997 as an example. There were about ten million students who attended the self-study examinations in 1997. If these students were also counted, the gross enrolment rate in China would have been 30.8% in 1997. The researcher does not agree with Yang's calculation. The study situations of self-study students are very different, such as the time and energy they spend on learning. Therefore, one student who attended the examinations may not be equivalent to one full time student in a traditional institution. Besides, those who are still studying, can not be counted, because many of them do not register. The official way of calculating the self-study student numbers is based on the estimation that the average length of the studies in the system is five years. Therefore, it is estimated the total enrolment is five times that of graduation numbers. For instance, in 1997, 288800 students got diplomas or degrees, the official figure of student number in the self-study examination system in that year, was 1444000. Based on this estimation, the gross enrolment in 1997 was 9.07%, which is much lower than Yang's estimation (Ji 1999b:28). The researcher believes the official calculations tend to be underestimated, because those who study in the system but fail in the examination, are not included.

Although named self-study, many of the students normally attend some kind of classes to assist their learning. For instance, many of the traditional institutions and adult institutions organize classes for self-study students. There are 1095 private higher education institutions in China. Ninety eight percent of these private institutions were started specifically for offering courses for self-study students. It may be accurate to say

that the self-study examination system promotes the development of private higher education (Cao 2000:44).

Yang, X.W. (1999:163) mentions that the self-study examination system has the characteristics of life-long learning, further education and open education. It is a combination of 'self study, society assistance and state examination'. The costs are very low. This kind of study is easily accepted by society, especially in rural areas.

One of the problems of the self-study examination system is very similar to that of other non-traditional institutions. The examination papers are produced by experts in traditional universities. The criteria and standards are set according to relevant criteria and standards in the traditional universities. Thus the curriculum and teaching contents are similar to those of traditional ones, which makes the system lack its own strength in terms of teaching contents (Chen, Z.Y. 1999:61).

In conclusion, China's self-study examination system may be an unique feature in the world. It plays an important role in the expansion and diversification of the Chinese higher education systems. The openness and flexibility of the system is well-adapted to mass higher education. The low cost is especially an advantage for a developing country, like China. It is the researcher's observation that there may be another problem relating to the system. The self-study system is regarded as less noble than the traditional system by Chinese society. Its graduates feel inferior in the job market to those from the traditional institutions. Additionally, the system still remains elite in terms of curriculum, teaching contents and academic criteria. These are in contrast with its teaching methods.

The last form of China's non-traditional higher education is private higher education. This is studied in the next section.

3.6.2.4 Private higher education

Chinese private higher education experienced different development periods because of political influences. When the new China was established in 1949, there were 69 private higher education institutions, composing 39% of the total number of higher education institutions. In the 1950s, all the private institutions were transferred to state ones. Afterwards, for three decades from the 1950s until 1980s, there was no any private higher education institution in China because private enterprise was regarded as capitalism (Zhang & Wang 2001:19). In 1982, China revised its Constitution. The new Constitution stipulates that the state now encourages collective economic organizations, state enterprises and other social organizations, to establish every kind of education in China (China 1982). Since then the private higher education began to emerge. By 2000 their numbers increased to 1037, with a total enrolment of 1.23 million. But most of them can only offer non-qualification courses, only 37 of them are authorized with power to award diplomas or degrees (Editorial Department of China Education Yearbook 2000:121). Graduates from the other 1000 private institutions have to attend the self-study examinations if they want to obtain qualifications. This regulation limits the development of private higher education (the researcher's observation).

Although the number of private institutions increased fast, Pan (1999c:155) argues that the number of students in private institutions is only 94000, composing a small portion of the whole higher education system. In Japan and South Korea, the student numbers in private institutions are respectively 73% and 82% of the total student numbers.

Private institutions were politically sensitive in China. The government policies on private institutions changed several times. In 1987 the former State Education Commission promulgated 'The Several Temporary Regulations on Education Run by Society'. This document stipulated that private institutions could mainly undertake short time in-service training, or assisting courses for self-study examination students. Private institutions did not have the power to award certificates or degrees (State Education Commission 1987). As a matter of fact, this document limited the development of private

education. In 1993 the Ministry of Education issued 'The Outlines of Reform and Development of Education in China'. This document stipulates that all levels of the government should encourage and assist the development of private education in China (Ministry of Education 1993). Although the document does not give a detailed plan of how to assist the development, it at least releases the limitations on private institutions. In 1997 the Ministry of Education promulgated 'The Regulation on Education Run by Society'. It encourages the development of private institutions and also outlines the rules for establishing and operating private institutions. It is generally welcomed by society because it, unlike previous ones, gives clear instructions to follow. But in the meantime, it also stipulates that, the private institutions should not be established for the purpose of commercial benefit (Ministry of Education 1997). This restriction may prevent some enterprises and individuals from investing in private higher education.

It is obvious that the Chinese government's policies and their implementation were not consistent; they even contradicted themselves sometimes. There are several reasons for these changes. Politically, someone may still think that private education belongs to capitalism, instead of socialism. Therefore, it is not in line with the Chinese political system. Culturally in Chinese tradition, state goods are better than private ones, especially in the education sector. People are prejudiced against private institutions (Ke 1999:83).

Private higher education is important to China. The government cannot afford all the costs of higher education. It has to seek all possible resources to expand its higher education. Just as Chinese premier Zhu, R.J. (1999:27) claims China is a poor country running the largest education system, so the only choice is to use diversified resources to develop education. Pan (1999a:161) also argues that to develop a mass higher education system, even for developed countries, broad financial assistance is needed, not to mention in a developing country. For instance, students in private higher education institutions compose about 73.4% of the total university student numbers in Japan.

Chinese private higher education institutions are far from mature, due to their short history and political influences. The average scales of private institutions are only about 950 students (cf Table 3.7). The levels of education are lower than the traditional ones. Quality of both students and teachers are also lower (Pan 2001:18). Therefore, there are many aspects which should be improved. To develop Chinese private higher education institutions, the following policies may be considered:

- a. Private higher education is an important part of the entire higher education system. It has the potential to develop, especially in the process of transition to mass higher education. Like encouraging its private economy, the Chinese government should also encourage the development of private education as well, by means of more favourable policies for, and releasing control on, private education. The policy inconsistency as experienced before should be avoided. Private higher education law is needed to guarantee the stable development of private higher education and to protect the interests of both students and owners of institutions (Wang 2001:14).
- b. The emphasis of private higher education should be placed on higher vocational education to train applied personnel. Apart from short cycle courses, they should also be able to offer applied courses on higher levels, including undergraduate or even post-graduate levels (Ke 1999:85).
- c. Liu, L.L. (2001:6) argues that an effective way of developing private higher education may be to establish private colleges attached to state universities. Colleges can be relatively independent. They may be responsible for their own fund raising, enrolment, teaching, student's learning and daily operations. Parent universities may be responsible for setting academic criteria, organizing examinations, quality assessment and awarding diplomas or degrees if students meet the criteria. Guangdong, Jiangsu, Zhejiang and Sichuan provinces have already established more than ten such colleges (Xie 2000:127).

- d. Yang, D.G. (1999:169) suggests transferring the ownership of some state universities to private or collective ones. He argues that, if 30% of 1022 state institutions in China are transferred to private ones, the government can save 7.6 billion yuan a year. The fund can be used to strengthen remaining institutions. The researcher surmises that this idea originated from the experiences of the current economic reforms in China. To change the situation of loss in the many state enterprises, the Chinese government sold some of them to individuals, or changed from state owned to limited companies. A higher education institution is, anyhow, neither a company nor a profit-oriented organization. It has multiple functions and is influenced by the factors of economy, society, politics and others. It is doubtful that teachers, staff, students and their parents will be happy with the resolution.

In conclusion, private higher education can play an important role in the transition to a mass system. It is especially important when China is facing a shortage of funds. In this respect, China is different from Britain and Australia, where the transition depended mostly on state institutions (cf 2.7 & 2.8). The main difficulty in developing the private sector may be the ideological bias against private enterprise. The policy instability also negatively influences the healthy growth of the private sector. Private education law is needed to avoid the instability.

3.6.2.5 Conclusion

Mass higher education must be diversified. Diversity provides both the range of choices for students and the accessibility to higher education for many different clientele groups. Additionally, the diversity of funding resources could ease the financial pressures on a government (cf 2.2.6). As discussed, the Chinese higher education systems are plural. The different forms of the Chinese non-traditional higher education systems are playing an important role in the process of massification. This is similar to the experiences of both Britain and Australia. In the two countries, non-traditional higher education institutions expanded much faster than the traditional ones in the transition to mass higher education in the 1960s (cf 2.7 & 2.8). The Chinese government realizes the importance of

the non-traditional institutions and places emphasis on expanding non-traditional institutions to effect massification (cf 3.6.2). Compared with only one major form of non-traditional institutions in Britain and Australia, China has four different forms of non-traditional institutions: higher vocational education institutions, adult higher education institutions, self-study examination system and private institutions. This may be an advantage for China to expand its higher education.

There are, anyhow, two major problems in the Chinese non-traditional higher education systems. Firstly, non-traditional institutions copy traditional institutions and thus fail to develop their own strengths. Secondly, except TV universities, the scales of Chinese non-traditional institutions are normally small, which is not cost effective. These problems have to be addressed when the Chinese government makes policies to expand its higher education.

The different forms of non-traditional higher education systems in China have been discussed. In the next section the enrolment policies in China are examined.

3.6.3 Enrolment

China primarily established the examination system to select officials in the Sui Dynasty (581-618 AD). In former times, any one from either noble families or ordinary ones, could be appointed as a government official if he had passed the examination. This system was introduced to Europe in the 16th century (Yang, X.W. 1999:162).

Partially because of this tradition and partially because of current realities, the university entrance examination in China today is so important that people believe it decides the entire future of many young people. Examinations decide whether a youth can enter 'the white collar club' or whether those in rural areas could someday live in a city. Also due to the shortage of university places, the competition is fierce. As Lo (1991:714) describes the highly selective nature of Chinese university admissions filters down to school level, creating undue pressure on teachers, students and parents alike. Teachers do their utmost

to prepare students for the examinations. Thus patterns of examination questions are studied; class lectures are turned into coaching sessions; and extracurricular clubs, especially those devoted to the pursuit of academic subjects, become somber gatherings for the preparation of examinations. Examinations dominate students' lives.

To ease the examination pressure on students, the Chinese government adopted several reforms since resuming the examinations in 1978. The examination subjects were reduced from 7 to 5 in 1981, and further changed to '3+X' in 1998. '3+X' means 3 compulsory subjects plus one or two optional subjects. The three subjects are Chinese, mathematics and one of the selected foreign languages. X is one or two other subjects required by different universities. The contents of examinations have also been changed. Not only students' knowledge but also their ability are tested. Some cities began to hold examinations twice a year, instead of once a year in the past. Thus students were given more opportunities to enter universities (Zhou 2000b:3).

Another measure to ease the competition for university entrance is to expand higher education. The Chinese government decided to adopt multiple methods to increase the gross enrolment rate to 15% by 2010 (Central Committee of CPC & State Council 1999). But Yang, X.W. (1999:162) argues that expansion or reform of entrance examinations can not ease the competition, because the competition to universities is only a reflection of the general competition for a small number of positions in the social elite. Teichler et al. (1980:100, cf 2.6.5.3) also claim that it is hard to conclude that the expansion alone will ease the competition. However, though the examination pressure cannot be eliminated, some reforms of the entrance examinations and the expansion of higher education in China would reduce the pressures on students to a certain degree (Hu 2000:258).

In short, the enrolment issue is a policy dilemma. It was not resolved in OECD countries (cf 2.2.7). It may not be resolved in China as well.

As discussed above, China is now geared for the transition from elite to mass higher education. The strategies for the transition have been discussed. In the next section the prospects for the development of higher education in China for the next ten years are investigated.

3.7 Prospects for the development of higher education in China for the next decade

China's gross enrolment for higher education was 10.55% in 1999. The rates in some cities have already reached the level of a mass system. For instance, the gross enrolment rates were 35% and 34.56% in Beijing and Shanghai respectively (Kang 2000:17). The gross enrolment increased to 11% in China in 2000 (Cui 2001:1).

As discussed in the last chapter the enrolment rates in higher education are closely related to GNP per capita. When per capita GNP was lower than U\$ 1000, the enrolment rate was between 0-10%. When per capita GNP was about U\$ 1000-3000, the enrolment rate was between 10-20%, with an average of 14% (cf 2.3). It is predicted that the per capita GNP in China will be increased from U\$ 800 in 2000 to U\$1100-1700 in 2010 (Hao & Tan 1997:155). Thus the Chinese economy will pave the way for the massification of its higher education.

Xie and Huang (2000:20) made an international comparison of the length which some countries took to increase the gross enrolment rates from about 10% to 20%. It was found that the later a country started to develop its higher education, the faster the speed of development was. For instance, the USA and Philippines took 20 years from 1930 and 1959 respectively. But Thailand took six years from 1979 and Qatar took only five years from 1980. It took 5-20 years, with an average of 10.7 years, to have raised the gross enrolment rate from about 10% to 20% in the following ten countries, including the USA, Philippines, France, Japan, Italy, Western Germany, Cuba, South Korea, Thailand and Qatar. According to the experiences of these countries, the two scholars believe that China can increase its enrolment to 20% or even higher in about ten years time.

As the population is an important factor for the expansion of higher education (cf 3.6), it is necessary to scrutinize the population of the age group (18-22), when forecasting the enrolment in higher education for a decade later. According to the Chinese census in 1995, the population of the age group (18-22 years old) in 2010 was predicted to be 102.2 million, 112.2 million, or 116.2 million, in relation to three different rates of reduction during 1995 - 2010, due to immigration, death or people missing. If the enrolment rate reaches the Chinese government's target of 15% of the age group in 2010, the total enrolment should be 15.34 million, 16.82 million or 17.43 million respectively (Chinese State Statistics Bureau, quoted in National Center for Education Development Research 2000:103; cf Table: 3.9).

Table 3.8: Population of the age group of 18-22 years old and estimation of total enrolment in 2010 and average increasing rate of enrolment in the next ten years, providing China realizes its 15% target

	Population of 18-22 years old in 2010 (million)	Enrolment in 2010 (million)	Rate of increase
High estimation	116.2	17.432	5.7%
Mid estimation	112.2	16.823	5.3%
Low estimation	102.2	15.336	4.5%
Average	110.2	16.530	5.2%

Source: Chinese State Statistics Bureau, quoted in National Center for Education and Development Research (2000:103)

If Chinese higher education expands at the rates of 4.5% to 5.7% China can achieve its increased target (cf Table 3.9). According to Fang (2000:121), the average enrolment rate of increase in China was about 8% since mid 1980s when China adopted the reform and open door policy. The development of Chinese higher education in this period was relatively stable. If the average enrolment rate for the next ten years stabilizes at about the same rate of increase, the total enrolment would be about 21.9 million and the gross enrolment rate would be 19.9% by 2010.

As investigated in the previous and the present chapters, the developments of higher education are influenced by many factors. It is, therefore, not easy to predict accurately the level of China's higher education development for the next ten years. The researcher is convinced by the investigation made up till now, that China will be able to realize its target of increasing the gross enrolment rate to 15% by 2010.

3.8 Conclusion

In the present chapter the researcher has investigated the strategies for transition from elite to mass higher education in China through a literature study. The emphasis was put on non-traditional higher education institutions. The interaction between Chinese higher education and its contextual factors has also been examined.

The rapid development of the Chinese economy provides favourable conditions, and also demands for the expansion of higher education in China. As a developing country the shortage of funds seems to be the biggest obstacle in the way of expansion of Chinese higher education. Various ways of fund raising should be created. Increasing the governmental investment in higher education and introducing student fees are two important ways to solve the problem. Another important option is to seek private resources by establishing private institutions.

Employment of university graduates is becoming more and more problematic, along with the increase of student numbers. It seems that there is no effective way to resolve the problem, except to change the traditional views about the connection between qualifications and professions with high social status in an elite system.

The Chinese government recognized that high quality human resources are the key to its modernization drive. The government has made a series of policies to develop its higher education in both quality and quantity. But the disparity of the development between eastern and western regions and cities and rural areas, may negatively influence the

transition to mass higher education. The disparity, therefore, deserves careful consideration when the Chinese government makes relevant policies.

China has more diversified non-traditional higher education institutions, compared with Britain and Australia (cf 2.7 & 2.8). Therefore, it is more difficult for the Chinese government to make unified policies on different higher education systems in different development areas. In such a case, the researcher believes that the market mechanism may be an effective way to develop the Chinese higher education systems, although the government is reluctant to adopt this policy. The competition in the higher education market may stimulate the expansion and transformation of the higher education systems.

The quality of non-traditional institutions is a major concern of students and their parents. It is the researcher's observation that, on the one hand, some of the Chinese non-traditional institutions are newly established and need to improve their quality and build their reputation. On the other hand, society may need to adjust their view of the quality of institutions in a mass system. There are two different approaches to quality. One is academic quality emphasized more by an elite university. Another is applied quality emphasized more by a mass university. In a mass higher education system these two qualities are all important (Pan 2001:17).

The literature study has served as a basis for understanding the phenomenon of massification and identifying some of the strategies for the transition. In the next chapter an empirical study is conducted by using the qualitative method. This is done to investigate further, and make a preliminary evaluation of the strategies for the transition from elite to mass higher education in China.

CHAPTER 4

4 THE STRATEGIES FOR THE TRANSITION FROM ELITE TO MASS HIGHER EDUCATION IN CHINA: A QUALITATIVE INQUIRY

4.1 Introduction

The proceeding chapters form an important background for the investigation which is made, in the present chapter, by means of qualitative research.

Chapter 2 deals with the general theories on the massification of higher education and the experiences of the transition in the member countries of the Organization of Economic Cooperation and Development (OECD). Two case studies are made to scrutinize the process of massification in Britain and Australia.

Chapter 3 focuses on Chinese realities. It contains the higher education history, contextual factors and current development of Chinese higher education. The development policies adopted by the Chinese government are identified and analyzed. The quantitative facts about the development are also revealed.

This thorough literature study provided a basis for further investigation of the strategies for the transition from elite to mass higher education in China. Some crucial issues pertaining to the problems and some gaps in the existing knowledge have been identified. These issues and gaps are discussed in the present chapter, by means of a qualitative approach. Ten in-depth interviews have been conducted.

There are five major parts in this chapter. They are: theories on qualitative methodology, rationale for choosing the method, designs of the qualitative inquiry, presentation of findings and conclusions thereof.

4.2 Qualitative methodology - a theoretical basis

4.2.1 General orientation

According to Berg (1995:7), qualitative research properly seeks answers to questions by examining various social settings and the individuals who inhabit these settings. Qualitative researchers, then, are most interested in how humans arrange themselves and their settings, and how inhabitants of these settings make sense of their surroundings through symbols, rituals, social structures, social roles, and so forth. Page (2000a:104) argues that, as humans, we persist in seeking to know others and to comprehend the perspective used by others to focus on the world. We are able see them, but also ourselves, in all our differences and similarities. We persist, even though we can never fully grasp another's perspective and even though we recognize that our desire to know can be a form of violence, not just an expression of interest.

Glesne and Peshkin (1992:9) add that qualitative inquiry is an umbrella term for various philosophical orientations to interpretive research. For example, qualitative researchers might call their work ethnography, case study, phenomenology, educational criticism, or several other terms. Qualitative research is essentially an act of interpretation that examines the multiple meanings which people construct from shared and individual experiences (Brotherson 1994:116).

Metz (2000:62) similarly argues that qualitative researchers in sociology discover insider perspectives by spending a long time in contact with a group: participating in their lives with them, and seeking to understand mundane routines, special celebrations and rituals, and unplanned critical incidents. Researchers must listen for the interpretations that members of the group give for their own actions, the actions of other members of the group, and the actions, real and imagined, of outsiders. They produce descriptive data: people's own written or spoken words and observable behaviour (Taylor & Bogdan 1984:5). Such data provide 'thick descriptions' that are vivid, nested in a real context,

with a strong potential for revealing complexity, and have a ring of truth that has a strong impact on the reader (Miles & Huberman 1994:10).

Qualitative inquiry is different from quantitative inquiry. Qualitative inquiry implies a direct concern with experiences as they are 'lived' or 'felt' or 'undergone'. In contrast, quantitative research, often taken to be the opposite idea, is indirect and abstract, and treats experiences as similar, adding or multiplying them together, or 'quantifying' them (Sherman, Webb & Andrews 1984:26). Additionally, quantitative inquiry has a pre-specified intent. But qualitative inquiry is evolutionary, with a problem statement, a design, interview questions, and interpretations developing and changing along the way. The open and emergent nature means a lack of standardization; we do not know of, and thus do not provide for, clear criteria packaged into neat research steps (Glesne & Peshkin 1992:6).

Miles and Huberman (1994:1) find that qualitative research has secured a place in contemporary research fields. In the past decade more researchers in basic disciplines and applied fields (policy analysis, program evaluation, public administration, educational research, etc.) have shifted to a more qualitative paradigm.

In conclusion, qualitative research is a relatively new methodology, compared with quantitative research. It is a rigorous and systematic inquiry on a phenomenon in its real context. It can be used in applied fields, such as the present research of policy studies and evaluation. For such a reason, qualitative method is utilized in this research, to develop grounded theory instead of to prove or refute hypotheses. The issues of grounded theory are briefly discussed in the next section.

4.2.2 Grounded theory

The aim of grounded theory is to discover and conceptualize the essence of specific interaction processes. In order to understand patterns of experiences, grounded theory researchers gather data about the 'lived' experience of participants. Researchers immerse

themselves in the social environment. They may use in-depth interviews to verify, clarify, or alter what they thought happened, to achieve a full understanding of an incident, and to take into account the 'lived' experience of participants (Hutchinson 1986:51-52).

Star (1998:219 & 221) notes that grounded theory offers a way to include processes and actions in the analysis of vernacular representations. It is at the same time a source of theoretical richness for the understanding of intermingled types of work. Emphasis in grounded theory is put on making theories as richly complex as possible, rather than on proving hypotheses or applications of previous theories. Taylor and Bogdan (1984:140) similarly contend that the qualitative researcher can probably demonstrate plausible support for conclusions and interpretations, but never truly prove them.

Strauss and Corbin (1990:23) state that a grounded theory is one that is inductively derived from the study of the phenomenon it represents. That is, it is discovered, developed, and provisionally verified through systematic data collection and analysis of data pertaining to that phenomenon. Therefore, data collection, analysis and theory stand in reciprocal relationship with each other. One does not begin with a theory or hypothesis, then prove it. Rather, one begins with an area of study, and what is relevant to that area, is allowed to emerge. In such a way, grounded theory is built (Marshall & Rossman 1989:112).

In short, grounded theory is widely cited as a prominent framework for the analysis of qualitative data and is frequently referred to as the approach employed when writers report the results of their research (Bryman & Burgess 1994b:220).

As discussed above, researchers are the key players in generating grounded theories. Therefore, the role of a researcher in qualitative research is discussed in the following section.

4.2.3 The role of a qualitative researcher

According to Burgess (1985:5), the major research instrument is the researcher who attempts to obtain a participant's account of the social setting. Far from being a robot-like data collector, the interviewer is the research tool. The role entails not merely obtaining answers, but learning what questions to ask and how to ask them (Taylor & Bogdan 1984:77). A researcher is the provider of knowledge, not just in the sense of 'facts' but, more importantly, of insights which invite participants to reconceptualize their own world, and therefore possibly to devise ways of changing it (Finch 1985:122).

In qualitative research, researchers deal with multiple, socially constructed realities that are complex and indivisible. They regard their research task as coming to understand and interpret how the various participants in a social setting construct the world around them. To make their interpretations, the researchers must gain access to the multiple perspectives of the participants. Their study designs, therefore, generally focus on in-depth, long-term interaction with relevant people in one or several sites (Glesne & Peshkin 1992:6). The present research design accords with this observation.

The qualitative researcher's primary goal is to add to knowledge, not to pass judgment on a setting. The worth of a study is the degree to which it generates theory, description, or understanding. He/she tends to believe that situations are complex, so they attempt to portray many dimensions, rather than to narrow the field (Bogdan & Biklen 1992:46).

Qualitative researchers attempt to enter unfamiliar settings without generalizing from their own experiences to the new setting, and to enter familiar settings as if they were totally unknown. They try to suspend their own preconceptions or biases (Goetz & LeCompte 1984:10). But Taylor and Bogdan (1984:6 & 142) argue that it is impossible to avoid one's own commitments and biases. Data are never self-explanatory. All researchers draw on their own theoretical assumptions and cultural knowledge to make sense out of their data. Probably the best check on the researcher's bias is critical self-reflection. An understanding of one's data requires some understanding of one's own

perspectives, logic, and assumptions. In order to guard against their own biases, the qualitative researchers suspend, or set aside, their own beliefs, perspectives, and predisposition.

This is what the researcher tried to do with regard to personal bias in the process of the inquiries which started with the data collection. The data collection techniques are the focus of the next section.

4.2.4 Data collection techniques

The term data refers to the rough materials researchers collect from the world they are studying. They are the particulars that form the basis of analysis. Data include materials researchers actively record, such as interview transcripts and participant observation field notes. Data are both the evidence and the clues (Bogdan & Biklen 1992:106).

According to Brotherson (1994:102), qualitative research is aligned with such methods as participant observation, case studies, in-depth interviewing, and focus group interviewing. Within each technique, a wide variety of practices can be carried out, some more common than others. To figure out what techniques to use, again consider carefully what you want to learn. Different questions have different implications for data collection. In considering options, researchers choose these techniques that are likely, to elicit data needed to gain understanding of the phenomenon in question, to contribute different perspectives on the issue, and to make effective use of the time available for data collection (Glesne & Peshkin 1992:24).

The last issue of data collection is of confidentiality. Confidentiality can be seen as part of a larger issue. The fundamental ethical requirement of the researcher is to prevent harm coming to those studied. Embarrassment is usually the most serious harm that occurs. Maintaining confidentiality by not revealing the individual identities of those studied, is a means by which social researchers reduce the risk of harm to those studied (Erickson 1992:212). For such a reason the pseudonym is used in the present research.

In-depth interviews dominate the data collection in the present empirical inquiry. It therefore deserves an explanation.

4.2.5 Interviews

An interview is usually defined simply as a conversation with a purpose. Specifically, the purpose is to gather information (Berg 1995:29). One of the greatest skills of an ethnographic interviewer is the ability to be prepared to identify and pursue follow-up questions. In fact, the danger of beginning an interview with a list of questions 'written in stone' is that the list becomes a crutch that hobbles the researcher in pursuing data (Thomas 1993:40).

Interviews have particular strengths. An interview is a useful way to get large amounts of data quickly. When more than one person is used as an informant, the interview process allows for a wide variety of information and a large number of subjects. It also allows for immediate follow-up questions and, if necessary for clarification, follow-up interviews may be scheduled at a later date. Combined with observation, interviews allow the researcher to check description against fact (Marshall & Rossman 1989:82). Through interviewing, the skillful researcher can usually learn how informants view themselves and their world, and may obtain an accurate account of past events and current activities (Taylor & Bogdan 1984: 83 & 96).

Rapport is essential in a qualitative interview. It is tantamount to trust, and trust is the foundation for acquiring the fullest, most accurate disclosure a respondent is able to make. You promote rapport by the interest you show in what your respondents say. Showing interest is an easy way to reward: by your verbal and nonverbal behaviour you demonstrate that you are enjoying what you are hearing. The simple fact is that almost everyone gets satisfaction from being able to evoke interest in his/her listeners (Glesne & Peshkin 1992:79).

Different scholars give different names to the different types of interviews. Berg (1995:31-33) describes three types of interviews: the standardized interview, unstandardized interview and semi-standardized interview.

Howard (1985:215-217) observes otherwise that there are two basic forms of interviews: structured or unstructured. In structured interviews, it is assumed that the interviewer already knows a lot about the phenomenon to be investigated. It would look very similar to the questionnaire in a quantitative approach. In unstructured interviews, the following assumptions underlie the form: the relevant dimensions to be covered, will emerge in the course of the interview; the subject knows what issues are important, as well as, or better than the interviewer; and a lack of structure will lead to greater richness in data.

There is, anyhow, another form of interview which lies between structured and unstructured interview. It is a semi-structured interview which was used by Bekker (1993:12) during research for her master's degree at the University of South Africa. According to Bogdan and Biklen (1992:97), with semi-structured interviews researchers are confident of getting comparable data across subjects. But on the other hand, it is possible to lose the opportunity to understand how the subjects themselves structure the topic at hand. A particular type of method is chosen according to a particular research goal.

It is the researcher's view that different degrees of 'structuring' can be employed at different stages to avoid negative influences. For instance, in an initial interview an approach closer to an unstructured interview may be more helpful to establish rapport with informants, and to gain a general understanding of research subjects. In a later interview, the themes can then be more focused. A semi-structured interview allows flexibility to meet different needs at different stages of data collecting. Based on this consideration, the researcher adopted a semi-structured interview as the major data collecting method for the present qualitative inquiry.

Once data is collected, analyzing data is the next step of a research. It is discussed in the following section.

4.2.6 Analysis of data

According to Metz (2000:63), sociologists bring their own sociological lens to their analysis. They do not simply describe what they see, or become voices for insiders' perspectives. Rather, they analyze the roots, patterns and consequences of those perspectives. As sociologists, they often pay particular attention to various kinds of social structures, and to the economic or technical infrastructure and interaction patterns, in a society and in smaller groups they study within it. Thomas (1993:47) also argues that the process of actually doing critical research involves more than simply looking at culture with a jaundiced eye. It also requires that we attend to the various dimensions of topic selection, data acquisition, interpretation, and discourse to look for ways to move beyond conventional ways of observation and narrative.

Analysis involves a systematic process of sifting, charting and sorting materials, according to key issues and themes (Ritchie & Spencer 1994:177). Data analysis depends upon theorizing. The formal tasks of theorizing are: firstly, perceiving; secondly, comparing, contrasting, aggregating, and ordering; thirdly, establishing linkages and relationships; and fourthly, speculating (Goetz & LeCompte 1984:167).

According to Miles and Huberman (1994:11), analysis consists of three concurrent flows of activity: data reduction, data display, and conclusion drawing or verification. Data reduction refers to the process of selecting, focusing, simplifying, abstracting, and transforming the data that appear in written-up field notes or transcriptions. Data display is an organized, compressed assembly of information that permits conclusion drawing and action. Conclusion drawing and verification is to decide what things mean and to note regularities, patterns, explanations, possible configurations, causal flows and propositions. Glesne and Peshkin (1992:127) also claim that data analysis involves organizing what you have seen, heard and read so that you can make sense of what you

have learned. Working with the data, you create explanations, pose hypotheses, develop theories and link your story to other stories. To do so, you must categorize, synthesize, search for patterns and interpret the data you have collected.

The process of analysis is by no means an easy one; the breadth of qualitative research leads to data analysis procedures that offer less precision than in quantitative research. No two researchers will produce exactly the same analysis in exactly the same way. Differences in values, philosophies and training will lead each to present the phenomenon in his or her own way (Brotherson 1994:113-114).

When should data analysis be made? Taylor and Bogdan (1984:128) argue that data analysis is an ongoing process in qualitative research. Data collection and analysis go hand-in-hand. But, Bogdan and Biklen (1992:154) explain that analysis falls into two modes. In one approach, analysis is concurrent with data collection and is more or less completed by the time the data are gathered. The other mode involves collecting data before doing the analysis. In the case of the present research, the analysis-in-the-field mode was used, but the more formal analysis was done when most of the data was collected.

The purpose of research is, among others, to seek findings. How to present these findings is the topic in the next section.

4.2.7 Presentation of findings

After the data have been collected and analyzed, researchers return to the literature to juxtapose their findings and substantive theories, with a grand theory in order to discuss the contributions that studies provide (Glesne & Peshkin 1992: xiii).

Ethics is an important issue when qualitative findings are presented. According to Goetz and LeCompte (1984:244), the qualitative researcher's primary commitment is to a faithful and accurate rendition of the participants' life styles. Even though these may be

eccentric, singular, or idiosyncratic when compared to other groups, they still require reporting. The data should 'speak' to researchers, and researchers should listen closely, even if what they hear is not to their liking. To do otherwise is not only bad science, it is intellectually dishonest and unethical. If the data contradict or demonstrate processes counter to researchers' expectations, they must then change their position to fit the data (Thomas 1993:62).

According to Glesne and Peshkin (1992:164), the most frequently used technique of presentation is organization by themes or topics. By analyzing the data, the researcher generates a typology of concepts, gives them names or uses 'native' labels, and then discusses them one by one, illustrating with descriptive details. The researcher also adopted this technique to present his findings in the latter part of this chapter. The findings are organized by themes.

4.2.8 Reliability and validity

Validity and reliability of research are crucial in all social research regardless of disciplines and the methods employed. Collected data must be accurate and authentic and must represent reality. Also, intersubjective replicability of research enables investigators to produce cumulative findings (Shimahara 1984:71)

Reliability refers to the extent to which studies can be replicated. It requires that a researcher, using the same methods, should be able to obtain the same results as those of a prior study. But, qualitative research occurs in natural settings and often is undertaken to record processes of change. Because unique situations cannot be reconstructed precisely, even the most exact replication of research methods may fail to produce identical results. For these reasons, it may be claimed that no qualitative study can be replicated (LeCompte & Goetz 1982:35; Goetz & LeCompte 1984:211).

The validity of a measure refers to the degree to which the scores obtained in using the instrument, successfully approximate the true scores (the true score is a hypothetical value that represents a totally accurate score or rating) (Howard 1985:27).

To ensure accuracy, the researcher must always constantly double-check interview and observational data, for both accuracy and imposition of research values through leading questions or subtle misinterpretation that 'confirms' some presupposition without actually demonstrating it. Experienced ethnographers recognize that when analyzing field notes, it is as important to analyze the interviewer's style of questioning and interjected responses as it is to interpret the responses themselves. Interviewers' prompts can predetermine informants' discourse (Thomas 1993:39).

In spite of the danger of inaccuracy, Marshall and Rossman (1989:145) conclude that an in-depth description showing the complexities of variables and interactions will be so embedded with data derived from the setting that it cannot help but be valid. Within the parameters of that setting, population and theoretical framework, the research will be valid.

4.3 Choice of the methodology for the present research

In the present research qualitative approach is used. But Lemmer (1989:145) observes that such a decision can plunge an unwitting researcher into the midst of a fierce debate, amongst social scientists as to the virtues of quantitative over against qualitative methodology. Because of this controversy, a lucid explanation for the present choice of qualitative methodology is necessary.

There are three reasons for the researcher's choice. Firstly, qualitative research is suitable for policy research and evaluation. Secondly, the complementary role of the methodology may broaden the theories on the present research problems. Thirdly, qualitative research is descriptive, which can enhance the understanding of the research phenomena.

4.3.1 Qualitative research is suitable for policy research and evaluation

Quantitative methods are, in general, supported by the positivist or scientific paradigm, which leads us to regard the world as made up of observable, measurable facts. In contrast, qualitative methods are generally supported by the interpretivist paradigm, which portrays a world in which reality is socially constructed, complex and ever-changing (Glesne & Peshkin 1992:6). The potential of research based on qualitative, rather than quantitative, methods, can be seen clearly in relation to the study of social policy, and especially the consequences for human beings of particular social policies. It can do this because it can provide theoretically grounded, analytical accounts of 'what happens' in reality, in ways which statistical methods cannot accomplish (Finch 1985:113).

The last two decades have seen a notable growth in the use of qualitative methods for applied social policy research. Qualitative research is now used to explore and understand a diversity of social and public policy issues. It can be used to examine the reasons for, or causes of, what exists; to evaluate the effectiveness of what exists; and to identify new policies, plans or actions (Ritchie & Spencer 1994:173 & 174). Goetz and LeCompte (1984:30 & 32) also voice that qualitative evaluation became extremely popular in the late 1970s and has been the genesis of much evaluative research since then. The outcomes of educational qualitative research contribute to improvement in educational and school practices in several ways. They strengthen the overall research upon which many innovations and policies are based. Qualitative accounts convey to administrators the diversity to be expected from students, and encourage these educators to respond more flexibly and appropriately to their charges.

Burgess (1985:5) concludes there is significant potential for qualitative research to have an impact upon social policy in the field of education.

4.3.2 Complementary role of the present qualitative study

According to Finch (1985:113-115), the methods of qualitative research can be seen as complementary to other kinds of research, with their special contribution to make more comprehensible accounts. Statistical studies can tell us how many children are being catered for in playgroups and something about their social profile; but only qualitative studies can tell us what playgroups are actually like. Lemmer (1989:146-147) also claims that qualitative methods are useful in complementing large scale survey data. It can be used to illustrate or clarify quantitatively derived findings (Strauss & Corbin 1990:18-19).

China made policies to transform its higher education from the elite to the mass stage. The numbers of Chinese institutions and their students have been increasing. At the same time the tuition fees and unemployment rate of graduates have also increased. The quantitative descriptions of these changes have been published by the Chinese government and have also been investigated in chapter 3 of this research (cf 3.6). But, how do these changes affect relevant people (students, parents, teachers and employers alike)? How do these people evaluate the policies? What are the expectations of these relevant people? The researcher believes that attributes of a qualitative investigation will facilitate the discovery of possible explanations of these questions.

4.3.3 Qualitative research is descriptive

According to LeCompte and Goetz (1982:33), qualitative researchers attempt to describe systematically the characteristics of variables and phenomena, to generate and refine conceptual categories, to discover and validate associations among phenomena, or to compare constructs and postulates generated from phenomena in one setting with comparable phenomena in another setting. Qualitative data in their richness and holism have strong potential for revealing complexity. Such data provide 'thick descriptions' that are vivid, nested in a real context, and have a ring of truth that has a strong impact on the reader (Miles & Huberman 1994:10). Taylor and Bogdan (1984:5) similarly note that qualitative research produces descriptive data: people's own written or spoken words and

observable behaviour. Glesne and Peshkin (1992:168) conclude that the purpose of qualitative research in general is to increase understanding, to tell the story that the data tell, not to pass judgment.

Qualitative inquiry is suitable in the investigation of the strategies of higher education transition. According to Finch (1985:113), in providing the 'colour', qualitative studies reflect the subjective reality of the people being studied. They can therefore make a contribution to an understanding of the effects of the government policies.

Because of the above mentioned three reasons: appropriate for policy research and evaluation, complementary and descriptive, qualitative methodology is used in the present research.

4.4 Design of the present study

4.4.1 Statement of subjectivity

In qualitative inquiry the researcher is the major instrument in both collecting and analyzing data (cf 4.2.3). He can influence both data and the meanings that are attached to the data. In essence, researchers must guard against their own ethnocentrism and perceptual biases (LeCompte & Goetz 1982:47). Therefore, a simple and explicit acknowledgement of the present researcher's relevant background, is deemed necessary in an attempt to minimize possible distortion of and bias in research findings (Lemmer 1989:151). In order to ensure the validity of the present inquiry the researcher's background and values should be clarified.

The researcher is a Chinese man of the age of 40. He is married and has a school age child. He was born in a rural village in Inner Mongolia, a western undeveloped region in China. After rigorous studies in a school which is very backward compared with those in cities, he succeeded in the national university entrance examinations. He then entered a teachers' training university, and later another university which specialized in language

and cultural studies. Both universities are in Beijing. After six years of studies he received a bachelor degree in science, as well as a senior diploma in English, at the two universities respectively. Since graduation he has worked in the Chinese Ministry of Education in Beijing. In between he worked at the Chinese overseas missions in Australia for two years, and Britain for three years. He is currently working in the Chinese mission in Pretoria, South Africa.

The researcher's learning and working experiences may have at least three implications for this inquiry. Firstly, a university education has changed his whole life: from a farmer's son to a diplomat; from a harsh rural life to a comfortable city one. This gives him a deep understanding of the meaning of higher education to a youth in China. Secondly, working in the educational field, especially in a policy making body, has familiarised him with Chinese higher education policies. Thirdly, his working experiences in different countries have proved helpful to him to do this comparative research.

Regarding his values, the researcher is deeply influenced by Confucianism. Its values are cherished by the researcher.

Confucianism represents the way of life followed by the Chinese people for well over 2000 years. The key concept to Confucianism is the Chinese character Jen, which has been variously translated as virtue, love, magnanimity, or humanheartedness. Jen is to love men joyously and from the innermost of one's heart. Jen is inborn in all men, and to nurture and cultivate this seed-essence of humanity into full, flowering virtue is the common mission of human life (New Encyclopaedia Britannica 1978, s.v. 'Confucianism'). Besides Jen, Confucianism also emphasizes learning. Confucius once said that the worth of other pursuits is small, the study of books excels them all (Xi 1990:130). The researcher views that loving mankind nurtures the morality of our people. Devotion to learning makes our people clever and develops outstanding human qualities. These are the two most important aspects in a man's entire life.

As English is not the native language of both the researcher and the informants, it is necessary to clarify the issue of language in the next section.

4.4.2 Language

Interviews were conducted in Chinese which is the native language of both the informants and the researcher. This made it easier to communicate with and to understand the informants. The transcriptions were also written in Chinese. Translations from Chinese to English, were only made during the stage of writing of the dissertation.

In spite of the advantage of fluent communication in Chinese, the researcher is aware of the possibility of inaccuracy caused by translation. He tried his best to keep the meanings as close as possible to the original script. In case of uncertainty, consultation with experts was made.

4.4.3 Selection of informants

According to Glesne and Peshkin (1992:27), the strategy of participant selection in qualitative research rests on the multiple purposes of illuminating, interpreting and understanding, as well as on the researcher's own imagination and judgment.

Typically, researchers compose a set of criteria or a recipe that constitutes a portrait of the group they want to study. They then search for groups that possess those characteristics and endeavour to obtain access and permission to do the study. For comparative purposes, qualitative researchers may choose phenomena to study because they are similar or because they differ systematically along particular dimensions. In either case, the intention is the clarification, refinement, and validation of constructs (LeCompte & Goetz 1982:34; Goetz & LeCompte 1984:70).

Massification of higher education is a complex phenomenon. In order to present as broad a picture as possible, the researcher selected ten informants who differ systematically. Criteria for selection were set before the selections. The criteria are:

- a. Informants are from different groups: university students, university teachers, parents of university students, employers, an academic and a relevant governmental official.
- b. Informants are from two cities with different development levels. They are Beijing, the capital of China, and Hohhot, provincial capital of Inner Mongolia. Beijing is one of the most developed regions, while Inner Mongolia is one of the most undeveloped regions in China.
- c. Male and female informants are equally selected.
- d. Informants are technically accessible to the researcher.

According to the above preset criteria, the researcher contacted prospective interviewees whom he knows, or who were recommended by his friends. In the end, two students, two teachers, two parents and two employers were selected. One of each group is from Beijing and other is from Hohhot. One academic from Hohhot and one governmental official from Beijing were also chosen. Informants compose five males and five females.

4.4.4 Data collection

There are two important issues regarding the interviewing which is the major method of data collecting in the present research. One is rapport which is essential for obtaining valid data. Another is confidentiality. According to Taylor and Bogdan (1984:79 & 87), interviewers establish rapport with informants through repeated contacts over time and thereby develop a detailed understanding of their experiences and perspectives. They further note that it is almost always wise to use pseudonyms for people in written studies.

There are few legitimate research interests served by publishing people's names. The risks are substantial, such as embarrassment to the informant or others.

For the above reasons, pseudonyms are used for informants in the present research as mentioned previously (cf 4,2,4). Establishing rapport was given close attention during interviews.

The researcher spent two months, from October to December 2000, in China. He stayed about six weeks in Beijing and two weeks in Hohhot. Semi-structured interviews were conducted during these periods. The interviews were conducted in offices, homes and classrooms of informants in order to have natural settings. Each of the informants was interviewed twice. The first interview normally lasted about 30-40 minutes. It was more like an unstructured interview. A few minutes of social contacts and re-explanation of the research were necessary because establishing rapport was one of the main purposes in the first interview. Notes of the interviews were then taken. Informants' backgrounds were also noted.

The second interviews were more detailed and lasted about one hour each. They focused more on the themes than the first one. Each interview was tape-recorded throughout. Notes were also made on important points made by informants and the immediate reaction of the researcher. After each of the interviews, the researcher reflected on the interview and re-examined the interview guide, in order to find new themes and revise the old topics.

4.4.5 Data analysis

A preliminary analysis of data was started along with the interviews. By doing so, the researcher could reflect more clearly on the data newly collected. Fresh themes and topics emerged. These themes and topics could be explored further in the next interview.

Taped interviews were transcribed. The transcripts were made and grouped into different themes, instead of following the order of original interviews. The researcher found that such a procedure was effective for later analysis while not affecting the original meanings.

Notes and transcriptions were copied. Thus, these raw materials could be sorted, edited and organized freely, while the original ones were preserved.

The final and formal analysis was made after all data was collected. During the analysis, notes, transcriptions, as well as the literature in Chapter 2 and 3, were reviewed. Such a review is helpful for generating theory. It is also useful for presenting data consistently with previous chapters.

4.5 Summary

In previous sections, the researcher discussed the principles of on the qualitative methodology, rationales for adopting qualitative inquiry, and concrete designs for the present research on massification of Chinese higher education. Semi-structured interviews were conducted as the major way of data collecting. Ten informants with different backgrounds were selected.

In the next section, the findings which emerged from the qualitative research, are discussed and presented.

4.6 Presentation and discussion of key themes

4.6.1 Introduction

After the theoretical discussion of qualitative research, this section presents and describes the data generated in in-depth interviews with two university students, two university teachers, two parents, one university academic, one central government official and two employers. The characteristics of these informants are also introduced.

The presentation is made according to eleven themes which were identified in the literature study in Chapter 2 and Chapter 3, and also emerged from the interviews and interview analysis. In the most of the theme sections, the generated theories are stated firstly. Then data are presented to support and illustrate the theories. Finally, discussion is presented for the purpose of comparing the grounded theories with those in Chapter 2 and Chapter 3.

Like any other interview data, quotations are also translated from Chinese to English. Because the researcher speaks both Chinese and English, it was easy to judge whether Chinese quotations were translated with as little change in meaning as possible. Because of this, such translated quotations are freely used.

4.6.2 Characteristics of informants and background data

4.6.2.1 Students

Jiaf and Hain are two first year university students. Jiaf was a high achieves in high school. He ranked academically far behind in his class. But he is a good athlete. He often won prizes for javelin at school sport competitions. He lives now in university accommodation and only returns home for weekends. His parents are acquainted with the researcher. His mother is a teacher at a university and his father is a researcher at an institute. Hain is of Mongolian nationality (one of 55 different ethnic nationality groups in China). Her father is a lecturer at her university. She is a monitor of her class of 43 students. She lives with her family on the university campus. Her mother is unemployed. Hain was selected to attend this research on recommendation by a friend of the researcher. Their backgrounds can be found on Table 4.1.

Table 4.1**Students**

Jiaf	Gender	Age	City	Year enter Univ.
	Male	19	Beijing	2000
	Type of training	Subject	Qualification	
	Nontraditional	Medicine	Diploma	
Hain	Gender	Age	City	Year enter Univ.
	Female	19	Hohhot	2000
	Type of training	Subject	Qualification	
	Traditional	Physical education	Bachelor	

4.6.2.2 Teachers

Liy and Mao are two teacher informants. Liy works at a TV university which is a typical non-traditional university. She is married and has a high school child. Her husband is an associate professor in an university. She teaches more than two hundred students in accounting. She was recommended to participate in the research by a friend of the researcher. Mao, another teacher informant, works at a teacher's training university in Hohhot. He teaches three classes of about 120 students in anatomy. He is married and has a high school child. His wife is a teacher at a nurse's training college. He lives on his university campus. He did two years research in Japan. He is a relative of the researcher. So rapport was not a problem at all, but the researcher had to adjust his previous role as a relative to the role of a researcher. Mao also had to exchange the role of relative for informant. To facilitate the more formal relationship, the interview was conducted at his department office, rather than at his home which is very familiar to the researcher. In the end, the researcher was satisfied with the interview. Liy's and Mao's backgrounds are indicated in the Table 4.2.

Table 4.2

Teachers

Liy	Gender	Age	City	Teaching years
	Female	48	Beijing	23
	Type of Univ.	Subject	Qualification	Title
	Nontraditional	Accounting	Master	Associate professor
Mao	Gender	Age	City	Teaching years
	Male	44	Hohhot	19
	Type of Univ.	Subject	Qualification	Title
	Traditional	Anatomy	Bachelor	Lecturer

4.6.2.3 Parents

Qij and Chenm are two parent informants. Qij is married and has one child who is a first year student at a higher vocational university. She is a teacher in a high school. Her husband is an university teacher. Chenm is married and has a child who is a third year

Table 4.3

Parents

Qij	Gender	Age	City	Children
	Female	50	Beijing	1
	Type of children's Univ.	Profession	Qualification	
	Nontraditional	Teacher	Bachelor	
Chenm	Gender	Age	City	Children
	Male	54	Hohhot	1
	Type of children's Univ.	Profession	Qualification	
	Traditional	Teacher	Bachelor	

4.6.2.5 Employers

Donge and Yong are the two employer informants. Donge is a chief engineering and deputy general manager in a steel corporation. He is married and has a high school child. He is responsible for the training and human resource development for his corporation. He knows many university graduate employees. The corporation has about 300 employees with university qualifications. Yong is a deputy manager in a pharmaceutical company. The company has 329 employees, among them about 30 university graduates. He is married and has a high school child. Both of the employers were recommended by the researcher's friends. Table 4.5 contains their details.

Table 4.5 **Employers**

Donge	Gender	Age	City	Children
	Male	45	Beijing	1
	Organization	Title	Qualification	Number of employee
	Cooperation	Deputy general manager	MBA	1247
Liy	Gender	Age	City	Children
	Male	43	Hohhot	1
	Organization	Title	Qualification	Number of employee
	Company	Deputy manager	Bachelor	329

So far, the characteristics and backgrounds of all informants have been identified. Including the first instance or the second instance, five interviews were conducted at informants' offices, four at informants' homes and one in a classroom. All interviews were undertaken in a friendly atmosphere. Informants showed a high degree of rapport with the researcher. Because all the informants have a higher education background and are closely related to the field in one way or another, they showed keen interests in the

topic. The researcher was convinced by the rapport and interest the informants showed, that their true perspectives and opinions were fully expressed. These perspectives and opinions are presented and discussed in the next section.

4.6.3 Presentation and discussion of key themes

4.6.3.1 Chinese government policies for expanding its higher education and their effects

As discussed in Chapter 3 (cf 3.6.1), the Chinese central government has made policies aiming at expanding the enrolment of its higher education. The increase of student numbers was especially large in 1999. Effects of these policies are obvious. Among others, the enrolment times increased from once a year to twice a year in some regions. Thus, students have more chances to go to universities:

Previously Inner Mongolia recruited university students once a year, only in autumn. From 2001, the provincial government will change the enrolment to twice a year, in both spring and autumn. Shanghai and Zhejiang have already increased to twice a year in 2000 (Chenm).

Liy also states:

From the spring of this year, university enrolments were held twice a year in Beijing. In the past, it was only once a year. This is good. In fact, the number of enrolment times for non-traditional learning, like TV universities, should be further increased.

The enrolments of Inner Mongolia universities have also increased. Chenm states that the student enrolment in the region will increase to more than 16000 in 2001. The numbers of new students enrolled at his university, will increase to 3000 or more in 2001 from 2500 in 2000. According to Liuw, the increase of the enrolment was stipulated by the

provincial government instead of universities themselves. Even the concrete plans of increase were also set by the local government:

The Education Department of Inner Mongolia issued a document to my university. It requires us to increase the student numbers to 15000 by 2005. We have only 6000 students now. This means we have to increase 1.5 times in five years (Liuw).

Chenm opposes such an top-down administration style:

The enrolment plan should be made by institutions according to their situations, instead of the government. Institutions know their capacities better.

To adapt to the increase in student numbers, the Chinese government and institutions increased the investment in institutional infrastructures. The expanded facilities for both teaching and living are one of the priorities for both government and institutions:

My university is busy building on teaching facilities and student dormitories (the researcher's remark: most of the students live on campuses at Chinese universities). The university planned to build a student canteen in 2001. I do not know who invested the money, the university or the provincial government (Chenm).

Zhangg noted that both the government and universities are going to invest in infrastructures:

While the government increases the funds for infrastructures, it also encourages institutions to increase the investment in infrastructures, such as teaching buildings, students dormitories and sport facilities. The government also allows institutions, jointly with social and economic sectors, to invest and operate student dormitories (the researcher's remark: formerly student

dormitories could only be managed by institutions according to the government regulations).

All interviewees agreed that expanding Chinese higher education is the right decision. It can ease the competition for going to university and improve the general standard of living in China:

Competition for going to university is a serious problem in China. It is like 'thousands of army soldiers and horses crossing a river by using a single narrow bridge'. The pressures on parents, society, especially students, are huge. The expansion of higher education can provide more opportunities for students. Besides, the more students who receive higher education, the higher the standard of living in China could be (Liuw).

Some of the students benefit directly from the expansion, as Hain described:

The effects of the expansion in Inner Mongolia are obvious. Our university enrolled a lot more students. Some students in my class are not good at studying. In the past, students like them could not enter to an university. But now they can study here. So the policy of expansion is crucial to those students (Hain).

In spite of these positive facets, there are some concerns about the governmental policies. For instance, the policies were not well deliberated and publicized. The quality of higher education may be affected due to lack of facilities:

The policies of expansion were made unexpectedly. It was just suddenly announced that so many numbers of enrolment were to be increased. There was a lack of consultation. Material preparations in institutions were not sufficient. These affected the quality in some institutions (Qij).

The issue of quality is further studied in paragraph 4.6.3.6.

a. Discussion

In the process of higher education expansion, two unique phenomena may be noticed in China. Firstly, most of the students live on campuses in Chinese institutions. When the enrolment expands, new dormitories have to be built to accommodate the increase in students. This depletes educational funds. Secondly, the provincial government in Inner Mongolia gives concrete instructions to its universities, in terms of the increase in numbers of students and the time to achieve its target. In contrast, British and Australian governments created marketized mechanisms to encourage the expansion of their higher education. But it was the universities which decided on the increase in numbers and deadlines, instead of the government (cf 2.7.2 & 2.8.2). It is the researcher's comment that these two unique phenomena in China may not be positive for massification, if the issues of funding and institutional autonomy are considered. Relaxation of the control on student dormitories is a right approach.

4.6.3.2 Reasons for the expansion of Chinese higher education

According to the discussion in the Chapter 2 (cf 2.2.5), there are multiple reasons for the expansion of higher education in some developed countries. The expansions were demanded by economy, society and politics. China is no exception. Zhangg states that there are four reasons for China to expand its higher education. Firstly, along with the economic and social development, more university students are demanded by the Chinese economy and society. Secondly, expansion of higher education can ease the pressure of unemployment, because the expansion allows more school leavers to go to university, instead of entering the labour market. Thirdly, due to economic development China is able to spend more money on higher education. Fourthly, most parents hope and want their children to go to university.

Apart from these general reasons which have been discussed in Chapter 3 (cf 3.2, 3.3 & 3.4), interviewees gave another specific reason from their perspectives:

Most parents strongly hope their children can go to university. But university placements in China are limited. So many of the parents spend a lot of money on sending their children to study abroad. Many students go abroad every year. A huge amount of foreign currency has thus been transferred to foreign universities. The government realized the problem. This is one of the reasons for the government to expand its higher education (Qij).

Liy also states:

That universities of the USA, Britain and Australia, come to China to recruit students. Tuition fees are as high as hundreds of thousands yuan. The quality of some foreign universities is very poor. Some Chinese students are even cheated. Why don't we use this money to enlarge our own universities, rather than give it to foreigners?

a. Discussion

When the Organization of Economic Cooperation and Development (OECD) member countries expanded their higher education after the Second World War, their concerns were mainly domestic (cf 2.2.5). In the era of economic globalization China has to face a new challenge. It is the international competition for overseas students. This new challenge could be an additional force to accelerate the expansion of Chinese higher education.

4.6.3.3 Positive influences brought about by the expansion of Chinese higher education

Informants identified three benefits from the expansion of Chinese higher education. The first is the improvement of manpower quality. The second is the acceleration of the economy and the third is the promotion of youth development. Five of the informants maintain that one of the positive effects of the higher education expansion is the improvement of the quality of human resources in China. In the era of a knowledge based economy, the quality of manpower is an important factor in the international competition:

China developed a strategy of 'Invigorating China through Science and Education'. Along with the massification of higher education, the applied talents will increase, which will benefit the development of the economy and science (Yong).

Mao also claims:

Expansion can improve the cultural quality of Chinese citizens. It was found that the cultural quality is much higher now than it was 20 years ago in China. People's ideology has also been changing. For instance, awareness of environmental protection has improved a lot.

The second benefit from the expansion of higher education is the contribution which was made to economic development. Three aspects are underlined by the informants:

It benefits economic development. There is a saying before that, 'the people working do not know technology, and the people knowing technology do not work'. In the past, university graduates in factories did not need to do labour work, they just gave instructions to workers who did not know technology. Because the number of graduates has increased, the situation is changing now (Mao).

Regarding other aspects, Donge argues that the service industry in China is undeveloped. The expansion of higher education can stimulate the growth of the service sector because universities need a lot of services provided by society. Yong, another employer, also emphasized the effects on economic development. He maintains that the development of higher education can narrow the development gaps between China and the Western countries.

In addition, promoting youth development is another benefit. Students normally graduate from senior high school at the age of 18 or 19 years old. Due to the high rate of unemployment in China it is very difficult for such young people to get a job. It could create a social problem when they stay at home. Expansion of higher education can lead to more youths entering university to learn, rather than staying at home and wasting their time:

The more youths who go to universities, the less they loaf around. It is good for the public order. If it was not for the increasing enrolments, many of my classmates could not attend university. They would have nothing to do because they could not find a job soon. So, it is better for them to go to university and study (Jiaf).

a. Discussion

The data collected from the informants indicate that the positive effects from the higher education expansion, on economic development and the growth of the service industry were tremendous. This accords with the arguments studied in the previous chapter (Hayrynen 1979:174-175; Hao & Tan 1997:137-139; cf 2.3). Promoting economic development is one of the major purposes for the Chinese government to expand its higher education (Weifang 1991:151; cf 3.2.1).

A young informant raises a new argument that higher education expansion could occupy more youths with study, rather than loafing around. Although this view was not found by the researcher in the literature study, it seems to be important, at least to a relevant individual teenager himself.

4.6.3.4 Difficulties faced by China to expand its higher education

The informants identified two major difficulties in the process of expanding Chinese higher education. They are: the shortage of funds, especially in the underdeveloped western regions and the difficulty in changing people's ideology.

China is a developing country. The level of its economic development is relatively low, which constrains the development of higher education. The Chinese government cannot invest enough in higher education. Because of the shortage of funds, some Chinese universities are poorly funded:

The majority of Chinese universities are state owned. Most of the funds are from the government. Although the Chinese economy has developed rapidly in the last 20 years, the percentages of both government revenue and the education budget, to the GNP, are low. They are lower than in some other developing countries, such as India. In official documents or leaders' speeches, the government attaches great importance to the education. But in reality they think they have more important sectors to invest in (Mao).

Liuw similarly claims:

Higher education should be funded mainly by the government. But as a developing country the government cannot provide enough money. The teaching, living and experiment facilities are far from enough.

The problem of funding is even worse in China's underdeveloped western regions, as described by Chenm:

The shortages of funds are a big problem, especially in western or ethnic nationality regions. In an university like mine, it is difficult. The central government tells us there is no money, the local government tells us, no money. My university, unlike some famous universities which have high tech industries, cannot create a lot of extra money. Our university's 'industry' is only several flats which the university allocated for renting out to make some extra money.

Apart from funding, changing people's ideology is another obstacle to the process of massification:

I think the expansion should be further accelerated. Although the government raised the concept of mass higher education, universities and society still stick to the traditional ideology. They think the idea of mass higher education is not in line with university functions. For instance, notwithstanding the fierce competition for entering university, higher vocational institutions cannot recruit enough students in Beijing. They think that higher vocational institutions are not their idea of a university. Ideology is the key factor (Donge).

The old ideology of some government officials constrains the massification of higher education:

Educational officials have long been used to the modes under the planning economy. They always hope the development is in line with their plans. These plans limit the development. The Ministry of Education makes plans according to availability of funds and the needs of the labour market. If they need manpower in certain fields they train people in those fields. They do not

train people in the fields which they think they do not need. They treat people as instruments of labour. This is wrong. This ideology should be changed. The individual's self fulfillment should also be considered (Qij).

a. Discussion

The funding and ideological problems are nothing new in the process of massification. When OECD countries expanded their higher education they also encountered funding constraints (cf 2.3.2.1, 2.7.3 & 2.8.3) and ideological obstacles (Cerych et al. 1974:44; Bereday 1973:142; cf 2.2.10). But in the case of China, it seems that the funding constraints and ideological obstacles are much more serious than in OECD countries. China is in the process of transition from the former planning economy to a market economy. But changing people's ideology is a slow process, which affects the transition to a mass higher education in China in a fundamental way.

4.6.3.5 Conflicts caused by the expansion of Chinese higher education and methods to resolve them

There are two major conflicts identified by informants. One is the employment difficulty as Yong states that, along with the higher education expansion the graduates will find it more and more difficult to find a good job. The issue of employment is studied further in paragraph 4.6.3.9.

Another conflict is the quality caused by the lack of facilities. The number of students has increased rapidly for the last two years. But the increase of funds is not compatible to it. Thus teaching and learning facilities in some universities are very inadequate:

Along with the increase of student numbers our dormitories and learning spaces are really limited. We have to go to the library or classrooms (for self-studies) early to occupy seats, otherwise you will have no place to study. Seven or eight students live in one room of about 14 square meters. ... Our

university is now constructing new buildings. The old student residence buildings are three or four stories. The new ones are more than ten stories. The university does not have enough space for these new buildings. So the old lower buildings have to be pulled down (Jiaf).

The shortage of teaching facilities affects the quality of teaching, as Mao observes:

The big conflict brought about by the expansion, is the quality problem. The quality is lowered because of, not student quality, but the lack of teaching and experimental equipment. Therefore, the student numbers should be increased gradually, instead of suddenly. The enrolment numbers should be decided on by individual universities according to their capacity, instead of being decided by the government.

a. Discussion

The shortage of facilities is serious in some Chinese universities. The Chinese government tried to find ways to increase the investment in higher education (cf 3.2.3). But it is doubtful that the scale of fund increase will be compatible with the scale of enrolments. The shortage may not be resolved soon unless other resources, like private resources, are found. The tempo of expansion is a policy dilemma. If enrolments are not rapidly increased, those outside universities will protest. But if enrolments are rapidly increased, those inside universities will complain. How to resolve the dilemma may deserve further research.

4.6.3.6 Enrollment policies for easing the fierce competition and effects of these policies

The competition for entering universities is fierce in China because of the limitations of university places and the Chinese traditions. Such competition can filter down to school level, creating unbearable pressure on students and parents alike (Lo 1991:714; cf 3.7.3):

In order to reduce the heavy burden on students, the government stipulates that schools are not allowed to give students homework during the stage of primary education. But parents are against the regulation. They buy extra reference books for their children. Schools do not arrange additional lectures during weekends. But parents hire home teachers. All these practices are for the university entrance examination. The government's call for reducing students' burdens, therefore, mostly failed (Chenm).

The competition pressures are felt by all students, both students who are not so good academically, and those who are excellent enough to be sure that they can succeed in the examinations:

Universities are different. There are higher vocational institutions, ordinary universities and prestigious universities. Every one wants to go to good universities. Higher vocational institutions are their last choice. Good students want to go to prestigious universities, like Qsinghua University and Peking University. For those who know they can only enter higher vocational institutions, they again have to compete for good subjects. So competition influences all students (Liy).

When asked what policies the government adopted to ease such fierce competition, informants revealed several of them, such as: lowering minimum entrance scores, recruit contract students, and creating more places in non-traditional universities. Lowering the minimum entrance scores was obvious. Hain describes that the minimum scores for going to Peking University was reduced to 570 marks this year from more than 600 marks last year. Liy also states:

A son of my friend was excellent in school, he was in a special class (researcher's explanation: in some schools, contrary to government regulation, all excellent students are concentrated in one or two classes, namely special

classes. Special classes are normally treated favourably in terms of teachers arrangement). He got about 620 marks in last year's examinations. He applied to the Physics Department in Qsinghua University. Before the enrolment expansion, his results were not good enough to go to Qsinghua. But last year he was lucky to have succeeded.

The second way of reducing competition is to recruit contracting students. According to Yong and Mao, in some underdeveloped areas, it is difficult for students to be successful in the national examinations. To reduce the inequality, the government allots certain quotas to these areas, on the condition that these students must return to their home areas upon graduation.

The third policy is to create more chances, especially expanding non-traditional higher education:

The government uses different types of higher education to enlarge the enrolment, such as adult education, education on line, TV education. The effects are obvious. For instance, in Beijing, the numbers of applicants for adult education doubled this year compared with that of last year. I saw long queues outside the registration offices. The quality of some adult education programs run by famous universities, is not bad. They employ many good retired university teachers (Qij).

Lastly, paying more money is one of the alternatives, maybe not a good one, for going to universities. Although the government stipulates the concrete fee levels for different types of institutions (Qu, Xu & Gong 1999:31), some universities still admit unqualified students by receiving higher fees. This creates direct inequality between the rich and the poor:

If your scores do not reach the pass lines, you can still go to university. You just pay more money. You may not go to good universities, but you can still

go to some ordinary ones if you pay. For example, the stipulated tuition for bachelor degree programs, is 4000 yuan per year. But I pay 8000 yuan per year for only these diploma programs. Because of higher fees, universities (he refers to state universities) are willing to recruit students. It was planned to recruit one class of 40 students in my program this year, but when I entered I found that they recruited two classes of 80 students (Jiaf).

a. Discussion

Diversification is an important characteristic of mass higher education. Developing non-traditional higher education is an efficient and effective way to expand higher education. This observation accords with the investigations in previous chapters (cf 2.2.6 & 3.6.2). The issue of diversification is further studied in the next section.

In this investigation, it is found that there are dual enrolment standards in China, although the government opposes them. The state universities' doors are open to those who obtain enough scores from the examinations and those who have enough money from their parents. According to the researcher's observation, the latter is in a minority and they are also required to get a certain number of scores. Although this only involves a minority, it could harm the poor both practically and psychologically. The Chinese government may realize the problem, but its policies may not be implemented fully by institutions. This assumption is illuminated, in the section, by the two examples of having special classes and receiving high fee students.

4.6.3.7 Diversification

Three informants believe that different types of higher education can train different types of manpower. Society needs not only the elite but also applied talents. Lifelong learning is a trend for the future. But influenced by the Chinese tradition, non-traditional education is not emphasized:

In fact, higher vocational education can train people's technical skills and applied knowledge. It is very important for the economical expansion. In foreign countries, vocational training is emphasized. But in China people do not emphasize it. They emphasize traditional theoretical studies. ... The change of knowledge is dramatic. People need to keep learning. The further education and adult education also requires the expansion of non-traditional institutions (Donge).

Zhangg similarly maintains:

In some developing and developed countries, like Germany, vocational education is very advanced. Vocational education improves the quality of manpower in terms of vocational skills. It makes a direct contribution to the economic development. China also wants to adopt such a policy and to expand higher vocational education. But the effects are not good. This is mainly because of the people's traditional ideology about higher education.

Two informants suggest that developing private universities is one way to expand Chinese higher education, especially as the Chinese government does not have enough funds:

The government should change its policies. It should encourage the development of private universities. The government could assess and evaluate the qualities of private universities, but not discriminate against them. China has many private universities, but they are not allowed to award qualifications. This is the main reason why students do not want to enter private universities (Donge),

Yong also argues that universities are mainly run by the state in China. There are many private universities in some foreign countries. China should develop private universities to resolve the fund shortage.

The importance of diversification in mass higher education is also addressed by many scholars in both Chapter 2 (cf 2.2.6) and Chapter 3 (cf 3.6.2). The views of the informants are consistent with those studied previously. There are still two diversified issues which need to be investigated. One is the type of non-traditional institutions existing in China. Another is the reason for students and their parents, to choose or not to choose, the non-traditional institutions. These two issues are focused on in the following sub-sections.

4.6.3.7.a Different types of non-traditional higher education systems in China

According to the studies made in the Chapter 3 (cf 3.6.2), China has ten different types of non-traditional higher education systems. They are: higher vocational education institutions, the self-study examination system, private universities, radio and TV universities, worker's colleges, peasants colleges, institutions for administration, education colleges, independent correspondence colleges and adult education run by traditional institutions. Chinese higher education is diversified.

To the question of what kind of different higher education exist in China, Qij states there are universities run by central government and those run by provincial governments. Recently some private universities have been established. Jiaf points out that there are universities (refer to the traditional), adult, TV and private universities.

Yong refers to the traditional university as a formal one, implicating the rest are informal:

In Hohhot, we have five formal universities and some adult universities.

Only one informant mentioned the self-study examination system.

No interviewees can name more than four types of non-traditional institutions. Some of them just identified one or two, after reflection. The informants' unfamiliarity with non-

traditional higher education systems may indicate that the influence of non-traditional higher education is not big in China. Another possibility may be the traditional perception of higher education. When higher education is referred to, they tend to think of the traditional rather than the non-traditional.

4.6.3.7.b Reasons that non-traditional institutions are the second choice of students and their parents

When asked if students are willing to go to non-traditional institutions, all the informants' replies were negative. When further asked why certain students do go to non-traditional institutions, they gave various reasons:

We come to the non-traditional institutions because we did not succeed in the examinations. We have no other choice (Jiaf).

Yong further explains there are three groups of people going to non-traditional institutions. The first is those who failed in the entrance examinations. The second is employed people who want to improve themselves or those whose work needs them to study further. The third is adults whose age exceeds the age requirements of traditional institutions.

Traditional ideology is the major factor which prevent students from going to non-traditional institutions. The qualifications from non-traditional institutions are regarded as lower than those from traditional ones. Such perceptions seriously affect the job seeking of graduates from non-traditional institutions:

I have a friend. She did not pass the entrance examinations. Her parents were very unwilling to let her enter higher vocational institutions. They think that the qualifications obtained from higher vocational institutions, are not as good as that from the traditional universities. Their major concern was the

qualification. So my friend went to an examination training class. She plans to try the university examination next year (Hain).

Mao additionally states:

Apart from learning knowledge, the main aim of going to university is for future employment. They want to get a good job. But now the society does not accept qualifications awarded by non-traditional institutions. The people think that qualifications from the traditional are better than the non-traditional. So people do not like to go to the non-traditional.

Jiaf specifies that qualifications awarded by many private institutions, are not recognized by both the government and society. So students do not want to enter private institutions.

Apart from traditional ideology, the quality of some non-traditional higher education institutions is another reason for students not choosing the non-traditional:

There are problems of quality in non-traditional institutions. For instance, students in the field of engineering need to do experiments. TV universities also have engineering subjects. But their students cannot do experiments, which inevitably affects their standards. Furthermore, the skills of graduates from the non-traditional institutions are normally lower than those from traditional ones (Mao).

People have a bias against private higher education institutions, but more importantly the quality of these institutions is not high. Otherwise, people would also accept them:

Some private high schools in Hohhot, like Qiushi High School, are very good. So people began to accept them. Many students are willing to go to these schools (Liuw).

Qij also notes:

People normally do not like to go to private institutions. They believe the quality of state universities is higher. But in recent years, some foreign countries established private institutions in China, especially in the fields of business, administration and accounting. They are of a good quality. So many people are willing to go there.

a. Discussion

After analyzing the higher education expansion in the 1970s in some developed countries, Cerych et al. (1974:35) concludes that the main challenge for diversification is that the non-traditional institutions are classified as less noble than the traditional ones (cf 2.2.6). The same ideological problems exist in China today. It seems that there are no effective solutions, unless the non-traditional institutions improve their own standards and build their own reputations. Non-traditional higher education systems are very important in the process of the massification. But they must build their own strengths (cf 3.6.2.5) and improve their standards (cf 4.6.3.8.2) to compete with the traditional ones in terms of attracting students.

4.6.3.8 Employment

4.6.3.8.a Over-qualification

Along with the expansion of higher education in China, graduates find it more and more difficult to get suitable jobs. Some of them even cannot get jobs (cf 3.2.2). Therefore, some scholars view that expansion would cause the devaluation of qualifications or over-qualification (Zhang, Y.Q. 2000:57; Fang 1999:66; cf 2.3.1).

Opinions on over-qualification from informants are different. While seven informants disagree, three others, including the two students, support the idea:

Of course, over-qualification does exist. Many university graduates cannot find jobs. It is over-qualification (Liuw).

When talking about future employment, Jiaf looks really concerned. A kind of pessimism can be felt:

Along with the increase of university students, graduates may not find good jobs. Some of them even cannot get jobs. So, no choices. Over-qualification is certain (Jiaf).

Because of the difficulties of finding employment, many graduates tend to pursue postgraduate studies:

Even now, some graduates have already felt the difficulties of finding jobs. They cannot get jobs for a long time after graduation. Therefore, it aroused a general interest in pursuing postgraduate studies. My classmate's sister chose to read for a master's degree after completing her bachelor degree. She said having studied humanities, she cannot find a job if she does not have a master's degree. One of my neighbours is also in the field of humanity. She went to a human resources market and found that good jobs all require postgraduate qualifications. She has no choice, but to read for a master's degree (Hain).

As an employer, Yong differs from the students on the employment difficulties:

From my point of view, the over-supply of graduates is a good thing. It can promote the competition among universities and students alike. Such competition can pressure them to improve their quality of education. Those who have a low standard or cannot meet the needs of society, would be eliminated by competition.

Although these are views to support the idea of over-qualification, six informants insist that over-qualification does not exist in China. The only problem is people's ideology. People's views on employment, still stay in the stage of elite. They need to change their views and adapt to the transition to mass higher education:

For a long time in the past, China had small numbers of intellectuals. When a student received a qualification, he would feel he became somebody. If a job were less than ideal he would not take it. It is not that he cannot find a job. For instance, in 1998 there was a job fair at my university. Many employers from Shandong province came to recruit students. But in most cases graduates would not take the jobs because they want to stay in Beijing (Qij).

Zhangg also claims that there are some problems with employment. It seems that the society cannot absorb so many graduates. But in fact, it is a matter of ideology. Graduates are not satisfied with some kinds of jobs.

These opinions accord with the discussion in Chapter 2 (Teichler et al. 1980:42; cf 2.3.1).

Although jobs are not as ideal as that of the past, university graduates are still in a favourable position in the job market (Geiger 1979:36; cf 2.3.1):

As an employer, I still prefer university graduates rather than school leavers, if they are willing to do any jobs assigned to them (Donge).

In the vast rural and undeveloped areas, talents are badly needed, but graduates normally do not like to work in these areas:

Many students from the western areas, do not like to go back when they graduate. Students from cities or eastern developed areas are even more

unwilling to go to the western or rural areas. So you cannot say that China has too many graduates (Chenm).

4.6.3.8.b Government policies on employment

The Chinese government has established different kinds of job markets. Graduates can go to these markets to find jobs:

I often see many students go to the job markets. Some capable students can get a job in the job markets, but some incapable students cannot get any. There is no choice. It is caused by the market economy and the globalization (Hain).

Apart from establishing a job market, every local government has set up some counselling organizations and made some popular policies to help graduates with employment:

There are employment guidance centers in both regions and universities to help students to find jobs. In Beijing and Shanghai, graduates are exempt from tax for the first few years, if they establish their own businesses (Mao).

Furthermore, Chinese local governments use different ways to create job opportunities for graduates:

Some local governments encourage early retirement to create vacant positions for university graduates. Some positions now begin to require certain levels of qualifications. For instance, the Inner Mongolian government stipulates that officials in positions as head of townships or above, must have an university qualification (Mao).

Qij also contends that the government has begun a new policy to hire public servants. Those who want to work in government departments, have to pass unified examinations. This policy is favourable to university graduates.

a. Discussion

Employment was a topic of heated discussion during interviews. Informants expressed their concerns for graduate employment. Liuw, the educational theorist, states:

Students nowadays only concern themselves about future jobs when they select courses. They all select the applied subjects, instead of theoretical subjects which is important for the academic development.

Changes of elite ideology seem to be one of the major ways to address the problem. This suggestion is made by both the Research Group on Employment of University Graduates (1999:107; cf 3.2.2) and the informants (cf 4.6.3.9.1). But such changes may be a slow process.

Job information systems and job markets are the Chinese government's two initiatives to help students seeking jobs. The National Center for Education Development Research (2000:126-127), Hain and Mao (cf 4.6.3.9.2) all argue that a job counselling system is a satisfactory way to help students seek jobs.

There are still some other policies, like creating more positions for graduates, which were revealed through this qualitative inquiry. These policies indicate that the Chinese government attaches importance to the graduate employment. But along with further expansions of higher education, it may be market mechanisms, instead of governmental intervention, that will be more workable.

4.6.3.9 Funding

One of the direct effects of the Chinese government policies to expand higher education, is the increase in higher education funds. This is welcomed by universities:

The percentage of education funds to governmental expenditure has been increased by 1% every year for five consecutive years from 1998, by the central government. Although only 1%, the absolute amount is huge, about tens of billions of yuan. The central government also decided to allocate part of the governmental bonds to higher education. The effects are very good. They are used for the building of teaching and living accommodations on campuses (Zhangg).

Some local governments also invest more funds on higher education:

The Inner Mongolian government decided to allocate 10% of its local tax revenues to education (Mao).

Apart from increasing funds, the Chinese government also decentralized some powers to institutions. It allows, and in fact encourages, institutions to seek extra funds:

The government relaxed its control. Universities can now use different ways to seek funds. For instance, my university borrowed a lot of money from banks in 2000, in order to construct new buildings (Qij).

Mao also notes:

Now universities can borrow money from banks. My university borrowed 300 million yuan from banks. In the past, it was not allowed. Universities can now use this money to build dormitories and experimental buildings. It provides material conditions for further expansion.

Although these are positive approaches, there is still a problem of arrears of funds in Inner Mongolia:

Universities should be funded mainly by the state. You cannot depend on student fees. In Inner Mongolia, two thirds of last year's university funds have not been paid by the provincial government. It owes the university lots of money. They said they do not have money. The government should not delay the funding (Chenm).

a. Discussion

In spite of the increase of funds for education, the percentage of education expenditure to GDP in China, is lower than the average of both developing and developed countries (International Bank for Reconstruction and Development & World Bank 1998:47 & 49; cf 3.2.3). As the expansion of the Chinese higher education accelerates, the fund constraints will increase. If university funds are in arrears, like Chenm's university, an embarrassing situation could easily arise. In the process of transition to mass higher education, the problem of funding needs to be carefully considered. Otherwise, it will inevitably affect the educational quality and social equality if exorbitant fees are charged.

4.6.3.10 Fees

The issue of charging tuition fees is a policy dilemma. If universities do not charge fees they cannot ease the funding constraints (cf 4.6.3.10). If they charge fees it may have a negative affect on equality (cf 2.3.2.2). Because of these policy difficulties, the Chinese government policies undertook roughly three different periods:

Before the end of the 1980s, no fees were charged at universities. Since then, the Chinese government gave universities certain quotas and allowed them to recruit small numbers of fee paying students who failed in the entrance

examinations. It was later found such a policy was not fair to the poor. Additionally, the academic standard of some students was too low. So the government eliminated the policy in 1995 and adopted a unified fee policy. All students began to be charged fees, but much lower than the previous fee level (Zhangg).

The third period emerged two years ago. The fee policy was reversed, not by the government, but by individual universities. They enrolled students who did not get enough marks, but were willing to pay higher fees (cf 4.6.3.7). The dual fee standards started to emerge again.

According to Mao, the standards of tuition fees are decided by the government. The fee level was set according to a certain percentage of the real costs, with little consideration of the peoples' financial capacity. Donge also argues that the government should set the fee standards according to the average incomes. Zhangg describes:

The government stipulates that the tuition fee in ordinary subjects, is about 2500 yuan per year, 25% of the real cost which is about 10000 yuan per year. But fees are higher for some high cost subjects, such as arts and physical education. ... Local governments can adjust their fee levels according to the central government's regulations and their local circumstances.

In spite of governmental regulations, universities normally charge higher fees than the governmental standards:

In my university, fees for humanities and sciences are 3000 and 3500 yuan per year respectively. Fees for art and physical education are 6000 yuan per year (Mao).

When asked whether the students can afford the fees, Chenm replies that students in big cities can manage to pay such high fees, but it is very difficult for students from rural

areas, small towns or unemployed families. Zhangg also observes that 50% of the students are from rural areas. They feel it is difficult to pay the fees. In cities if both parents are employed they can afford it, otherwise it is not easy:

The average income in Inner Mongolia is about 600 yuan per month, which is 7200 yuan a year. If both parents work, the total income is about 14400 yuan a year. For these families the fee composes about 20% of their income. They can afford it. But if one or both parents are unemployed, the fee is too high for them. The unemployment pension is only 270 yuan a month (Mao).

Further to these discussions, two student interviewees give two different answers:

There is no problem in Beijing. Universities charge fees according to government standards. They are lower. The fee is 8000 yuan per year. Most of my classmates can afford it. Those who cannot afford it can apply for bank loans, student assistance or do part-time work. They all can find a way (Jiaf).

But for students from poor areas like Inner Mongolia, the situation is different, as Hain describes:

Tuition fees are a big problem. Although my fees can be reduced a little bit because I am a child of a university teacher, I still feel a heavy burden. My mother became unemployed. All of our family depends on my father's salary. ... The government should increase teachers' salaries. Their salaries are too low.

The sadness of Hain can clearly be felt when she talks about fees.

To reduce the inequality in receiving higher education, it is important to have student assistance schemes when tuition fees are introduced (Zhao & Qiao 2000:28; OECD 1983:198; cf 2.3.2). The Chinese government introduced several student assistance

schemes, such as: scholarships, loans, stipends and part-time jobs (cf 3.2.2.2). The Chinese government's promise is that 'no student should drop out because of financial difficulties'. Zhangg explains:

Some newspapers once reported that there were some students who dropped out because they could not afford the fees. The Ministry of Education attached importance to these reports. We were asked to investigate the case. But we found that the reports were not true. The fact was that some students were enrolled by non-traditional institutions. They did not want to go there. They wanted to try for the examinations next year. There were, anyhow, some extreme cases where students had to give up their studies because of financial reasons. It was because some universities did not fully implement the government policies. On the other hand, it indicates that the student assistance policies need to be improved. But generally speaking, the implementation of the policies is good (Zhangg).

The needy students can apply for loans from banks. The procedures for a loan have been simplified for students:

In the past, procedures for loans were very complicated. They also required guarantees which students often found hard to provide. From 2000, the government asked banks to simplify the procedures. For instance, in Tianjin, the application forms for loans are posted to students, together with the acceptance letters. When the forms are filled in, students can get loans from banks (Qij).

Universities try to provide part-time jobs for needy students. But sometimes it happens that non needy students take the part-time jobs, instead of needy students:

My high school classmate's university advertised for part-time jobs, such as: selling newspapers or cleaning, for needy students, but no one took the jobs.

In my university, many part-time jobs are done by ordinary students who want to make extra money. Needy students are reluctant to do the jobs because they feel they will lose face (Jiaf).

Scholarships and stipends are not as popular as bank loans. Jiaf states that there are scholarships from both government and individuals, but the numbers are very few, not easy to get. Chenm states that there are several students in his class who received stipends because their hometowns had experienced a snowstorm disaster. Otherwise, it is not easy to get the stipends.

a. Discussion

Most of the informants, especially those from Inner Mongolia, said that many families find it difficult to afford the fees. Although the amounts of private deposits in banks, are huge in China now (Zhai 1999:7; cf 3.2.2.2), the gap between the rich and the poor, is also large (Research Group of Peking University 2000:202; cf 3.2.2.2). As many as half of the total students are from rural areas (Zhangg) which are normally underdeveloped. In cities there are large numbers of unemployed parents. These people's interests and difficulties must be considered. The Chinese government established several student assistance schemes. But according to the survey made by Zhao and Qiao (2000:27-28; cf 3.2.2.2), the bulk of the assistance is from parents and relatives. The effects of government schemes still need to be improved. These findings accord with the impression the researcher got during his interviews.

The fee policy directly affects the social equality which a government must consider. The issue of equality is further discussed in the next section.

4.6.3.11 Equality

Inequality exists between students from urban areas and rural areas. It is caused by the teaching conditions and the quality of teachers in basic education:

I went back to my home village. The situations of the primary and secondary schools there are bad. The governor of the county says he attaches importance to education, but in fact, he does not. The county government does not pay teachers salaries, or pay only part of them. What they do is that they assign teachers farm lands. Teachers live by farming, instead of by teaching. While teaching they have to farm. They cannot concentrate on their teaching. The quality of teaching is seriously affected. Local governments invest far from enough on education. The administration is not good either. The central government calls on local government to emphasize education, but the local governments do not obey (Chenm).

Hain further states:

The quality of teaching in rural areas is not as good as in cities. University graduates normally do not like to teach in rural schools because the general material conditions are not good and the incomes are lower. Additionally, children in rural areas do not have money to buy reference books, and do not have a cultural life. Their knowledge is not as broad as that of children in the cities.

Additionally there are inequalities between different regions. Although the entrance examinations are unified nationally, the passing scores are different from province to province due to different enrolment ratios:

For the same examinations, the pass scores in Inner Mongolia are higher than that of developed regions. For instance, the minimum scores for a bachelor degree was 430 marks in Tianjin this year. But in Inner Mongolia it was 470 marks. This is because there are more universities in Tianjin than in Inner Mongolia (the researcher's explanation: many local institutions recruit mainly local students in China) (Hain).

Jiaf similarly notes:

The minimum scores for entering universities in Beijing is much lower than that of other areas because there are many more universities in Beijing. This is an inequality. The western regions should build more universities.

There are also inequalities between the Han nationality (the majority) and ethnic nationalities:

The law stipulates that all nationalities are equal. But in reality, ethnic nationalities normally live in undeveloped areas. The quality of basic education in these areas, is lower. They are disadvantaged in the competition. Furthermore, some ethnic schools use the ethnic language as a teaching language. Their students cannot easily go to some prestigious universities which teach only in Chinese (Mao).

There are, anyhow, two informants who believe that inequality does not exist with regard to access to higher education in China:

Everyone needs to attend the unified entrance examinations. Students are selected in a ranking system. It is equal to all, never mind if you are from a farmer's family or from an official's family. It is fair (Yong).

Zhangg also argues that the unified entrance examinations are the most effective way to guarantee the equality.

a. Discussion

Bereday (1973:37; cf 2.4.2) claims that the selection function of higher education was regarded as an important reason of inequality. But it is noticed that two informants

(Zhangg & Yong) believe that the selection through the examinations can guarantee equality. They argue all people are chosen equally.

The survey made by Wu (1998:351-362; cf 3.3) demonstrates that social inequality exists in China. But it was a surprise to find that no informants mentioned the social inequality, when they were asked to identify the inequality in receiving higher education in China.

According to the inquiry in both the present section and Chapter 3 (cf 3.2), regional disparity is one of the major factors which causes inequality. The Chinese government policy to increase investment in undeveloped regions, is a way to reduce such inequality.

4.7 Conclusion

In this chapter, principles of qualitative research have been studied, which forms the basis for the option of the specific methodology and concrete research designs. Ten different informants were selected systematically. Semi-structured interviews were conducted as the major data collecting technique. The presentation of findings forms the major part of this chapter.

Compared with the literature study on the same problems of the Chinese strategies for the transition to mass higher education, it was found that there are similarities as well as differences in the qualitative inquiry. It was also found, in both inquiries, that China is fully engaged in expanding its higher education at present. The transition to mass higher education is, therefore, in its processing stage. Certain difficulties, conflicts and dilemmas exist in this process. These negative factors should be given due consideration when China massifies its higher education. The stresses and burdens caused by the fierce competition, high fees and employment difficulties, are explicitly expressed by the interviewees. These individuals' feelings should in no way be neglected, when a government makes relevant policies.

Inequalities in receiving higher education, especially between different regions, are identified. But the inequalities, between different social groups, stressed in both Chapter 2 (cf 2.4.2) and Chapter 3 (cf 3.3), did not attract the attentions of the informants. On the contrary, some informants believe that the university selections are fair to all social groups (cf 4.6.3.12). It is an assumption that such a phenomenon may reflect the level of awareness of social equality, or the degree of democracy, in the Chinese society.

After this comprehensive study, the concrete findings in this research and recommendations for further research, are discussed in the next chapter, as a general conclusion of the whole inquiry.

CHAPTER 5

5 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The Chinese Ministry of Education has set the target that the gross enrolment rate in Chinese higher education institutions must reach 15% by the end of 2010. According to Martin Trow's phase development theory, 15% of the gross enrolment rate is the turning point from elite to mass higher education (cf 1.2). It is believed that China is in the process of such a transition. According to previous examination, the transition is a complex phenomenon which interacts with its contextual factors, such as economy, society, politics, population, science and technology.

This research has aimed at investigating the strategies for the transition from elite to mass higher education in China. The research problems which were studied, include three aspects. The first is policies which the Chinese government adopted to expand its higher education, and to resolve the difficulties and conflicts caused by the transition. The second is the interaction between higher education development and its contextual factors. The third is preliminary evaluations of the strategies of the transition (cf 1.3).

Literature study and qualitative inquiry are two major methods adopted in this research. A wide range of literature has been studied in Chapter 1, Chapter 2 and Chapter 3. The qualitative research has been described in Chapter 4. Ten informants were selected for the project. Data gathering was carried out by means of semi-structured interviews and analysis was done by means of qualitative methods.

In Chapter 1, the research background, problems and methods have been formulated. The perspective of China has been briefly outlined. The definitions of key terms, such as educational reform, family planning and gross enrolment rate, have also been explained. In Chapter 2, the researcher has reviewed the theories on the transition from elite to mass

higher education. He has also examined the massification experiences in Britain and Australia. The focus of Chapter 3 is on Chinese realities related to the research problems. The Chinese policies on the transition have been analyzed. These policies have been further investigated and a preliminary evaluation made by means of qualitative research in Chapter 4. Ten informants explored the phenomenon from their individual perspectives, which complemented the literature inquiries in Chapter 3. A broad picture of Chinese higher education transition has then been formed.

Based on above-mentioned investigation, this concluding chapter can be formulated accordingly. This Chapter is divided into eleven themes related to the problems. The summary of each of the themes is followed by the conclusions drawn from previous investigations. Recommendations are made and presented after each of the conclusions.

Finally, suggestions for future research are made in the latter part of the chapter.

5.2 Strategies for the massification of Chinese higher education

5.2.1 Summary

In Chapter 2, two ways were found to massify higher education. One was to expand and improve the efficiency of existing institutions. Another was to establish new ones. In the Organization of Economic and Cooperation Development (OECD) member countries, massification underwent more or less four stages. The first was characterized by the rapid expansion of higher education. The second stage was to search for modern structures of higher education to absorb increasing numbers of diversified students. The third was accompanied by the debate on 'over-qualification'. In the last stage, a new stage of higher education emerged. It was also revealed that changing people's traditional views was very important for massification. Additionally, market mechanisms were approved, by the experiences of Britain and Australia, to be an effective way to promote the transition to mass higher education (cf 2.9.2).

In Chapter 3, the development of Chinese higher education was examined. The increasing of student numbers was rapid in the last decade, especially during the last two years. Along with the increased enrolment, the structures of the Chinese higher education are also changing. The Chinese government rationalized some of the existing institutions and established some new ones. The decentralization policy was also adopted. It is concluded that China is now fully engaged in massification (cf 3.6.1).

In Chapter 4, all informants in the qualitative inquiry, agreed that expanding Chinese higher education is a right decision. The Chinese government's policies to expand its higher education are effective. It was also found that the Inner Mongolian government is eager to expand higher education in the province. It gives universities concrete expansion targets and the time to fulfill them. This top-down policy is in contrast with that of the British and Australian policies.

5.2.2 Conclusion

Chinese higher education is undergoing changes: student numbers are increasing, structures are changing, and 'over qualification' is debated. Their characteristics accord with those in the first three stages when OECD countries massified their higher education. This indicates that China is now in the process of transition to mass higher education. This transition seems to be well supported by the society (cf 3.6.1 & 4.6.3.1).

Some Chinese local governments directly interfere with their universities' enrolments, which may contradict the capacity of institutions. The autonomy of institutions may be negatively influenced. On the contrary, the market mechanism is a way to mobilize maximally the enthusiasms of institutions for the expansion. Institutions can be encouraged, not instructed, to enroll more students, and in return, they get more financial resources. This was how Britain and Australia successfully expanded their higher education decades ago (cf 3.6.1.2 & 4.6.3.1).

5.2.3 Recommendation

- a. China is now in the process of transition from elite to mass higher education. Such development trends and its implications should be publicized, by both the Chinese government and its institutions, to enlighten and prepare their people for such changes. This will enable the people to change their traditional views on higher education (cf 4.6.3.7 & 4.6.3.8.a).

- b. The Chinese government should adopt market mechanisms to promote the increased enrolment. Market mechanisms can also be used to create competition amongst Chinese institutions. Thus, the institutions have to improve their efficiency, and to seek non-governmental funds to expand themselves, which is especially important to China because of its serious shortage of funds (cf 3.6.1.2).

5.3 Enrolment policies

5.3.1 Summary

The enrolment policies in OECD countries were discussed in Chapter 2 (cf 2.2.7, 2.7.2 & 2.8.2). In these countries, the elite institutions or prestigious professional faculties remained selective while others adopted open access. It is recognized that enrolment policies affect the social equality (cf 2.2.7). China has a long tradition of an exclusive selection for entering universities. The fierce competition is unbearable to students and parents alike. The Chinese government has since adopted a few reforms to ease the enrolment competition (cf 3.6.3), but the informants revealed that the policies are not as effective as expected, and the competition remains largely the same (cf 4.6.3.7).

5.3.2 Conclusion

There may be two major factors influencing Chinese enrolment policies. One is the realities, such as numbers of potential students, the capacities of institutions and

availability of funds. Another is issue of equality. Considering the huge numbers of potential students and the limitations of funds and placements in Chinese institutions, it seems impossible for the Chinese government to adopt an open or a flexible enrolment policy, like OECD countries did. But the fierce competition should be eased, the sooner the better (cf 2.2.7, 3.6.3 & 4.6.3.6).

5.3.3 Recommendation

- a. Although China may not adopt open and flexible enrolment policies as the OECD countries did, it must move in that direction in its development. The Chinese government should create as many chances for students to go to institutions as possible, by both investing more money in higher education and making preferable policies to attract more non-governmental funds (cf 2.2.7 & 3.6.3).
- b. The Chinese government should allow students to transfer between non-traditional institutions and traditional institutions, by using study credit systems. This may reduce, to a certain extent, the competition for entering traditional institutions (cf 2.2.8, 2.9.5 & 3.6.2.1).

The enrolment policies relating to equality are discussed in paragraphs 5.10 and 5.11.

5.4 Diversification

5.4.1 Summary

According to the investigation in Chapter 2 (cf 2.2.6), diversification is the key feature of mass higher education. Different forms of higher education aim at meeting different demands by both students and society. China has multiple higher education systems. For the Chinese government it is a priority to develop its non-traditional higher education systems, especially the higher vocational institutions (cf 3.6.2). But all the informants (cf 4.6.3.8.b) observed that the non-traditional institutions are largely regarded as a second

choice to the traditional ones. The Chinese government policy of developing higher vocational institutions has not yet been applauded by the students and their parents.

5.4.2 Conclusion

Flexibility is one of the major characteristics of non-traditional institutions. They are flexible in enrolment, and consistently adjust themselves to meet the needs from society. While some Chinese non-traditional institutions have this characteristic, some others try to imitate the traditional institutions. As such they lack their own strengths. Although people have a bias against the non-traditional institutions, the quality and efficiency of institutions themselves play an important part in competing with the traditional ones. Institutions of small scales are not cost effective. Additionally, private institutions are important for the higher education expansion, especially when using non-government funds is considered (cf 2.2.6 & 3.6.2). The private institutions are further discussed later in paragraph 5.5.

5.4.3 Recommendation

- a. China has various forms of non-traditional higher education systems, which is an advantage in the massification. But the non-traditional institutions should improve their qualities and efficiencies. They should avoid imitating the traditional ones, and try to build their own strengths (cf 3.6.2 & 4.6.3.7).
- b. Biases in society may reduce gradually along with the improvement of standards and strengths of non-traditional institutions. But the policy makers and educational authorities must adjust their biases against non-traditional institutions, especially higher vocational education institutions, the sooner the better. Otherwise, it will hinder the development of the Chinese non-traditional institutions (cf 3.6.2.1, 4.6.3.4 & 4.6.3.7).

5.5 Private higher education

5.5.1 Summary

As a developing country, China cannot invest a compatible amount of funds in its higher education. So financial constraints became one of the major obstacles of the higher education expansion. In such a case, seeking non-governmental funds is inevitable. Development of private higher education institutions is a measure to ease the financial constraints. Although this has such benefit, the Chinese government is cautious towards private institutions. The development of private higher education is limited in a number of ways. For instance, most of them cannot award qualifications. The governmental policies on private higher education are not consistent and sometimes, even contradictory (cf 3.6.2.4). Some informants state that people have a bias against private higher education. The qualifications awarded by private institutions, are not recognized. But more importantly, as they further state, the standard of private institutions is not high. Otherwise, people would also accept them (cf 4.6.3.8.b).

5.5.2 Conclusion

According to international experiences, like the USA and South Korea, private higher education is an important part of the whole education system (cf 3.6.2.4). This has special implications for the expansion of the Chinese higher education system. Developing private higher education is a way to seek non-governmental funds. The major obstacle may be some officials' conservative ideology, and the negative political influence (cf 3.6.2.4). Besides, the Chinese private institutions' quality and reputation are another factor influencing people's opinion of them. Chinese private institutions have not come to maturity due to their short history. The average sizes of Chinese private higher education institutions are only about 950 students (cf 3.6.2.4).

5.5.3 Recommendation

- a. The Chinese government should attach importance to the development of private higher education. It should make favourable policies to, and release control on, private higher education (cf 3.6.2.4).
- b. A private education law seems necessary to be made to legitimize the status of private institutions, and to protect the interests of both students and owners. Private law can also avoid the policy inconsistency which was experienced before (cf 3.6.2.4).
- c. The government should treat private institutions in the same way as state institutions. The government can assess and monitor the quality of private institutions in the same way as state ones. If private institutions meet the quality requirements pre-set by the government, they should be allowed to award qualifications (cf 4.6.3.7).

5.6 Higher vocational education

5.6.1 Summary

The British and Australian experiences are worthwhile to be discussed as comparative data. In the late 1960s the British government established polytechnics in order to expand its higher education. Since then the polytechnics have played a significant role in enrolment increases. They became an active part in the British higher education systems. They are closely linked with industry, and also directly respond to community needs. Compared with the traditional institutions they were more flexible, accessible and cheaper (cf 2.7.4).

The Australian government developed similar strategies to expand its higher education. It created Colleges of Advanced Education (CAEs) in the mid-1960s. The CAEs emphasized teaching more than research and have a more localized and vocational focus.

They were also considerably cheaper to fund. The effectiveness of CAEs was outstanding. For instance, as high as 70% of the increase in higher education enrolments, during the period 1977-1987, in Australia, was absorbed by the CAEs (cf 2.8.4).

Chinese higher vocational education institutions are similar to the polytechnics in Britain and CAEs in Australia in terms of their purposes and functions. The Chinese government realized the importance of higher vocational education institutions and called on local governments, institutions and society to actively develop higher vocational institutions. The Chinese government even claims that the expansion of Chinese higher education will mainly depend on the development of non-traditional institutions, especially the higher vocational education institutions. But because of the people's traditional prejudice and the problems of vocational institutions themselves, students are unwilling to enter the vocational institutions. For instance, higher vocational education institutions often offer non-degree courses. Students are not allowed to transfer to the traditional institutions for further degree studies (cf 3.6.2 & 3.6.2.1). The informants further claimed that most of the students do not like to go to higher vocational education institutions because the qualifications awarded by these institutions, are regarded as inferior by both society and employers. In some regions, like Beijing, the vocational institutions cannot enroll enough students. Furthermore, the quality is identified by informants as one of the most important factors influencing students' choices (cf 4.6.3.8.2).

5.6.2 Conclusion

The Chinese government has adopted similar policy approaches to Britain and Australia. But the effectiveness of the Chinese policies is in sharp contrast with these two countries. It seems that a stronger bias against non-traditional institutions exists in the Chinese society. In the meantime, higher vocational institutions have their own problems. They tend to imitate traditional institutions (cf 3.6.2.1), rather than forming their own strengths, like the British polytechnics which are more flexible, accessible, cheaper and have a close linkage with industries and society. These characteristics are the key for the development and even survival of vocational institutions (cf 2.7.4).

5.6.3 Recommendation

- a. It is the right strategy for the Chinese government to attach importance to higher vocational education in the process of massification. But the strengths of the vocational institutions should be improved and emphasized. They should maximally meet the needs of students, industries and society. The experiences of Britain and Australia are worthwhile to note and learn from (cf 3.6.2.1).
- b. Higher vocational education institutions should be allowed to award degrees if the quality is guaranteed, or alternatively, a mechanism should be created for students to transfer to other institutions for further studies (cf 3.6.2.1).
- c. Chinese higher vocational education institutions should improve their efficiency and increase their competitiveness. Too small scales are not cost effective (cf 3.6.2).

5.7 Funding

5.7.1 Summary

It is argued that governments should fund higher education because they want to fulfill their economic, political and social aims. But no government can afford a mass system, even for developed countries. Therefore, non-governmental funds have to be found, and institutional efficiencies need to be improved (cf 2.3.2.1). It is found that the Chinese government provides as high as 90% of its higher education funds. The percentage of expenditure on higher education to the education expenditure as a whole, in China, was higher than other Asian countries, because the higher education fund from private resources in China, was less than the other countries (cf 3.2.3). Even though a higher percentage, Chinese higher education systems face increasing financial constraints because the state appropriation cannot keep up with the fast expansion of its higher education. Even worse, some local governments postpone the payment to institutions (cf

4.6.3.12). Low efficiency of Chinese higher education systems is another reason of the financial constraints (cf 3.2.3). Furthermore, the informants identified a unique phenomenon in China. Most of the students live on campuses. When Chinese institutions increase its student numbers they also need to accommodate them, which requires a large amount of money (cf 4.6.3.12). The last finding is that, lack of facilities which is caused by the fund shortage, led to a deterioration in quality in some institutions (cf 4.6.3.6).

5.7.2 Conclusion

The Chinese higher education seems to be financially constrained more than the OECD countries, when these countries expanded their higher education decades ago. As a developing country China cannot increase its funds as fast as the increase of its student numbers. Furthermore, Chinese universities have a long tradition of providing for student dormitories, which increases the financial constraints. Finally, inefficiency in Chinese institutions leads to high costs of higher education. All these negative realities need to be addressed (cf 3.2.3).

5.7.3 Recommendation

- a. The Chinese government should increase its investment in higher education systems along with the increase of student numbers. Non-governmental funds should also be sought. Development of private higher education is one of the options, which was discussed in the previous section (cf 5.5).
- b. The Chinese government and institutions should stop or reduce using precious funds to build student dormitories. Students can find accommodation off campus, like most of the students at Western universities do (cf 4.6.3.1).
- c. Universities should improve their efficiency. As noted in paragraph 5.2.3, market mechanisms may compel universities to achieve this end.

d. Charging tuition fees is one of the other options, which is studied further in the next section.

5.8 Fees

5.8.1 Summary

Charging student fees is inevitable in a mass higher education system for two major reasons. One is that government cannot afford a mass system. Another is that higher education is partially private good, so individuals should contribute to their own education. But on the other hand, higher education also produces social benefits, so governments should fund higher education too. China introduced a fee policy in 1989. Since then the fee level increased greatly (cf 2.3.2.2 & 3.2.4).

Social inequality may increase by charging fees. Therefore, student assistance schemes must be established (cf 2.3.2.2 & 3.2.4). The Chinese government established student assistance schemes, like scholarships, loans, stipends and part-time jobs, when it introduced a fee policy. It is found, anyhow, the support level of these schemes is very low (cf 3.2.4). While some informants believe the fees are affordable, some other informants found that student fees are heavy burdens to many families, especially those in underdeveloped areas or the unemployed (cf 4.6.3.11).

5.8.2 Conclusion

The level of student fees is a policy dilemma. Charging no or low fees may not be enough to ease the financial constraints for institutions. But charging too high fees may increase social inequality. It seems to be an option, to charge a certain level of fees on one hand, and increase student assistance on the other hand. By doing so, the balance can be kept (cf 2.3.2.2, 3.2.4 & 4.6.3.10).

5.8.3 Recommendation

- a. According to the income levels of average Chinese families and the sentiments of some informants, the present fee levels are high enough. The Chinese government and institutions should not increase fees any more (cf 4.6.3.10).
- b. The Chinese government should increase its support to needy students. The effectiveness of the loan systems and other assistance schemes should be improved (cf 2.9.3 & 4.6.3.10).
- c. A flexible study credit system should be introduced. Thus students will be able to do temporary jobs to support their studies.

5.9 Employment

5.9.1 Summary

In OECD member countries, the expansion of higher education brought about changes in employment patterns. One is that graduates have to seek employment in non-traditional, lower level jobs, and jobs in the private sector (cf 2.3.1).

Similar changes are taking place in China. Chinese university graduates find it more and more difficult to get jobs. Apart from the increasing number of graduates, there is another reason for the employment difficulties in China. Some of the subjects in institutions or the quality of graduates cannot meet the requirements of the economy and society (cf 3.2.2). Although some of the informants, especially the student informants, expressed deep concerns about the employment, both literature and qualitative inquiries reveal that it is hard to conclude that over-qualification exists in China. On the contrary China has a shortage of talents, especially in underdeveloped areas. It is suggested that students and their parents need to adjust themselves psychologically to adapt to the shift from elite to mass system (cf 2.3.1, 3.2.2 & 4.6.3.9).

5.9.2 Conclusion

Transition from an elite to a mass higher education is a complicated phenomenon. The changes of employment patterns are one of the phenomena. Students or their parents should not expect that the patterns in elite stage still exist in the process to mass stage. But on the other hand, China is now in the process of transition. In this process the problem is far from clear cut. New employment patterns emerge, while old ones do not disappear. The mass system is in sight, while the elite remains. Such realities in China are so complicated that people, especially the youth, may not understand clearly what the implications of massification will have on the employment market. They may feel confused or pessimistic, which was what the researcher discovered during the interviews. Because of such complications, the government and institutions should adopt all possible measures to help students with their employment (cf 4.6.3.8).

5.9.3 Recommendation

- a. Employment services should be completed in all institutions. Such services aim at providing both job information and psychological counseling services for students (cf 3.2.2).
- b. The newly established job market is a good mechanism for graduates to seek jobs. They should be improved and enlarged (cf 4.6.3.8).
- c. The central government and local governments should make an effort to create jobs for graduates, such as what Inner Mongolian government did (cf 4.6.3.9.b).

5.10 Equality

5.10.1 Summary

Although it is realized that the selective function of higher education is an important reason for inequality, there is no easy way to resolve the problem.

According to the investigation made in paragraph 2.4.2, the higher education expansion in many countries in the 1950s to 1970s, improved social equality, but far from the policy maker's expectations. So some countries adopted other ways to reduce the inequality. The Irish government reserved places for students from disadvantaged backgrounds and abolished all undergraduate fees in the 1990s. The Australian government invested massive funds in the 1990s into equality programs for disadvantaged students, which proved to be effective (cf 2.4.2 & 2.9.3). Chinese inequality is caused by the big income gap between different social groups, as well as the large disparities between different regions. Additionally, higher education institutions are distributed unevenly. The Chinese government adopted two major policies. One is to increase the investment on higher education in underdeveloped areas. Another is to establish student assistance schemes to help the needy students (cf 3.3). These policies, anyhow, have not been found very effective by the informants. Social and regional inequality obviously remains. Furthermore, unqualified students can still go to some institutions by paying higher fees (cf 4.6.3.7 & 4.6.3.12).

5.10.2 Conclusion

China adopted, to a certain extent, similar policies as Australia and Ireland, such as reserving university places for ethnic groups, enrolling contracting students from underdeveloped areas, and creating student assistance schemes. But the essential point is the scale: how many students can benefit and how much can they benefit from these policies. This may be the reason why the needy students still feel the pressure in spite of these policies. The key to reduce the existing inequality is to increase resources, so as to

enlarge these schemes by using different methods. But it may not be realistic to expect the inequality to be eliminated in the short term (cf 3.3 & 4.6.3.10).

5.10.3 Recommendation

- a. Both the central government and the local governments should increase the investment in student assistance schemes.
- b. The government should stop the practices or policies which may increase inequality. For instance, students should not be admitted because of paying higher fees (cf 4.6.3.6).
- c. All students should be admitted on the same academic criteria. No students should be discriminated against, because they are from regions with fewer institutions (cf 4.6.3.11).
- d. Non-governmental resources should be encouraged, through governmental policies, to assist students with scholarships, bank loans, donations or part-time work.
- e. University places should continue to be reserved for students from some underdeveloped areas as well as for ethnic groups (cf 4.6.3.6).

5.11 Social factors affecting the transition of Chinese higher education

5.11.1 Summary

Mass higher education institutions interact as a community with other social groups. They try to meet certain demands of, and offer services to, society. In return they receive material resources from society. The service function of institutions becomes more and more important. Modern society is in favour of learning in a mass system because it provides instrumental and operational knowledge. Therefore, it is correct to claim that

society demands the transition to mass higher education (cf 2.5). Apart from these common features there are three social characteristics which promote the expansion of Chinese higher education. Firstly, the Chinese society is influenced positively and negatively by Confucianism (cf 3.4). Secondly, Chinese families attach even more importance to their children's education, because many families have only one child due to the Chinese family planning policy (cf 1.6.2 & 3.4). Thirdly, the Chinese residence permit policies encourage many youths to pursue higher education in order to move to cities or rich areas (cf 3.4). The informants add that expansion of higher education could give teenagers more opportunity to study, rather than stay at home and waste their time, or even make trouble for society. Furthermore, along with the improvement of living standards, the aim of receiving higher education may be just for the individual's self-fulfillment, which implies ideological changes (cf 4.6.3.4 & 4.6.3.5).

5.11.2 Conclusion

China is expected to realize modernization by 2010 (cf 3.2.1). Modernization would bring about the transition of Chinese higher education to a mass system and will change people's values. The society should be aware of these fundamental changes.

The strong social demands for higher education could mean huge potential for the higher education market. While it has uniqueness the higher education market is also characterized by competition, and the principle of supply and demand. Through this market the individual resources can be utilized (cf 3.4).

5.11.3 Recommendation

- a. The higher education transition would be accompanied by ideological changes. Pessimism as showed by some of the informants is due to the conflict between the old values and the new ones. The Chinese government should publicize such changes by using public media, official documents and academic activities (cf 2.5 & 4.6.3.8).

- b. As suggested in paragraph 5.2, the Chinese government should create market mechanisms in the higher education systems. Thus a huge potential market for higher education could be cultivated. Higher education institutions supply knowledge (applied knowledge is normally preferred in a mass system) to customers (students and others), and in return get material resources to develop themselves.

5.12 Suggestions for further research

There are two areas which seem necessary to be studied further. One is the changes taking place inside institutions in the process of massification. Another is the comparative research on massification between developed countries and developing countries.

The transition from elite to mass higher education is a fundamental change which could be external and internal. External problems include the interaction between contextual factors and higher education institutions, government strategies, enrolment (input) and employment (output) policies, and higher education structures. Internal problems include the changes taking place in teaching, studying, researching, curriculum, institutional administration, student and teacher relations (cf 2.2.2). The present research focuses on external problems. But the internal problems are equally important to understand the phenomenon of massification. Therefore, they are necessary to be investigated.

Secondly, massification is an international phenomenon. There are both similarities and differences between developed countries and developing countries. Some developing countries, like China, are or will be in the processing of massification. Comparative studies between countries with different development levels could be made. Their findings could be of benefit to developing countries when they have to design their massification policies.

5.13 Conclusion

China's transition from elite to mass higher education is part of its transformation to a modern society. It is accompanied by changes in social values and people's ideology. This is a complex process. Chinese strategies for the transition are portrayed, in this research, from three different angles: other countries' experiences, literature study of Chinese reality and the perspectives of ten Chinese informants. Through this thorough examination, the Chinese strategies have been identified, analyzed and evaluated. The complicated phenomenon of the massification of higher education in China is illuminated.

There are several challenges China has to face in the transition from elite to mass higher education. To change people's values and ideologies is a difficult and slow process. Furthermore, the shortage of funds and social inequalities are two major obstacles for the massification. This study revealed that developing non-traditional higher education institutions is an effective way to overcome these difficulties to a certain extent. It is also found that developing private higher education is an important way to mobilize non-government funds to expand Chinese higher education. But the political ideology regarding private higher education must be adjusted to guarantee the smooth and healthy growth of Chinese private higher education. The formulation of private education law is a way to achieve the goal.

It is hoped that these major findings and recommendations, and others in this study, could be of value to policy makers or to educational theorists, in future both in China and in other countries engaged in higher education reform.

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Interview Guide

Opening remarks

1. A brief re-explanation of the objective
2. Confidentiality of the interview
3. Consent to tape interview on audio cassette
4. Completion of basic interview information

General questions

1. What kinds of policies does the Chinese government adopt to expand its higher education?
2. What are your comments on the above mentioned polices? How effective are these polices?
3. What are the reasons for the expansion of higher education in China, from your point of view as a student, parent, policy maker, academic, teacher or employer?
4. What are the difficulties for the expansion of Chinese higher education?
5. What are the conflicts caused by the expansion of higher education? How would you resolve them in your point of view?
6. What are the positive consequences caused by the expansion of higher education?
7. What are the negative consequences caused by the expansion of higher education? How would you avoid these consequences in your point of view?
8. Do you believe China can realize the government target whereby the enrollment in higher education institutions in China will reach 15% of the age group (18-22) by 2010? Why?

Enrollment

1. What policies does the Chinese government adopt to ease the competition for entrance to higher education institutions? How do you evaluate the effectiveness of these policies?
2. What kind of policies does the Chinese government adopt to equalize the chances to enter higher education institutions? What is the effectiveness of these policies?

Diversification

1. How many different forms of higher education are there in China?
2. What are the reasons for students and their parents to choose or not to choose non-traditional higher education?

Curriculums

What changes of curricula have been made to adapt to the massification of higher education?

Employment

1. Do you believe in 'over-qualification'? Why?
2. Please describe the employment situation for higher education graduates and relative governmental policies.

Fund and fees

1. What do governmental financial policies exist to stimulate the expansion of higher education?
2. What are the fee policies? How heavy is the burden borne by families for their children's higher education?

Equality

What are the inequalities with regard to access to higher education in China? How does the Chinese government address these problems?

(Note: Omit the questions if it has been answered in previously one)