

Bulletin of Educational Research
December, 2010, Vol. 56 No. 4 pp. 95-138

Diversity within Uniformity: The Dynamics of Government Control and Program Diversity in Teacher Education Curriculum in Taiwan

Hsiou-Huai Wang

Abstract

The intertwining forces of government-controlled uniformity and program-based diversification have influenced teacher education policies internationally. It is not clear, however, to what extent teacher education curriculum is subject to such dynamics. This paper intends to fill the gap by analyzing the curriculum of secondary teacher education programs in Taiwan, a society that has experienced a swing back and forth between the two forces on teacher education policies over the past six decades. Data on education/pedagogy courses of 41 secondary education programs were collected, compared and analyzed. The results show that the teacher education curriculum in Taiwan enjoys a limited degree of diversity within a uniform structure. Discussions on the contexts of teacher education policies in Taiwan and their effect on the quality of teachers are provided.

Keywords: teacher education policy, curriculum, government control,
program diversity

Hsiou-Huai Wang, Associate Professor, Center for Teacher Education, National Taiwan
University

E-mail: wanghs@ntu.edu.tw

Manuscript received: Dec. 18, 2009; Modified: Oct. 13, 2010; Accepted: Dec. 3, 2010.

教育研究集刊

第五十六輯第四期 2010 年 12 月 頁 95-138

一元中的多元：政府管制與多元培育 機制下我國中等教育學程 教育專業課程分析研究

王秀槐

摘要

各國的師資培育政策大都由兩股勢力，包括政府的一元化管制與市場多元化機制的牽引；但是，這兩股勢力如何影響師資培育課程的制定，仍有待探討。本文藉由分析我國中等師資培育學程的教育專業課程來探討，在這兩股力量的影響下，教育專業課程的結構與內涵究竟呈現何種樣貌。研究蒐集國內 41 所中等教育學程的教育專業課程資料，針對課程結構、開課類型與領域內涵，進行分析、對照與比較。研究結果顯示，我國師資培育課程在一元化的政策架構下，僅享有有限的多元空間。本文進一步就造成此一現象背後的師資培育政策脈絡與沿革，進行說明與探討。

關鍵字：師資培育政策、教育專業課程、政府管制、多元培育機制

王秀槐，臺灣大學師資培育中心副教授

電子郵件為：wanghs@ntu.edu.tw

投稿日期：2009 年 12 月 18 日；修改日期：2010 年 10 月 13 日；採用日期：2010 年 12 月 3 日

1. Introduction

The intertwining forces of government-controlled uniformity and program-based diversification have impacted teacher education policies internationally. It is not clear, however, to what extent teacher education curriculum is subject to such dynamics. This paper intends to fill the gap by analyzing the curriculum of secondary teacher education programs in Taiwan, a society that has experienced a swing back and forth between the two forces on teacher education policies over the past six decades. It is interesting to explore how diversified or uniformed is the course structure and courses content offered by teacher education programs across the country. Such investigation may advance our understanding of how the two forces have an impact on the “process” of teacher education.

This article is organized as follows: An overview of relevant literature is first presented in Section 1, followed by a description of the purpose and specific questions for the study, before an account of the research methods was presented in Section 3. The research outcomes, including: a detailed account of the course structure, offerings, and content of the 41 secondary teacher education programs in Taiwan will be provided in Section 4, followed by an in-depth discussion on the historical and socio-cultural roots of such developments and implications of the findings in the final sections.

2. Literature Review

2.1 Dynamics between governmental control vs. program diversity

Internationally, two opposing forces have been underlying the recent development of teacher education: first, deregulation of teacher education, which argues for program-based deregulation and diversification; and second, regulation of teacher education, advocating stronger governmental control for uniform standards and criteria (Apple,

2001; Cochran-Smith & Fries, 2005; Furlong, Barton, Miles, Whiting, & Whitty, 2000). Both approaches attempt to pursue teacher quality, yet through contrasting strategies. The former assumes that diversity and competition among various teacher training institutions will inspire innovations and creativity and ensure the strongest and best to emerge; the latter argues that only through establishing uniformed standards by central authorities can teacher quality be achieved (Apple, 2001; Furlong et al., 2000; Hill, 2006, 2007).

For instance, in the U.S., while diverse teacher training paradigms and alternative teacher training programs have been multiplied, the government has implemented stricter regulations and higher standards for controlling teacher quality and accountability under the current reform movement (Feiman-Nemser, 1990; Lucas, 1999; Popkewitz, 1995; Tsai, 1997; Zeichner & Conklin, 2005). In the UK, the government has recently intensified its control over the instalment of teacher education programs while loosening regulations to allow some qualified secondary school consortia to take up teacher training (Landman & Ozga, 1995; Lee, 2008). In Germany, while diverse models for teacher education have been developed across the country, the central government has implemented two levels of national teacher qualification examinations to ensure teacher quality (Yang, 1999, 2006). In addition, Japan allows universities to set up diverse teacher education programs with various admission criteria and curriculum standards; however, the government controls the quality in the end through employment screening tests (Liang, 2008; Morris & Williamson, 2000). Evidence from these countries has demonstrated the ever intertwining tensions between increasing diversification through diverse forms of teacher training and heightened uniformity due to stricter governmental control (Apple, 1995, 2000, 2001; Hill, 2006). Such dynamics may have a great impact on the input, process, and output of teacher education.

2.2 Impact on teacher education internationally

“Input” refers to the mechanism with which teacher education programs select

their students. It is found that in these countries, the government tend to maintain a relatively lenient control on the student selection process and allows individual teacher education programs/institutions to set diverse criteria to admit students according to their own institutional goals and definitions of teacher quality. Rarely a centralized selection process or uniformed set of selection standards were prescribed for individual institutions/programs to comply (Halstead, 2003; Wang & Fwu, 2007).

“Output” refers to the certification of qualified teachers at the end point of teacher education. It is found that governments usually take stricter control to ensure the quality of graduates from various teacher education programs by setting regional/national standards and requiring qualification examinations or certified standardized tests (Blömeke, 2006; Wang, 2004; Yang, Chen, & Chiang, 2008). For example, in the U.S., those who complete teacher education programs have to pass certain qualification exams on aptitude, subject area knowledge, and pedagogical knowledge mandated by the state and offered by different testing institutions, teacher professional associations, or state boards in order to become certified teachers (Clark & McNergney, 1990; Roth & Piphon, 1990). In the UK, those who complete a teaching internship have to pass the Qualified Teacher Status skills test in numeracy, literacy, and Information and Communications Technology in order to register with the General Teaching Council for England (GTCE) to obtain the Qualified Teacher Status (QTS) (Halstead, 2003; QTS standards, n.d.). Germany has an even stricter qualification process of two-stage examinations: graduates from teacher education programs have to pass the First State Examination to obtain the qualification for student teaching internship, and after one to two year internship, pass again the Second State Examination in order to obtain the qualified teacher certificate (Blömeke, 2006; Terhart, 2004; Yang, 1999, 2006).

Nevertheless, it is not clear to what degree the “process,” that is, the curriculum offered by teacher education programs, is subject to government control. Relatively little literature is found on systematic analysis of teacher education curriculum, that is, the structure and content of the education/pedagogy courses provided by teacher education programs in a system, to see to what extent it is subject to government

control or program initiatives. Since curriculum is at the very core of teacher education, providing the learning experiences necessary for future teachers, and usually reflects the nation's political agenda on teacher education and individual institutions/programs' special missions and goals, it is important to explore how this area of teacher education is shaped by these two opposing forces (Foshay, 2000; Parkay, Anctil, & Hass, 2006).

2.3 The Taiwanese context

In Taiwan, teacher education had been under strict government control since 1949 since the Nationalist government began its nation building process on this island nation. Teachers have been hailed as “guardians of the nation” and teacher education regarded the essential means to educating loyal citizens and efficient labour force. During this era, teacher training was exclusively provided by a small group of government-funded normal universities and teachers' colleges. Little diversity in teacher education institutions was found (Fwu & Wang, 2002). However, recent reform in teacher education since the enactment of Teacher Education Act in 1994 has opened up the teacher training market to all the universities and colleges in the country. Under the new system, any universities and institutions may join teacher education endeavour and once approved by the Ministry of Education, could recruit students from various departments within the university and train them into future teachers (Fwu & Wang, 2002).

In the new system, there appears to be a much higher level of diversity among teacher training institutions, including: traditional normal universities and teachers' colleges, academically-oriented public universities and private universities, as well as technological universities and colleges. Depending on their traditions and resources available, these institutions offered teacher education courses through different ways. Normal universities, blessed with their longstanding status and resources in the field of education, tend to offer teacher education courses through comprehensive colleges of education composed of multiple departments of education. Non-normal academic universities, depending on different degrees of resources and reputations, tend to

provide courses via either college of education, department of education (with several sub-fields in education) or small-scale teacher education program (with a minimum of five faculty members). Technological universities tend to provide courses in a lesser scale through either a department of education or a teacher education program. There seems to be much diversity in the organizational forms of teacher education; however, it is not clear yet if these diverse programs in different types of higher education institutions do offer diverse curriculum to train their students into future teachers. More specifically, it is not clear if the structure, type and content of courses vary across programs, and if programs differ in their endeavours to initiate program-specific courses.

3. Research Purpose and Questions

The purpose of this study, thus, is to examine the degree of diversification and uniformity in the curriculum of secondary teacher education programs in Taiwan. This issue can be explored in terms of course structure, course offerings, and content areas provided by these programs. The specific research questions include the following:

- 1) Do the programs vary in their course structure and course taking regulations?
- 2) Do the programs vary among the number and types of courses they offer?
- 3) Do the courses offered by these programs vary in their content areas?
- 4) Do programs' endeavours to initiate program-specific courses vary with institutional characteristics?

It should be noted that, first, this analysis focuses mainly on the curriculum of secondary school teacher education programs without reference to programs for other levels of education, because these programs comprised the majority of teacher education programs in the country and are thus expected to demonstrate greater, if any, diversity among programs. Second, although the complete curriculum for preparing a well-rounded teacher of a specific teaching subject may include: education/pedagogy courses (such as *Educational Psychology*, *Educational Philosophy* etc.), teaching

subjects courses (such as Chinese, Math, Physics, and Biology), and student teaching internship. Among them, the content of teaching subject courses are mainly provided by various academic departments/faculties, and internship depends largely on intern schools' arrangement; only the education/pedagogy courses are completely provided and controlled by teacher education programs themselves. Thus, this study focuses only on the analysis of education/pedagogy courses; discussion of the teaching subject courses and internship arrangement is beyond the scope of this article.

4. Research Methods

4.1 Data source

As of 2008, a total of 47 secondary teacher education programs had been set up by universities and college in Taiwan (Ministry of Education, 2008). In this study, data was collected from 41 of these programs.¹ Data were collected from the following three sources. First, the author downloaded the following documents from the official website of each of the 41 programs during the period of April 2008, including: 1) official program descriptions; 2) course-taking regulations; and 3) course catalogues of each program for the year 2008. A total of 41 catalogues/descriptions of course offering were obtained, and a total of more than 500 pages of data/information were collected as the main source for analysis. As websites are the major channel for teacher education programs to publicize their courses, the information contained on the website is considered official, up-to-date, and accurate. Second, official evaluation reports from the Ministry of Education on the overall performance of teacher education programs were used to corroborate the data obtained from website documents. Third, literature

¹ The researchers were unable to obtain data from the other six programs through internet or phone inquiries after successive attempts. Therefore, these programs were not included in this study.

on the comparative studies of teacher education system and curriculum was collected to deepen the researcher's understanding for data analysis.

4.2 Analysis

This study utilized documentary analysis as the primary method of data analysis (Hsieh, 2006). The author used the following steps: first to determine the main focuses for analysis based on the purpose/question of the study, then to categorize and organize the data according to the main focuses/themes, and then distil conspicuous patterns in the data to obtain meaningful results. Based on the research purpose of this study, that is, to determine whether diversity is achieved among teacher education program courses, the data were analyzed from the following four angles. The first angle focused on the course structure of specific programs. The author analyzed the program descriptions and course-taking regulations of the 41 programs and synthesized the number of credits required, types of courses offered, and distribution of required and elective courses stipulated by these programs. These regulations were compared with the Ministry of Education (MOE) standard version listed on the MOE website to determine how much the program regulations for course structure diverged from the MOE regulations.

The second analysis centred on the diversity of the required and elective courses offered by the 41 programs. Using the information from the course catalogues, the author first made a complete list of all the courses offered by the 41 programs and then calculated the percentages of programs offering each course in order to see the diversity of course offerings among programs. The author further computed the percentages between MOE standard courses and program-initiated elective courses in each program to see what proportions of such program-initiated courses are in the entire curriculum offered by each program.

The third dimension of analysis focused on the content areas of these courses. In order to delve into the diversity of the substantive knowledge areas contained in the courses offered by the programs, the author classified the courses into six areas

according to their substantive curriculum fields, and then compared and contrasted the courses offered in each area.

Lastly, considering the historical development of higher education and teacher education in Taiwan, the type of institution and scale of programs tend to have a bearing on teacher education course offering. The demarcation of academic vs. technological, public vs. private, and normal vs. non-normal institution is significant. Thus, the author divided the 41 programs based on their institutional traits into the following six types: 1) five normal universities with a comprehensive college of education (NU-CE); 2) eight non-normal universities with a college of education (NNU-CE); 3) eight non-normal universities with a department of education (NNU-DE); 4) seven non-normal universities with a teacher education program (NNU-TE); 5) one technological university with a department of education (TU-DE); and 6) twelve technological universities with a teacher education program (TU-TE).

5. Research Outcomes

The findings from the above analyses are presented in the following three sections, including: course structure, course offerings, and content area.

5.1 Course structure

First of all, it is found that according to MOE regulations, the national curriculum for secondary teacher education are designed based on the discipline-based modularized curriculum model (Null, 2007; Wu, 2006), that is, a curriculum that tends to break up the professional knowledge necessary for a teacher candidate into a series of separate and differentiated courses specialized in various sub-disciplines of education, such as *Educational Psychology*, *Educational Sociology*, or *Guidance and Counselling* etc. A series of well-structured modularized credit courses is designed and it is assumed that after students completed such course sequence, they will acquire the necessary professional knowledge for a teacher.

Such curriculum is composed of four categories of courses: 1) four Educational Foundations courses, including: *Introduction to Education*, *Educational Psychology*, *Philosophy of Education*, and *Sociology of Education*; 2) six Educational Methodology courses, including: *Curriculum Development and Design*, *Principles of Instruction*, *Measurement and Assessment in Education*, *Instructional Media*, *Principles and Practice of Guidance and Counselling*, and *Classroom Management*; 3) two Practicum courses, including: *Materials and Methods in Teaching* and *Teaching Practicum*; and 4) a number of Electives courses. A student must take a certain number of courses among these four categories to reach the minimum of 26 credits required, including two (4 credits) out of the four Foundations courses, three (6 credits) out of the six Methodology courses, and the two Practicum courses (four credits), totalling seven required courses (14 credits) and 6 electives (12 credits), and then takes a half-year full-time student teaching internship (equivalent to four credits), in order to fulfil the requirements for obtaining teacher certification (MOE, 2003) (see Figure 1).

After a detailed examination of the course list and course-taking regulations of the 41 programs, it is found that they had extremely similar course structures and course-taking regulations in conformity to the above MOE regulations. All the programs ask their students to take at least 26 credits and to choose 5 of the 10 Foundation and Methodology courses. Only in Practicum courses some variation was found, by adding 1 or 2 more courses or adding the number of credits for the courses. After the students completed the 26 credit courses in university, they are placed in intern schools for half-year full-time student teaching.

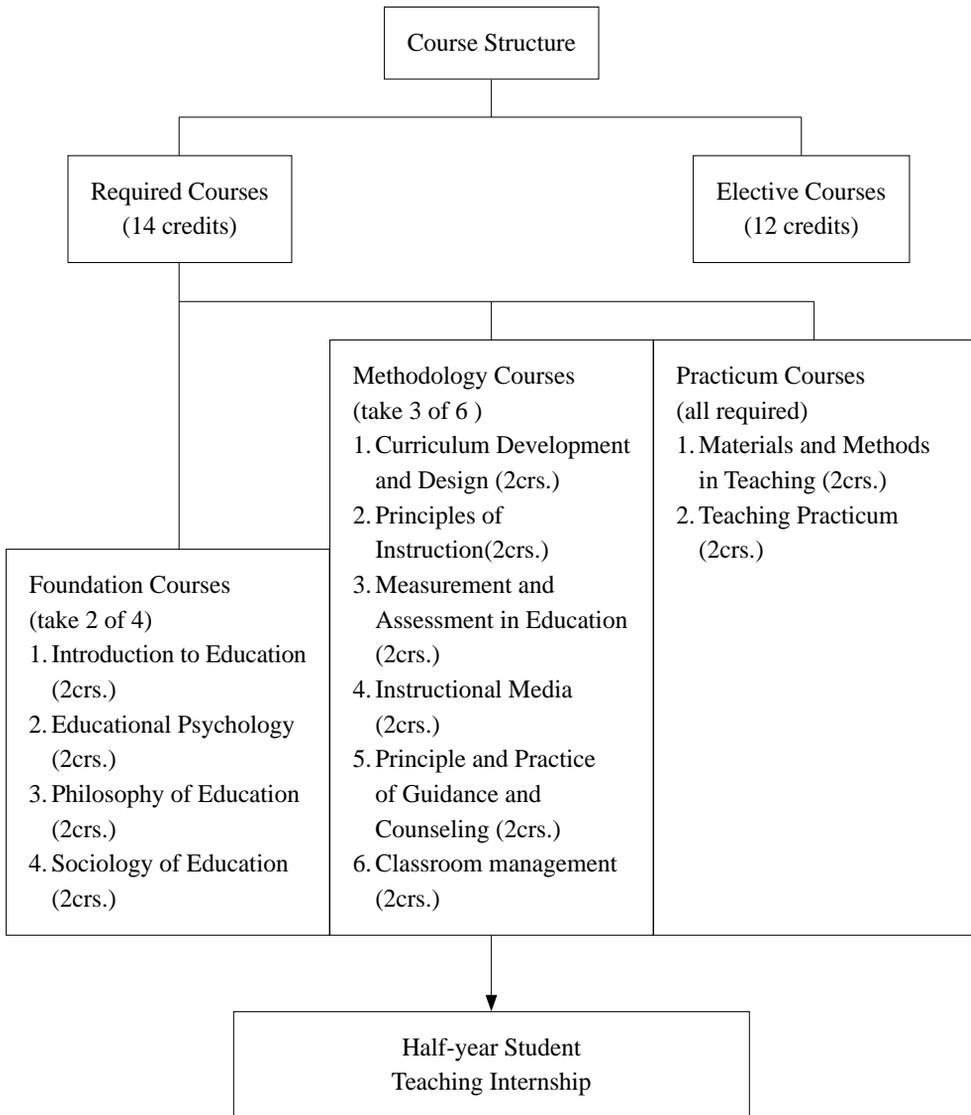


Figure 1 Course structure for secondary teacher education

In sum, a uniformed course structure does exist among all the secondary teacher education programs in that the category of courses, number of credits required, and

distribution of credits among different categories are basically the same. All the programs follow the subject-based curriculum model prescribed by the Ministry of Education. No alternative curriculum models were found. No programs developed their curriculum based on integrated broad-based courses in which courses are organized in a broader field of knowledge, for example, integrating *Educational Psychology*, *Educational Philosophy and Educational Sociology* together into a course called *Educational Foundation* so that students may gain a more holistic understanding of complex educational issues (Kim, Andrews, & Carr, 2004); nor did programs develop “blended” type of curriculum that rotates university coursework and school-site internship to first place students in school site and then provide university-based classes for theoretical learning and then place them in school again for integrated application (Maxie, 2001); nor did programs develop a field-intensive curriculum that places students mainly in partnership schools and learn through daily school practice with periodical seminars offered on site by joint faculty and school supervisors (Halstead, 2003; Maandag, Deinum, Hofman, & Buitink, 2007). Without such alternative curriculum models, it is found that the course structure of all the programs are basically the same, conforming to government regulations.

5.2 Course offerings

Under such a uniformed curriculum paradigm, it is worth further exploring if there is space for programs to offer diverse courses within the set structures and categories and if they did provide courses other than those stipulated by the Ministry of Education to fulfil specific program goals and meet students’ needs. While a truly uniformed curriculum across programs should see that all the programs offer the same set of courses without variation and a completely diverse curriculum should be the one in which no programs offer the same courses, a detailed analysis of all the courses offered by the 41 programs reveals a mixed picture between the two.

First of all, a total of 183 *different* courses were offered by these programs in the years 2007-2008. There were three types of courses: 1) 10 MOE stipulated required

courses; 2) 30 MOE suggested elective courses; and 3) the remaining 141 elective courses initiated by individual programs. As the first two types represent the core curriculum stipulated by the government, the third type was the indicator of how diverse these programs offer their courses. Table 1 listed the number and percentage of these three types of courses offered by all the 41 programs. It is found that all the programs (except very few ones) did offer all of the ten MOE stipulated courses; however, these programs varied greatly in offering the second type (MOE suggested) of courses, from the least of 4 to the maximum of 29 courses. The variation spanned even greater in the third type (program-initiated) of courses, from zero to the maximum of 38. Lastly, the total number of courses offered by each of these programs spanned from the minimum of 17 to the maximum of 67. These programs altogether offered a total of 171 different elective courses beyond MOE stipulation in the third category. To delete redundancy among them, it is found there were a total of 141 *different* courses initiated by the programs themselves.

Table 1 Number of all the courses offered by 41 TE programs

	MOE Required	Percentage	MOE Suggested	Percentage	Program Initiated	Percentage	Total
PU-NU-CE 1	10	19.23%	25	48.08%	17	32.69%	52
PU-NU-CE 2	10	24.39%	24	58.54%	7	17.07%	41
PU-NU-CE 3	10	22.22%	29	64.44%	6	13.33%	45
PU-NU-CE 4	10	25.64%	24	61.54%	5	12.82%	39
PU-NU-CE 5	10	34.48%	19	65.52%	0	0%	29
PU-NUU-TE 1	10	24.39%	20	48.78%	11	26.83%	41
PU-NUU-TE 2	10	38.46%	10	38.46%	6	23.08%	26
PU-NUU-TE 3	10	47.62%	7	33.33%	4	19.05%	21
PU-NUU-TE 4	10	58.82%	4	23.53%	3	17.65%	17
PU-NUU-DE 1	10	20.00%	15	30.00%	25	50%	50
PU-NUU-DE 2	10	30.30%	11	33.33%	12	36.36%	33
PU-NUU-DE 3	10	34.48%	12	41.38%	7	24.14%	29

Table 1 (continued)

	MOE Required	Percentage	MOE Suggested	Percentage	Program Initiated	Percentage	Total
PU-NNU-CE 1	10	14.93%	19	28.36%	38	56.72%	67
PU-NNU-CE 2	9	36.00%	4	16.00%	12	48%	25
PU-NNU-CE 3	10	45.45%	5	22.73%	7	31.82%	22
PU-NNU-TE 1	9	29.03%	11	35.48%	11	35.48%	31
PU-NNU-TE 2	10	34.48%	12	41.38%	7	24.14%	29
PU-NNU-TE 3	10	30.30%	17	51.52%	6	18.18%	33
PU-NNU-TE 4	10	43.48%	11	47.83%	2	8.70%	23
PU-NNU-DE 1	10	25.64%	16	41.03%	13	33.33%	39
PU-NNU-DE 2	10	27.78%	15	41.67%	11	30.56%	36
PU-NNU-DE 3	10	25.64%	23	58.97%	6	15.38%	39
PU-NNU-DE 4	10	27.03%	23	62.16%	4	10.81%	37
PU-NNU-DE 5	10	34.48%	18	62.07%	1	3.45%	29
PU-NNU-CE 1	10	18.52%	19	35.19%	25	46.30%	54
PU-NNU-CE 2	10	41.67%	7	29.17%	7	29.17%	24
PU-NNU-CE 3	10	41.67%	9	37.50%	5	20.83%	24
PU-NNU-CE 4	10	50.00%	7	35.00%	3	15%	20
TU-TE 1	10	28.57%	13	37.14%	12	34.29%	35
TU-TE 2	10	25.64%	19	48.72%	10	25.64%	39
TU-TE 3	10	34.48%	10	34.48%	9	31.03%	29
TU-TE 4	10	27.03%	19	51.35%	8	21.62%	37
TU-TE 5	10	30.30%	16	48.48%	7	21.21%	33
TU-TE 6	9	31.03%	13	44.83%	7	24.14%	29
TU-TE 7	10	52.63%	5	26.32%	4	21.05%	19
TU-TE 8	10	62.50%	4	25.00%	2	12.50%	16
TU-TE 9	10	31.25%	20	62.50%	2	6.25%	32
TU-TE 10	10	24.39%	30	73.17%	1	2.44%	41
TU-TE 11	10	40.00%	14	56.00%	1	4%	25
TU-TE 12	10	27.78%	26	72.22%	0	0%	36
TU-DE 1	10	20.83%	27	56.25%	11	22.92%	48

To present the result in a more graphical way, Figure 2 clearly showed that on the one hand, almost all the programs offered the ten MOE stipulated required courses (the bottom layer), and all the programs did provide some courses out of the thirty MOE suggested courses (the middle layer), indicating the tendency of these programs to conform to the MOE core curriculum. However, all these programs altogether have created a diverse set of 141 elective courses beyond MOE stipulation in the third category (the top layer), signifying the degree of autonomy the programs enjoy to offer their own courses.

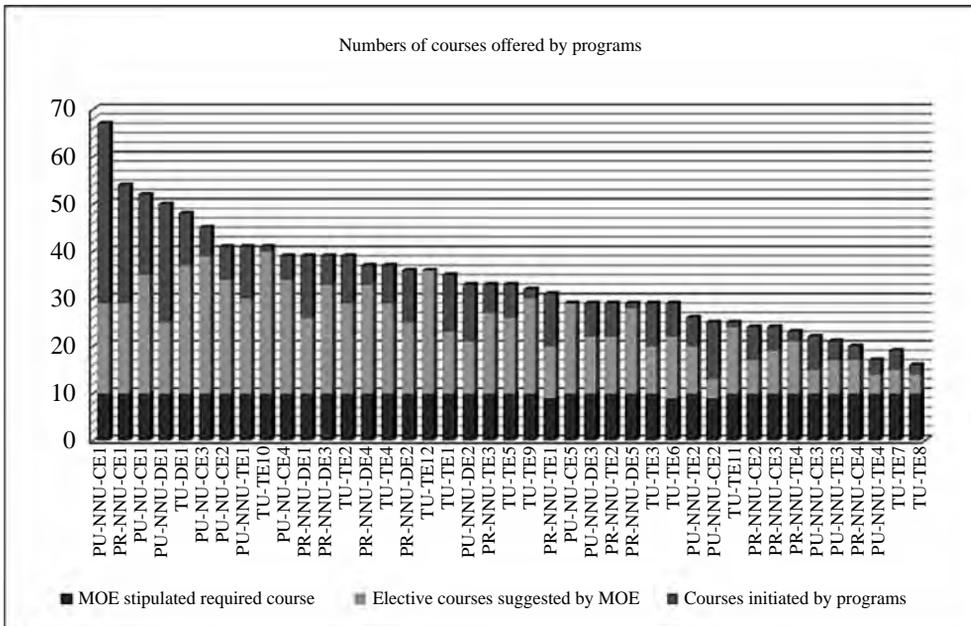


Figure 2 Numbers of courses offered by programs

In addition to examining the total number of the three types of courses provided across the programs, the author also calculated the ratio of each type of courses within the entire curriculum of each program to see how substantial the proportion of the curriculum was subject to government control or program autonomy. Figure 3 illustrates the percentages of three types of courses within the curriculum of each of

the 41 programs. As can be seen, the proportions of the first type of courses (MOE stipulated required courses) in the curriculum varied (from 15% to 59%), with an average of 33% across all 41 programs. The ratios of the second type (MOE suggested elective courses) ranged more widely (from 16% to 73%), with an average of 45% across the programs. And the proportions of the third type (program initiated elective courses) varied even more greatly (from 0% to 57%), with an average of 23% across the programs. Comparing the average proportions of each type of course found that these programs did offer a relatively higher proportion of the first (33%) and second type (45%) of courses, the combination of both types even exceeding 78%, and provided relatively smaller proportions of the third type (23%). While the first two types of courses may represent how programs conform to the MOE control scheme and the third type indicates the degree by which programs are free to develop their own curriculums, such results show that these programs on average were more apt to conform to MOE regulations than to devise a diverse range of courses of their own.

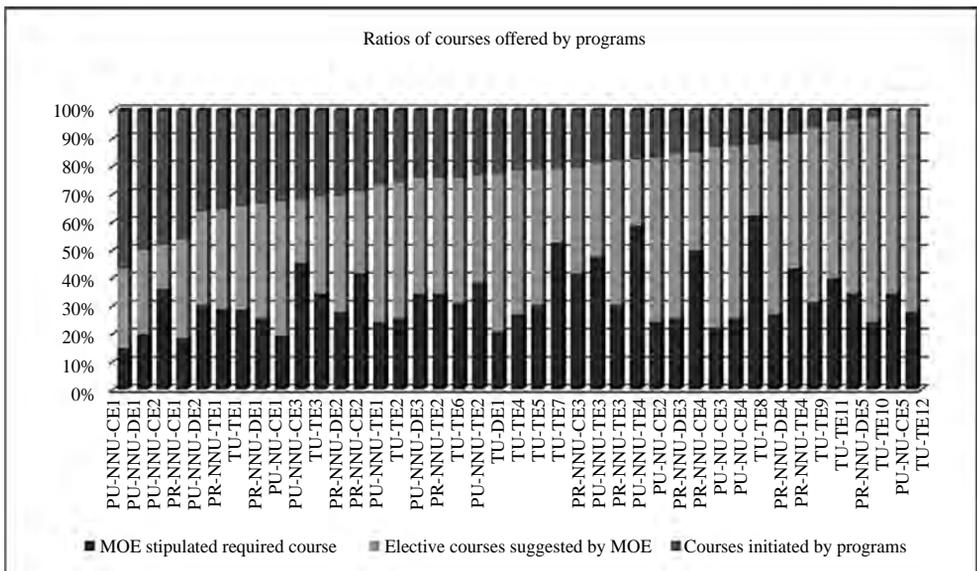


Figure 3 Ratio of courses offered by programs

5.3 Content Area

In addition to examining the number and ratio of different types of courses offered by the teacher education programs, it is important to investigate the content areas covered by these courses in order to grasp the width and depth of the professional knowledge delivered to students in the process of teacher education.

The 183 courses provided by all the programs can be classified into six sub-fields. They are: 1) Educational thoughts & philosophy; 2) Human development, psychology & counselling; 3) Curriculum, instruction & assessment; 4) Administration and social policy; 5) teacher professional development; and 6) Education for specialized areas. Within each content area, the author further differentiated the courses into the three types of courses, including MOE required courses, MOE suggested elective courses, and program-initiated elective courses. Further analyses were conducted to examine the diversity in focus within each sub-field to see how the program-initiated courses strengthen, complement, or diverge from the MOE core courses.

5.3.1 Educational thoughts/philosophy

In the area of “*Educational Thoughts and Foundations*,” the MOE stipulates two required courses and six suggested courses, focusing on the general introduction and fundamental knowledge of educational philosophy and contemporary issues in educational thoughts. In this area, the programs did initiate an additional 19 courses, first adding on some courses on the topics of contemporary thoughts in education, such as *contemporary issues of education*, *educational thoughts in the modern time*, *post-modernism and feminism*, *humanistic education*, and *cultural philosophy*; second, adding on courses on some interesting emerging areas, such as *open education*, *affective education*, *life and death education*; further, providing such courses with distinctly indigenous perspectives as *inquiry to Taiwan education* and *meditation on Buddhist wisdom*. In this way, we can see that the programs did offer courses both to strengthen and intensify the topics/dialogues covered by MOE core courses, and to develop totally new venues for inquiry to reflect the indigenous Chinese-Buddhist

philosophy and thought (see Table 2).

Table 2 Courses in Educational Thoughts and Foundations

Educational Thoughts and Foundation	Course Name	Offering Number	Course Name	Offering Number
MOE required courses	Philosophy of Education	41	Introduction to Education	39
MOE suggested electives	Secondary Education	26	History of Education	18
	Contemporary thoughts on education	24	Anthropology of Education	9
	Moral Education	23	Elementary Education	1
Program initiated electives	Contemporary Issues of Education	7	Theory and Practice of Affective Education	1
	Inquiry of Educational Problems	5	Principles and Practice of Life-and-Death Education	1
	Introduction to Philosophy	1	Open Education	1
	Cultural Philosophy	1	Meditation on Buddhist Wisdom	1
	Theory of Feminism	1	Lectures on Education	1
	Educational Thoughts in the Modern age	1	Selected Classics in Education	1
	Ethics of Education	1	Pedagogy	1
	Theory and Practice of Humanistic Education	1	Inquiry of Taiwan Education	1
	Humanistic Education	1	International Educational Reform	1
	Post-modernism and Education	1		

5.3.2 Human development, psychology, and counselling

In the area of “Human development, psychology, & counselling,” the MOE stipulates 2 required courses and 10 suggested courses, concentrating on the general

introduction of educational psychology, human development, student guidance, and education for diverse students' needs. The teacher programs offered an additional diverse spectrum of 29 courses in this area on more specialized and refined topics, including: 1) various sub-fields of psychology, such as *cognitive psychology, social psychology, personality psychology, learning and instructional psychology, abnormal psychology, health psychology, creativity and innovation*; 2) human development at various stages, such as *adult development, early childhood development, child psychology, adolescent development*; 3) guidance and counselling, such as *counselling techniques, Gestalt psychotherapy, guidance for at-risk adolescents*; and 4) education for students with various types of disabilities, such as *mental disabilities, learning disability diagnosis, medial instruction for children with mild disabilities*. In this way, the program-initiated courses tend to strengthen and complement the areas/dialogues covered by MOE core courses (see Table 3).

Table 3 Human development, psychology and counselling

Human Development, Psychology & Counselling	Course Name	Offering Number	Course Name	Offering Number
MOE required courses	Educational Psychology	41	Principle and Practice in Guidance and Counselling	41
MOE suggested electives	Introduction for Special Education	38	Life Education	22
	Psychology of Adolescence	34	Developmental Psychology	21
	Parent Education and Guidance	27	Behavior Modification Technique	21
	Interpersonal Communication	26	Psychological and Educational Testing	10
	Career Education	25	Child Psychology	4
	Gender Education	24		

Table 3 (continued)

Human Development, Psychology & Counselling	Course Name	Offering Number	Course Name	Offering Number
Program initiated electives	Guidance of At-risk Adolescents	9	Abnormal Psychology	1
	Counselling Theory and Technique	7	Human Intelligence and Potential	1
	Educational and Vocational Guidance	7	Early Childhood Development and Psychology	1
	Health Psychology	6	Youth Development and Psychology	1
	Psychology of Learning	5	Adult Development and Psychology	1
	Adolescent Development and Guidance	5	Theory and Practice of Discipline and Guidance	1
	Cognitive Psychology	4	Physical and Mental Development and Guidance	1
	Sex Education	3	Instruction for Children Systematic Thinking	1
	Learning Disabilities	3	Thinking and Reasoning	1
	Psychology and Education of Child with Special Needs	3	Creativity and Innovation	1
	Group Dynamics	2	Problem-Solving Strategy	1
	Personality Psychology	2	Learning Diagnosis and Treatment	1
	Psychology of Instruction	1	Mental Disabilities	1
	Social Psychology	1	Remedial Instruction for Children with Mild Disabilities	1
	Gestalt Psychotherapy	1		

5.3.3 Curriculum, instruction and assessment

Both MOE and the TE programs appeared to place a great emphasis on the area of “*curriculum, instruction and assessment*.” In this area, MOE stipulates seven required courses and two suggested courses, covering the sub-fields of curriculum, instruction, assessment and media instruction, while the teacher programs offered additional diverse spectrum of 32 courses on more specialized and refined topics, covering: 1) curriculum-related courses, including *school-based curriculum, curriculum integration, curriculum evaluation, and curriculum reform*; 2) instruction-related courses, such as *instruction for critical thinking, competency-based instructional design, constructivist instruction, team teaching and instructional supervision*; 3) media-related courses, including *computer-assisted instruction, multimedia instruction, and distance education*. As can be seen, some of the courses opened new avenues for emerging topics/dialogues not covered by MOE core courses, while others tend to add on specialized knowledge to complement the areas/topics in MOE scheme (see Table 4).

Table 4 Curriculum, instruction and assessment

Curriculum, Instruction and Assessment	Course Name	Offering Number	Course Name	Offering Number
MOE required courses	Educational Measurement and Evaluation	41	Instructional Media and Practice	41
	Principles of Instruction	41	Teaching Methods and Materials	41
	Curriculum Development and Design	41	Teaching Practicum	41
	Classroom management	41		
MOE suggested electives	Computer and Education	24	Audio-Visual Education	7
Program initiated electives	Teaching for Creative Thinking	13	Distance Education	2

Table 4 (continued)

Curriculum, Instruction and Assessment	Course Name	Offering Number	Course Name	Offering Number
	Computer-assisted Instruction	8	Curriculum Reform	1
	Introduction to Nine-Year Integrated Curriculum for Compulsory Education	7	Curriculum Innovation	1
	Instructional Design	7	Constructivist in Instruction	1
	Curriculum and Instruction	5	Instruction of Higher Order Thinking	1
	School-based Curriculum	5	Instruction of Outdoor Activities	1
	Curriculum Integration	5	Thematic Instruction	1
	Computer Network and Instruction	4	Team Teaching	1
	Curriculum Leadership and Evaluation	3	Introduction to Instructional Technology	1
	Instructional Supervision	3	Competence-based Instructional Design	1
	Compilation of Teaching Material	2	Seminar on Curriculum, Instruction & Sociology of Technology	1
	Instruction for Critical Thinking	2	Seminar on Curriculum, Instruction & Philosophy of Technology	1
	Multimedia Instruction	2	Evaluation and Assessment of Science	1
	Educational Communication and Technology	2	Textbook Evaluation	1
	Educational Technology	2	Resource Room Program	1

5.3.4 Administration and social policy

In the area of “Administration and social policy,” MOE stipulates only one required course and seven suggested courses covering some of the most important administration and social policy issues, such as *educational legislation*, *school administration*, *multicultural education* and *comparative education*. In addition, the programs offered an additional diverse spectrum of 24 courses on more specialized and refined topics with the following trends. First, school-based management has become a focal concern in educational administration, as reflected by courses such as *school management*, *school leadership*, and *school effectiveness*. Second, the issue of reform is emphasized with courses such as *educational reform* and *international educational reforms*. Third, for educating citizens for the contemporary world, courses including *lifelong learning*, *civic education* and *environmental protection* are provided. And last, education for diverse groups is stressed and provided through courses such as *aboriginal education* and *Southeast Asian Chinese education* (see Table 5).

Table 5 Administration and social policy

Administration and Social Policy	Course Name	Offering Number	Course Name	Offering Number
MOE required courses	Sociology of Education	40		
MOE suggested electives	Educational Administration	31	Comparative Education	19
	Educational Legislation	30	Education for Human Rights	16
	School Administration	29	Environmental Education	15
	Multicultural Education	23		
Program initiated electives	Education of Environmental Protection	7	School Leadership	1
	Educational Reform	6	School Change and Innovation Management	1
	Civic Education	5	School Affairs Management	1

Table 5 (continued)

Administration and Social Policy	Course Name	Offering Number	Course Name	Offering Number
	Education for Local Cultures	4	School Effectiveness	1
	Organizational Behavior in Schools	3	Special Subject of Six Main Issues in Taiwan's Education	1
	School Education and Lifelong Learning	3	Culture and Education	1
	Service Learning	3	Aboriginal Education	1
	Educational Policy in Nowadays	1	Southeastern Asia Education	1
	International Education Reforms	1	Education for Southeast Asian Chinese	1
	Policy and Administration in Vocational Education	1	Gender and Intimate Relationship	1
	Study of Issues in Teacher Education	1	Gender Awareness and Campus Culture	1
	Human Resource Management in Education	1	Marriage and Family	1
	Total Quality Management	1		

5.3.5 Teacher professional development

In the relatively new and emerging area of “*Teacher Professional Education*,” the MOE did not stipulate any required courses and only suggested two elective courses focusing solely on research methodology. However, the teacher education programs did manage to put forward a multitude of 17 courses in the following three aspects. First, courses aimed to train a variety of competencies and skills for teachers, including: *oral communication*, *Chinese literacy*, *blackboard calligraphy*, *English conversation*, and *teaching portfolio* to enhance future teachers’ instructional capacities. Furthermore,

methodology courses including *case study methods*, *qualitative research*, and *action research* were offered to hone future teachers' research skills for ongoing inquiry and improvement. Finally, courses such as *teacher professional development*, *teacher career development*, and *mental health for teachers* were offered to help prospective teachers prepare for a well-adaptive and productive professional career. All the courses in this area touched upon new fields of knowledge not covered by MOE core curriculum (see Table 6).

Table 6 Teacher professional development

Art, Sport and Occupational Education	Course Name	Offering Number	Course Name	Offering Number
MOE required courses				
MOE suggested electives	Information Education	15	Science Education	15
Program initiated electives	Art Education	7	Athletic Education	1
	Technology and Modern Life	3	Physical Education in Schools	1
	Music Education	2	Outdoor Life Skills	1
	Visual Art Education	2	Health Education	1
	Scout Education	2	Home Economics Education	1
	Keyboard Music	1	Introduction to Tourism Education	1
	Musical Instrument's Performance	1	Introduction to Hospitality Education	1
	Vocalism in the Period of Adolescent Change of Voice	1	Nutrition Education	1
	Theatrical Screenplay and Performance	1	Information Science Education	1
	Technique of Theater	1	Consumer Psychology	1
	Research in Visual Communication and Design	1	Ocean Education	1

5.3.6 Education for specialized areas

Finally, there were some courses for certain specialized areas such as art, athletics, vocational and technological education. As the MOE tends to place more emphasis on general courses that may apply to all types of teacher education programs, courses in those specialized areas were relatively neglected. That’s why in the area of “*Education for specialized areas*,” MOE stipulated no required courses and only suggested two electives (*educational research methodology and educational statistics*). However, teacher education programs specializing in these areas did manage to provide a wide spectrum of 23 courses to highlight their own special goals and functions. Programs specializing in art education offered courses such as *art education, music education, theatrical screenplays and performance, visual communication, and design education*; programs specializing in athletic education provided courses in *athletic education, scout education, and physical education in schools*; programs for vocational/technological education provided courses in *tourism education, consumer psychology, nutrition education, home economics, and information science education*. This variety of courses appears to be intended to hone students’ knowledge and skills in teaching various occupational subjects in the future (see Table 7).

Table 7 Specialized fields in art, athletic and vocational education

Teacher Professional Development	Course Name	Offering Number	Course Name	Offering Number
MOE required courses				
MOE suggested electives	Educational Research Methodology	29	Educational Statistics	26
Program initiated electives	Action Research	9	Crisis Management	2
	Mental Health for Teachers	7	EQ Education for Teachers	2
	Teacher Professional Development	6	Qualitative Research	2
	Oral Communication	5	Classroom Observation and Research	1

Table 7 (continued)

Teacher Professional Development	Course Name	Offering Number	Course Name	Offering Number
	Teacher Career Development and Renewal	5	Theory and Practice of Teacher-Parent Cooperation	1
	Teaching Portfolio	4	Research Methods	1
	Chinese Literacy for Teachers	4	Case Study Method	1
	Blackboard Calligraphy	2	Teacher's Rights and Obligation	1
	English Conversation	2		

In summary, among the six content areas of the courses provided by the teacher education programs, four areas were emphasized by both MOE and teacher education programs, and two areas were ignored by MOE, yet emphasized by the programs. Further, in each of the content areas, these programs did offer a diverse set of courses to strengthen or supplement courses stipulated by MOE or to open new avenues to knowledge/dialogues not touched upon by the MOE scheme to highlight their own special purposes and resources.

5.4 Program-initiated courses

Considering the historical development of higher education and teacher education in Taiwan, the demarcation of institutional type (academic vs. technological; normal vs. non-normal) and program type (college, department, program of teacher education) do bear significance in understanding teacher education curriculum. As program-initiated (Type 3) courses is an indication of program autonomy, it is important to examine the number and ratio of such courses offered by different types of programs to see if autonomy varies with institutional characteristics. It may be inferred that academically-oriented universities, in general possessing more resources as the mainstream providers of secondary school teachers, may be more capable of initiating more program-

specific courses than technological ones. Furthermore, normal universities, with their longstanding status and vast resources in the field of teacher education, may provide more program-specific courses than non-normal ones. And college of education, with its comprehensive scope and large pool of faculty in education, may offer more program-specific courses than department of education and than a single teacher education program.

Table 8 shows that, corresponding to our hypotheses, in general academic universities on average did offer more program-initiated courses (Median=9) than technological universities (6); and public universities did initiate more courses (10) than private ones (6). However, it is surprising to see that, contrary to our expectation, normal universities did not offer more program-initiated courses, but in fact even provided slightly fewer (7) such courses than their non-normal counterparts (8). In addition, colleges of education (11) and departments of education (10) did provide more program-specific courses than teacher education programs (6).

Table 8 Median number of program-initiated courses by program

Type of institution	N	Median
Academic	28	9
Technological	13	6
N Public	24	10
Private	17	6
N Normal	5	7
Non-normal	36	8
College of Education	12	11
Department of Education	9	10
Teacher Education Program	20	6

When further dividing the 41 programs into 6 categories according to their institutional characteristics, it is worth noting that (see Figure 4) the technological university with a department of education (TU-DE) managed to offer the highest number (Median=11) of program-initiated courses. Non-normal universities with college of education (NNU-CE) or department of education (NNU-DE) on average provided 9 and 7 different program-initiated courses, respectively. In addition, teacher education programs in non-normal universities (NNU-TE) and technological universities (TU-TE) offered 6 courses, similar to those traditionally teacher training normal universities with comprehensive colleges of education (NU-CE).

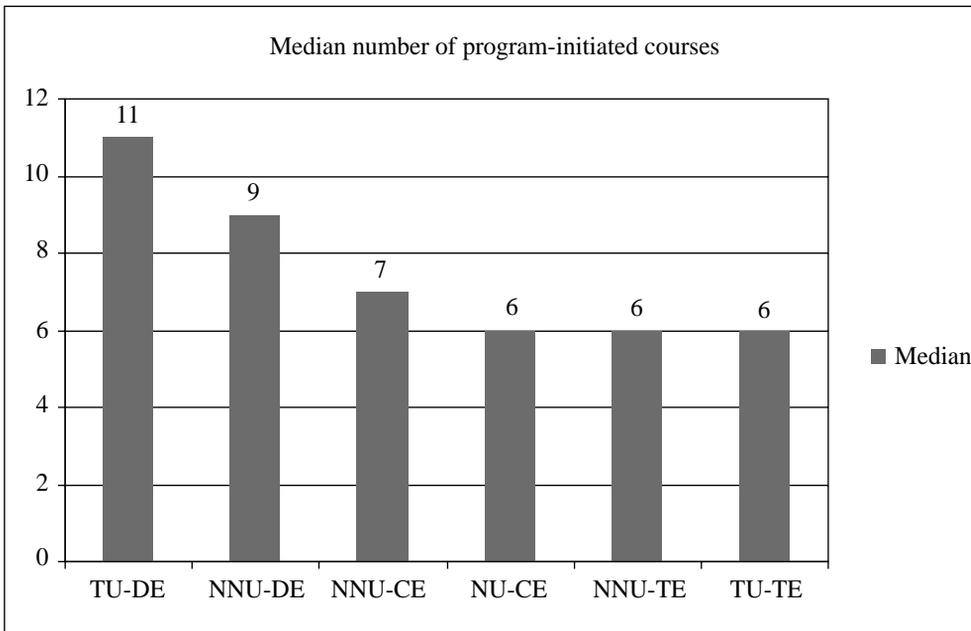


Figure 4 Median number of program-initiated courses by programs

Furthermore, to examine the ratios of program-initiated courses in relation to the total number of courses provided by the 6 types of programs (see Figure 5), it is found that, for non-normal universities with a college of education (NNU-CE), program-initiated courses consisted of more than one thirds of their total courses (35%),

followed by 25% offered by department of education in non-normal universities (NNU-DE); 23% offered by department of education in technological universities (TU-DE); 22% by teacher education program in non-normal universities (NNU-TE); and 17% by teacher education in technological universities (TU-TE). Again, it is surprising to see that for normal universities with comprehensive colleges of education (NU-CE), program-initiated courses only constituted 15 percent of their total courses, the lowest ratio among the 6 types of institutions in the study.

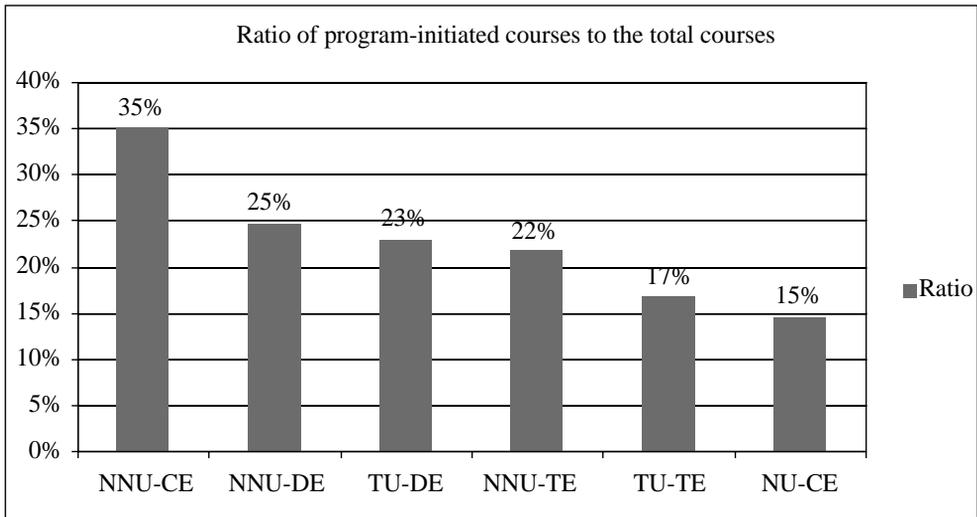


Figure 5 Ratio of program-initiated courses by programs

In summary, diversity in program autonomy in offering self-initiated courses did vary with institutional characteristics and could be explained by the following three factors. First of all, resources and status do count. For example, academic and public universities, which in general possess more resources and prestige as mainstream providers of secondary school teachers, did enjoy higher level of autonomy than their technological and private counterparts. Second, program scale also matters. That's why college of education, with its comprehensive scope and large faculty pool, were in general able to provide more program-specific courses than departments of education, and even more so than teacher education programs. In addition, institutional tradition

may also exert an influence. Contrary to the commonly-held assumptions that normal universities, with its longstanding status and vast resources in teacher training should be able to provide the most enriched and diversified courses among all types of institutions; however, in fact they demonstrated the lowest level of diversity in offering courses among all the institutions. Such unexpected result may be partially explained by the traditional role normal universities have assumed. As the major teacher training institutions since early years, normal universities had been under strict state control in terms of input, process and output of their training for many decades (Fwu & Wang, 2002). With such a tradition, they may become more accustomed to conforming to the state-mandated curriculum than developing diversified program-specific courses.

6. Conclusions

Based on the above research findings, the four research questions were answered. First of all, to examine if “the programs vary in their course structure and course taking regulations,” the answer is negative as the course structure and regulations of TE programs did conform to MOE regulated structure. Secondly, to investigate if “the programs vary among the number and types of courses they offer,” the answer is mixed. Although these programs did manage to initiate program-specific courses, an analysis of the number and ratio of the three types of courses found that they were more apt to conform to MOE regulations than to devise a diverse range of courses of their own. Thirdly, to answer if “the courses offered by these programs vary in their content areas,” these programs did offer a diverse set of courses to strengthen or supplement courses stipulated by MOE and to open some new avenues to knowledge/dialogues not touched upon by the MOE scheme to highlight their own special purposes and resources. Lastly, to see if “programs’ endeavours to initiate courses vary with institutional characteristics,” it is found that such endeavour did vary with institutional characteristics. While academically-oriented universities did enjoy higher level of autonomy in offering more program-initiated courses than their technological

counterparts, normal universities enjoyed the lowest level of diversity in offering courses among these institutions.

In conclusion, the curriculum model and course structure of secondary school teacher education programs in Taiwan were fairly uniformed and conformed to MOE regulations, and the courses offered tended to concentrate on the MOE core courses. However, a diverse set of program-initiated courses were provided to supplement areas neglected by the MOE and to strengthen programs' special needs across six content areas. Thus, it may be concluded that the curriculum of Taiwanese secondary teacher education programs enjoys a certain degree of diversity within a uniformed structure.

7. Discussions

Given the above findings of a curriculum pattern with restricted diversity, it would be important to further explore the historical, political and social contexts underlying the process in which such curriculum pattern is developed. In fact, the development of teacher education in Taiwan has witnessed an ever-present tension between state-controlled uniformity and program-based diversification.

7.1 Historical and cultural roots of state control

First of all, strong centralized control for teacher quality has been on high priority throughout the long history of the Taiwanese society. Traditional Chinese heritage, Japanese colonial influence, and the nation-building process under the Nationalist regime have all shaped a public consensus on the importance of teacher quality and have prompted the government to exert strict control over it (Lee, 2001; Liang & McClain, 1991). In this society mainly composed of Chinese immigrants from the mainland since the 16th century, the Chinese/Confucian cultural heritage has been rooted in many veins of the social composition. The Confucian values, highlighting the importance of education and the importance of high respect for teachers, are embedded in the Taiwanese people's mentality. A teacher is regarded a learned scholar (*jingshi*)

who transmits knowledge and skills essential for living, as well as a moral figure (*renshi*) who sets an example for students to follow (Gao, 1999). Such a cultural tradition was reinforced during the Japanese colonial period, from 1895 to 1945. During the colonial period, a large number of teachers in Taiwan were expatriates from Japan who were better educated than most of the Taiwanese people at the time (Wu, 1980). In addition, the colonial government established a number of normal schools to recruit the best from local talented young people and train them into future teachers (Lee, 2001). Such combination of political savvy and high quality of teachers further instilled a high level of respect for teachers in the Taiwanese people's minds (Fwu, 1999; Guo, 1997; Wu, 1980).

7.2 State control during the Nationalist era

After 1949, such a view of teachers was continued by the nationalist regime led by the Kuomintang, or Nationalist, party, who were defeated by the Communist regime and withdrew from continental China to this island. Under continuous threat from the Communist regime, the government resolved to develop Taiwan into a “fortress in the Taiwan Strait.” In such a formidable endeavour, teachers played a key role as builders of the “mental defense” (*jingshen guofang*) and the “guardians of national solidarity.” Since teachers were so critical to the success of nation building, the government was determined to exert complete control over teacher education in order to install in future teachers a sense of loyalty and conformity (Liang & McClain, 1991; MOE, 1957; Xu, 1993). During this period, the government restricted teacher training to a few normal education institutions and stipulated strict curriculum guidelines for teacher training institutions to comply. The teacher education courses provided by the normal institutions were highly centralized, fairly identical with little diversity across institutions. According to the official course list stipulated by the Ministry of Education, a total of 13 courses with 26 credits were prescribed to students in all teacher training programs, among which 22 of the 26 credits were required courses, leaving little space for either students to choose from electives or for teacher education institutions to

design courses to highlight their own goals or focuses (MOE, 1984).

7.3 Diversification of teacher education

However, after suspension of martial law in 1987, under the ethos of the time with rapid political democratization, economic liberalization and social diversity (Huang, 2000; Lee, 2001; Pai, 2003), teacher education was pressed to be opened up on the logic of market-based deregulation. Thus, a multitude of teacher education programs were established by many traditionally non-teacher-training universities and a surplus of graduates were produced to compete in the open market so that the best and strongest will emerge to raise teacher quality (Fwu & Wang, 2002; MOE, 1994). During this period, the government released its grip on the curriculum of teacher education programs to some extent. The newly-established teacher education programs were able to offer program-initiated education courses with a greater degree of autonomy and to design their own course lists for various teaching subjects such as Chinese, math, science etc., according to institutional goals and resources (MOE, 1996; Wu, 2003). Also, there was no teacher certification examination, and graduates from various teacher education programs were qualified to teach once they located a job with a school (Qiu, 2005).

7.4 Re-regulation of teacher education

However, as the Taiwanese society has progressed into a technology-intensive knowledge society, the demand has intensified for high-quality teachers who are able to prepare future citizens with higher levels of knowledge, competency, and creativity (Liou, 2005). With the rising public demand for teacher accountability and quality assurance in education, such an open market policy with lenient government control has met with increasing criticism (Liou, 2005; Tseng & Chang, 2005; Wu, 2006). Opponents contended that under such a loose and chaotic “diversification” system, many “unqualified” institutions and programs were set up, a surplus of “low quality” teachers were produced and teacher quality has declined (Hsu, 2009). Thus, the

government should tighten its control with stricter standards in order to raise teacher quality (Wu, 2006). Such public outcries have once again pushed the government to increase its control over teacher education.

The current democratic government exerts its control by tightening curriculum regulations and implementing teacher certification examination. By doing so, the government has recently revised the official course listings for all the teaching subjects, stipulating a fixed combination of required and elective courses and leaving little space for individual programs to provide courses according to their own purposes and resources (MOE, 2003, 2007). Further, the Ministry of Education holds the right to approve or reject the education/pedagogy course list of individual programs who have to apply for MOE approval when designing and offering new courses for their students (MOE, 2004). In addition, the government has started a national teacher certification examination since 2005 to ensure the quality of graduates from various programs at the end point. (Lin, Wang, & Teng, 2007). All these developments have demonstrated a tendency of teacher education policy to swing from market-based diversification back to government-controlled uniformity once again.

In conclusion, due to the historical, political and social contexts, the development of teacher education in Taiwan over the past six decades has seen a suspension between the forces of government-controlled uniformity and program-based diversification. Due to a long period of strict centralized control and an emergence of program-based deregulation, the curriculum of teacher education programs in Taiwan has demonstrated a pattern of restricted diversity within a generally uniformed framework. Such a curriculum pattern reflects a compromised solution to the issue of how teacher quality should be pursued. As mentioned above, both approaches of program-based diversification and government-controlled regulation attempt to pursue teacher quality, yet through contrasting strategies. The former assumes that diversity and competition in the open market will inspire innovations and creativity and ensure the strongest and best to emerge; the latter argues that only through establishing uniformed standards by central authorities can teacher quality be achieved (Apple, 2001; Furlong et al., 2000).

These two seemingly conflicting ideologies are compromised in the Taiwanese case. On one hand, the government did establish a common structure and core courses to ensure a minimum level of quality in the process of teacher education; on the other hand, the programs did enjoy a certain degree of autonomy to offer a variety of courses to strengthen, refine and add on areas/topics ignored by the government standards and to produce graduates with diverse traits and specializations. In this way, a future teaching force equipped with a common set of core knowledge and some degree of diverse skills and strengths are produced, and in this way teacher quality may be ensured.

8. Recommendations

Based on the findings of the present study, the following five implications/suggestions could be made.

8.1 Releasing state control over curriculum

First of all, Taiwanese government is advised to release its control over teacher education curriculum. In the current Taiwanese system, the government has tightened the control over all aspects, including “input,” “process” and “output,” of teacher education and thus reduced the diversity of teacher education programs. However, international trend has shown that major countries such as the US, UK, Germany and Japan, tend to take a strict control over the “output” (licensure) but grant more diversity over the “input” (recruitment) and “process” (curriculum) of teacher education (Feiman-Nemser, 1990; Landman & Ozga, 1995; Lee, 2008; Liang, 2008; Popkewitz, 1995; Zeichner & Conklin, 2005). Each program may recruit and train students according to its specific goals and resources and the government takes charge to assure the quality of their graduates at the end point. In this way, diversity may flourish while quality could still be controlled (Lucas, 1999; Morris & Williamson, 2000; Tsai, 1997; Yang, 1999, 2006). Thus, it is recommended that Taiwanese governmental control over teacher education curriculum be lessened.

8.2 Enhancing program autonomy

Second, it is recommended that teacher education programs provide more program-specific courses to meet the program objectives and satisfy students' needs. This study found that while some programs did provide certain new and unique courses to tailor to faculty specialties and students' needs, the majority of the programs were still more apt to conforming to the state-mandated courses than to devising program-specific courses.

8.3 Filling gaps in course content areas

Furthermore, it is advisable for teacher education programs to examine the content areas especially neglected by the state-mandated courses and offer more courses in these areas in order to fill the gaps in curriculum and open new avenues to knowledge/dialogues not touched upon by the state courses to highlight their own special purposes and resources

8.4 Breaking the myth of normal universities

Fourth, it should be cautioned that the quality of teacher education programs should be judged by factual analysis, instead of commonly-held assumptions. This study found that in contrast to the commonly-held myths that normal universities, with its long tradition and vast resources in teacher education, should have provided the most abundant curriculum to their students; on the contrary, it is the non-normal academic and technological universities that have made effort to provide a richer and more diversified curriculum to their students. Thus, normal universities should be encouraged to offer more program-specific courses to their students. With their leading positions and abundant resources in the field of education, normal institutions should break away from the conformist traditional role to achieve more program autonomy.

8.5 Upgrading program scale

Lastly, it is advisable that program scale be upgraded. Our analysis found that in general college of education were able to provide more courses than departments of education and even more so than a single teacher education program. This is especially true with non-normal universities, when equipped with a comprehensive college of education, tend to provide a larger number of diversified courses to their students. Since scale and resources matter, upgrading of the scale is important to improve program diversity and autonomy.

References

- Apple, M. W. (1995). The politics of a national curriculum. In P. W. Cookson Jr. & B. Schneider (Eds.), *Transforming schools* (pp. 345-370). New York: Garland.
- Apple, M. W. (2000). Between neoliberalism and neoconservatism: Education and conservatism in a global context. In N. C. Burbules & C. A. Torres (Eds.), *Globalization and education: Critical perspectives* (pp. 57-77). London, UK: Routledge.
- Apple, M. W. (2001). Market, standards, teaching, and teacher education. *Journal of Teacher Education*, 52(3), 182-196.
- Blömeke, S. (2006). Globalization and educational reform in German teacher education. *International Journal of Educational Research*, 45, 315-324.
- Clark, D. L., & McNergney, R. F. (1990). Governance of teacher education. In W. R. Houston, M. Haberman, & J. P. Sikula (Eds.), *Handbook of research on teacher education* (pp. 101-117). London, UK: Collier Macmillan.
- Cochran-Smith, M., & Fries, K. (2005). Researching teacher education in changing times: Politics and paradigms. In M. Cochran-Smith & K. M. Zeichner (Eds.), *Studying teacher education: the report of the AERA panel on research and teacher education* (pp. 69-110). Mahwah, NJ: Lawrence Erlbaum Associates.
- Feiman-Nemser, S. (1990). Teacher preparation: Structural and conceptual alternatives. In W. R. Houston, M. Haberman, & J. P. Sikula (Eds.), *Handbook of research on teacher education*

(pp. 212-233). London: Collier Macmillan.

- Foshay, A. W. (2000). *The curriculum: purpose, substance, practice*. New York: Teachers College Press.
- Furlong, J., Barton, L., Miles, S., Whiting, C., & Whitty, G. (2000). *Teacher education in transition: Re-forming professionalism?* Buckingham, UK: Open University Press.
- Fwu, B. J. (1999). Who became teachers? Changes in the composition of Taiwanese teachers. [in Chinese.] *Proceedings of the National Science Council Part C: Humanities and Social Sciences*, 9(3), 377-397.
- Fwu, B. J., & Wang, H. H. (2002). From uniformity to diversification: Transformation of teacher education in pursuit of teacher quality in Taiwan from 1949 to 2000. *International Journal of Educational Development*, 22(2), 155-167.
- Gao, M. S. (1999). *The history of Chinese educational system (ZhongGuo JiaoYu ShiLun)*. [in Chinese.] Taipei, Taiwan: Lian-jing Bookstore.
- Guo, D. Y. (1997). A study of the social mobility of students in teachers' colleges (shi yuan sheng de she hui liu dong zhi yan jiu). [in Chinese.] *Proceedings of the National Science Council Part C: Humanities and Social Sciences*, 7(2), 181-197.
- Halstead, V. (2003). Teacher education in England: Analysing change through scenario thinking. *European Journal of Teacher Education*, 26(1), 63-75.
- Hill, D. (2006). Class, capital and education in this neoliberal and neoconservative period. *Information for Social Change*, 23, 11-35.
- Hill, D. (2007). Critical teacher education, new labour, and the global project of neoliberal capital. *Policy Futures in Education*, 5(2), 204-225.
- Hsieh, W. C. (2006). *Educational administration: Theory and cases*. Taipei, Taiwan: Wunan.
- Hsu, W. S. (2009). The current situation of the education of primary and junior high school teachers in Taiwan and the tactic of solving the problem. *Electronic Journal of Ming Chuan Education*, 1, 102-113.
- Huang, J. J. (2000). On Taiwan's education reform: A policy-oriented analysis. *Educational Policy Forum*, 3(1), 26-53.
- Kim, M. M., Andrews, R. L., & Carr, D. L. (2004). Traditional versus integrated preservice teacher education curriculum: A case study. *Journal of Teacher Education*, 55(4), 341-356.
- Landman, M., & Ozga, J. (1995). Teacher education policy in England. In M. B. Ginsburg & B. Lindsay (Eds.), *The political dimension in teacher education: Comparative perspectives on*

- policy formation, socialization and society* (pp. 22-39). London: Falmer Press.
- Lee, F. J. (2008). State centralization and market mechanisms: The teacher education reform in England and Wales (zhong iang ji quan yu jiao yu sh chang). [in Chinese.] *Journal of Educational Research and Development*, 4(1), 55-82.
- Lee, Y. H. (2001). *The history of teacher education in Taiwan (tai uan sh fan jiao yu sh)*. [in Chinese.] Taipei, Taiwan: Nantian Press.
- Liang, C. M. (2008). A study of operational mechanism of the role of state in Japan's teacher education reform (r ben sh z pei yu gai ge guo cheng guo jia jiao se yun zh tan tao). [in Chinese.] *Journal of Educational Research and Development*, 4(1), 1-26.
- Liang, S., & McClain, C. J. (1991). Teacher education. In D. C. Smith (Ed.), *The confucian continuum: Educational modernization in Taiwan* (pp. 277-316). New York: Praeger.
- Lin, H. F., Wang, H. L., & Teng, P. H. (2007). The current situation, policy and prospect of elementary and secondary teacher education in Taiwan. [in Chinese.] *Journal of Educational Research and Development*, 3(1), 57-80.
- Liou, M. J. (2005). The situation and review of Taiwan's teacher education (woguo shihzih peiyu zhi xiankuang yu jiantao). [in Chinese.] *Journal of school administration*, 39, 201-212.
- Lucas, C. J. (1999). *Teacher education in America: Reform agendas for the twenty-first century*. Retrieved August 12, 2009, from <http://books.google.com/books?id=XB5I3HRqcdAC&hl=zh-TW>
- Maandag, D. W., Deinum, J. F., Hofman, W. H. A., & Buitink, J. (2007). Teacher education in schools: An international comparison. *European Journal of Teacher Education*, 30(2), 151-173.
- Maxie, A. (2001). Developing early field experiences in a blended teacher education program: From policy to practice. *Teacher Education Quarterly*, Winter, 115-131.
- Ministry of Education [MOE]. (1957). *The third annals of Chinese education(5): Normal education (Di San Ci Zhong Guo Jiao Yu Nian Jian 5: Shi Fan Jiao Yu)*. [in Chinese.] Taipei, Taiwan: Zheng Zhong Bookstore.
- Ministry of Education. (1984). *The fifth annals of Chinese education (5): Normal education (Diwuci Zhongguo Jiaoyu Nianjian 5: Shifan Jiaoyu)*. [in Chinese.] Taipei, Taiwan: Zheng Zhong Bookstore.
- Ministry of Education. (1994). *Teacher education act* (Shizi Peiyu Fa). [in Chinese.] Taipei, Taiwan: Ministry of Education.

- Ministry of Education. (1996). *The sixth annals of Chinese education (5): Normal education* (Diliuci Zhongguo Jiaoyu Nianjian 5: Shifan Jiaoyu). [in Chinese.] Taipei, Taiwan: Ministry of Education.
- Ministry of Education. (2003). *Secondary pre-service teacher education courses, subjects, and credits* (zhong deng xue xiao jiao yu zhuan ie ke cheng ke mu ji xue fen). [in Chinese.] Taipei, Taiwan: Ministry of Education.
- Ministry of Education. (2004). *The examination principle of the application for establishing different majors of teacher education program in colleges and universities* (ge da xue xiao yuan shen qing she li ge lei ke jiao yu xue cheng shen cha yuan ze). [in Chinese.] Taipei, Taiwan: Ministry of Education.
- Ministry of Education. (2007). *Yearbook of teacher education statistics (shpei tongji nian jian)*. [in Chinese.] Taipei, Taiwan: Ministry of Education.
- Ministry of Education. (2008). *Yearbook of teacher education statistics (shpei tongjinian jian)*. [in Chinese.] Taipei, Taiwan: Ministry of Education.
- Morris, P., & Williamson, J. (Eds.). (2000). *Teacher education in the Asia-Pacific region: A comparative study*. New York : Falmer Press.
- Null, J. W. (2007). Curriculum for teachers: Four traditions within pedagogical philosophy. *Educational Studies*, 42(1), 43-63.
- Pai, H. F. (2003). Relations between the State and teacher preparation institutions in Taiwan: Since the mid-1980s (tai uan de zheng fu yu sh z pei yu ji gou guan xi zh tan tao: 1980 nian dai zhong qi zh jin de bian hua). [in Chinese.] *Journal of National Hsin Chu Teachers College*, 16, 39-67.
- Parkay, F. W., Anctil, E. J., & Hass, G. (Eds.). (2006). *Curriculum planning: A contemporary approach*. Boston: Pearson.
- Popkewitz, T. S. (1995). Teacher education, reform and the politics of knowledge in the United States. In M. B. Ginsburg & B. Lindsay (Eds.), *The political dimension in teacher education: Comparative perspectives on policy formation, socialization and society* (pp. 54-75). London: Falmer Press.
- Qiu, S. Q. (2005). The theories and reality of teacher education system. [in Chinese.] *Taiwan Education Review*, 631, 54-62.
- QTS standards. (n.d.) *Training and development agency for schools*. Retrieved August 12, 2009, from <http://www.tda.gov.uk/Recruit/thetrainingprocess/qualifiedteacherstatus/achievingqts>.

aspx

- Roth, R. A., & Piphon, C. (1990). Teacher education standards. In W. R. Houston, M. Haberman, & J. P. Sikula (Eds.), *Handbook of research on teacher education* (pp. 119-135). London, UK: Collier Macmillan.
- Terhart, E. (2004). Teacher-training reform. *European Education*, 36(1), 29-49.
- Tsai, C. H. (1997). *The research of teacher education reform in the United States (mei guo zhu peiyu gai ge yan jiu)*. [in Chinese.] Kaohsiung: Kaohsiung Fu-Wen Press.
- Tseng, C. Y., & Chang, C. F. (2005). A study of implementation of the teacher preparation law. [in Chinese.] *The journal of Chinese public administration*, 2, 109-119.
- Wang, H. H., & Fwu, B. J. (2007). In pursuit of teacher quality in diversity: A study of the selection mechanisms of new secondary teacher education programmes in Taiwan. *International Journal of Educational Development*, 27(2), 166-181.
- Wang, R. X. (2004). The reflection of the qualities of teacher profession: Introduction to NCATE and its relative organizations (jiao shi zhuan ye pin zhi zhi xing si: mei guo guo jia shi zi pei yu ren ke shen yi hui ji xiang guan zu zhi zhi jie shao). [in Chinese.] *Taiwan Education Review*, 625, 48-53.
- Wu, C. S. (2003). The past, present and future of teacher preparation law (shi zi pei yu fa guo qu xian zai yu wei lai). [in Chinese.] *Journal of Education Research*, 105, 27-43.
- Wu, C. S. (2006). The ideas and practice of teacher education (shi zi pei yu de li lun yu shi jian). [in Chinese.] *Journal of Educational Research and Development*, 2(1), 1-31.
- Wu, W. X. (1980). *A study of the normal education in Taiwan during the Japanese colonial period-teaching and conduct discipline. (ri ju shi qi zhi tai wan shi fan jiao yu-jiao xue yu xun yu)*. [in Chinese.] *Bulletin of Historical research*, 8, 251-312.
- Wu, W. D. (2006). The truth and myth of teacher education (shi zi pei yu de zheng si yu mi si). [in Chinese.] *Taiwan Education Review*, 638, 2-6.
- Xu, N. H. (1993). *The History of Taiwan Education (Tai Wan Jiao Yu Shi)*. [in Chinese.] Taipei, Taiwan: Shi da shu yuan.
- Yang, S. K. (1999). *Forms of knowledge and comparative education (zhishi xingshi yu bijiao jiaoyu)*. [in Chinese.] Taipei, Taiwan: Yang-Chih Book.
- Yang, S. K. (2006). State steering, market mechanisms and recent teacher education reform in Germany (guo jia guan li, sh chang ji zh yu de guo jin nian lai sh z pei yu zh gai ge). [in Chinese.] *Journal of Educational Research and Development*, 2(1), 119-144.

期刊徵稿：<http://www.edubook.com.tw/CallforPaper/BER/?f=oa>

高等教育出版：<http://www.edubook.com.tw/?f=oa>

高等教育知識庫：<http://www.ericdata.com/?f=oa>

- Yang, S. W., Chen, S. H., & Chiang, C. C. (2008). A study of the Japanese teacher education reform (ri ben jiao shi jiao yu gai ge zhi yan jiu). [in Chinese.] *Journal of Educational Research and Development*, 4(1), 27-54.
- Zeichner, K. M., & Conklin, H. G. (2005). Teacher education programs. In M. Cochran-Smith & K. M. Zeichner (Eds.), *Studying teacher education: The report of the AERA panel on research and teacher education* (pp. 645-736). Mahwah, NJ: Lawrence Erlbaum Associates.