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## A Review of Curriculum Study in Taiwan

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### Background and Development

Curriculum study is not only the foundation of curriculum development and innovation, but it could also serve as a watchdog over the quality of education. There is a close connection between curriculum study and the social context of a country. On the one hand, the outcomes of curriculum study may lead to social change and promote human qualities; on the other hand, the issues and approaches of curriculum study are also influenced by the sociopolitical situation.

The R.O.C. (Taiwan) government, established on Formosa Island in 1949, has been Westernized in its education system, regarding which there was never a lack of discussion or experimentation with the school curriculum. Yet not until the mid-1980s did the field of curriculum study appear in teacher education programs and in the top agenda of educational research. Indeed, as mentioned above, social change played a critical role.

### Social and Educational Background

*Social Background* Encompassed by an authoritarian political atmosphere, Taiwan's society has been underneath strict surveillance, regulation, and control. Education was merely considered an apparatus for implementing political policies and maintaining Taiwan as a stable state. In 1987, when martial law was lifted, new political parties and mass media emerged and contributed to Taiwan society's moving forward to the new epoch of a genuine democracy. Shortly after, in 1991, the government declared the termination of the law: the *Temporary Provisions Effective during the Period of National Mobilization for Suppression of the Communist Rebellion*. After decades of suppression, societal forces began to explode. Consequently, the debates and criticisms on political, cultural, historical, and educational issues that pushed forward the development of curriculum study flourished further in Taiwan. It is significant to note that when the Democratic Progres-

sive Party (DPP) defeated the Kuomintang (KMT) regime and became the ruling party for eight years (2000–2008), the political, social, and cultural transformation of Taiwan ensued. This became known as the Taiwanese localization-indigenization movement, a term used to emphasize the importance of a separate Taiwanese culture involving the teaching of the language, history, geography, arts, and culture of Taiwan from a Taiwan-centric perspective, as well as the use of local language or dialect in the broadcast media.

Taiwan's well-known and rapid economic growth in the 1960s also raised family income. The notions of "education as investment" and "education as consumption" that were to widely circulate among the public were gradually forming. Under the influence of such notions, parents willing to invest in educating their children and to consume education as a means of promoting quality of life started to appeal for more opportunities for their children to enter high schools and universities. Consequently, it caused a great expansion in capacity at the secondary and tertiary levels of schooling. Students were thereby able to climb higher up the educational ladder; following the increasing heterogeneity of the student population, curriculum adaptation was even more urgently requested. In such a case, many research institutes related to curriculum and instruction were then quickly established to meet the desperate needs of curriculum development and innovation. However, the migrations of Taiwanese industries to China and the global recession have affected Taiwan's economic development in *the latest decade and have widened the gap between the rich and the poor*.

In the meantime, the Taiwanese political climate and economic situation were changing. The transition from the traditional society to a new one had been proceeding fur- tively, and this gave rise to some social problems. Some characteristics about this new society have appeared, as follows: (a) population growth decreased, the percentage of the aged rose, an extremely low birth rate emerged,

and there was a rapid increase in the numbers of children in Taiwan's school system from foreign brides, primarily from China, Vietnam, and Indonesia; (b) family population shrank and the divorce rate during this time gradually increased; (c) consciousness of gender equality was suddenly awakened with its importance realized; (d) old values and traditions were deconstructed, and some new values began to emerge; (e) international exchanges happened frequently under the formation of globalization; (f) science and technology progressed rapidly, and computers and communication tools became very popular; and (g) Taiwan's ratification of the two United Nations human rights Covenants in 2009 brought Taiwan more into line with the international community (Hwang, Yu, and Chang, 1993; Ministry of Education, 2006; Ministry of the Interior, 2010; Taiwan Study Center /NCCU, 2010).

*Educational Background* After the lifting of Martial Law and under the influence of social change, Taiwan's society became much more democratic and liberal. People constantly demanded further participation in educational reforms. This condition accelerated the pace of reform. The 1990s became a critical age for rapid Taiwanese educational reforms. Not only was decentralization of educational policy finally put into effect, but autonomy, deregulation, and localization of education also took place.

First, the government enacted the University Law and empowered universities with curriculum autonomy; second, the local educational authorities set some projects (most importantly, school-based curriculum experiments) under local autonomy. Soon, textbook writing and publishing were open to nongovernmental publishers, and the right of textbook selection was returned from government control to the schools and teachers. Moreover, the revised curriculum standards of elementary schools (1993), junior high schools (1994), senior high schools (1996) and vocational schools (1998) began, thereafter, to emphasize flexibility, localization, and real life application. Additionally, the Nine-year Articulated Curriculum Guideline, enacted in 1998 and replacing the curriculum standards of elementary schools and junior high schools in 2001, was also undergoing an essential change in underlining (a) the articulation of elementary and junior high school curriculums, (b) the spirit of school-based curriculum, and (c) curriculum integration. Obviously, the overall tendency of educational reforms, having created a widely different academic environment, is, so to speak, an important element that will determine future curriculum study in Taiwan.

Facing the recent decline in student population due to low birth rate, quality in education has been emphasized; determining how to make the curriculum more adaptive and individualized for each student has become a hot issue in Taiwan curriculum study. The results from international comparative assessments, such as the Program for International Student Assessment (PISA), the Progress in International Reading Literacy Study (PIRLS), and the

Trends in International Mathematics and Science Study (TIMSS) concerning the educational productivity and effectiveness of different countries have sparked much interest. Therefore, the researchers in curriculum study also try to explore and present initial findings from an analysis of curricula of high-performing countries in order to develop the National Curriculum. In particular, issues of breadth, specificity, and challenge within each subject are examined in detail to assess what this might tell us in the context of devising a new National Curriculum which measures up to the highest international standards.

*The Development of Taiwanese Curriculum Study* According to the distinct aims and emphases of curriculum study that were influenced by the social and educational changes, Taiwan's history of curriculum study could be divided into the following three periods.

*The Period of Orientation Toward National Policy and Practicality: 1949 to the Mid-1980s* Curriculum study in this period was mainly affected by external elements, especially political factors. Curriculum study was focused on the introduction of principles and theories of curriculum design, which centered on formal school curriculum (i.e., national curriculum standards and textbooks).

During this period, school curriculum was thoroughly constructed by the government, along with curriculum specialists. The major issues of curriculum study were how to construct better curriculum standards, how to implement them efficiently in schools, and how to deliver them seamlessly to students. In addition, the inquiries into curriculum thoughts at that time were subject to the field of educational philosophy. Moreover, in terms of research, government officials and curricular specialists were leading researchers, and the research methods frequently adopted then were mainly philosophical, historical, comparative, or surveys. Issues related to national policies or those more pragmatically oriented were put as top priorities into curriculum study.

There were two big achievements in this period: translation and introduction of foreign curriculum study (Chang, 1968; Chinese Education Association, 1974; Chu, 1959; Huang, 1981; Sun, 1958, 1959), and investigation into consequences and problems of curricular implementation (Department of Education, 1972, 1976; Liou, 1983).

*The Period of Explicating and Criticizing: The Mid-1980s to the Mid-1990s* In this period, the domain of curriculum study began to expand vitally due to a relief from political control and an increase in the number of curriculum researchers (including the overseas-educated ones). Neither the inquiries about subject curriculum knowledge nor the technique in curriculum development was regarded as the hottest study topic. The main objectives of study were to react against the long-term political, cultural, and social suppression.

Then the concerns of curriculum study moved toward the relationship between curriculum and social environment, especially the ideology in textbook content across the Taiwan Strait, the operation of extra activities, and the hidden curriculum in Taiwan (Chen, 1985; Hwang, 1993; Ou, 1990). The methods of curriculum study were emphasizing theoretical analysis and document analysis, as well as in-depth interview and observation.

The critical thoughts of curriculum from Western scholars, such as Franklin Bobbitt, Ralph Tyler, Michael Apple, William Pinar, Herbert Kliebard, Elliot Eisner, John Goodlad, Henry Giroux, Michael Young, Basil Bernstein, Paulo Freire, and so on, also became an important part of curriculum study. This period was characterized as the “explicating and criticizing” period.

As seen in the research papers, the major accomplishments of this period were primarily reached by the novice researchers who had just graduated from university graduate schools (e.g., Chen, 1993; Chien, 1992; Chou, 1994, 1999; Chung, 1994; Huang, 1988; Kau, 1992; Lee, 1989; Lee, 1991; Tsai, 1992; Wang, 1992).

*The Period of Localization: The Mid-1990s to the Present* First, although the politics and culture of school curriculum have received sustained attention, the migration of curriculum theory was not restricted to only the United States-based Western scholars or to the educational domain. McLaren (e.g., Huang, 2006), Giddens (e.g., Huang, 2007), Queer Theory (e.g., Jan, 2008), Banks and McCarthy (e.g., Ou, 2009), and Merleau-Ponty (e.g., Chen, 2009) presented and inspired the field of curriculum development. Moreover, the research paradigm embraced by the circle of Taiwan curriculum researchers has shifted. Curriculum is teaching material, but also the interaction of all the forces, both hidden and explicit, that shape learning, including curriculum as political text, phenomenological text, autobiographical text, aesthetic text, etc. (Pinar, Reynolds, Slattery, and Taubman, 2002). In particular, after 2000, more researchers have focused on curriculum aesthetic inquiry. They promote aesthetic inquiry as an alternative approach to building curriculum theory as well as a guideline for curriculum practice in Taiwan (Chen, 2005; Chen and Chang, 2008; Chou, 2006; Lee, 2002; Ou, Chen, Chou, and Fan, 2009).

Following the reconceptualization of curriculum, the main target of Taiwan curriculum research is how to localize the curriculum theories, which are borrowed from outside this country. In addition, teachers’ roles were gradually considered to be that of curriculum makers or even researchers. The specific emphases in this stage on curriculum study were: (a) teachers’ curriculum decision making, (b) integration and differentiation of curriculum, (c) division of labor in curriculum development at each decision-making level, and (d) curriculum implementation and evaluation requested by curriculum reform. The following text will explore these aspects in detail.

Since the 1980s, objective positivism has been gradually losing influence over the methodology of curriculum study in Taiwan. Educational researchers are now guided by qualitative and action research in their study of curriculum, with their intensive adoption occurring in this period. To make thorough inquiries into operating curriculum, especially while dealing with the microcosmic phenomenon of school curriculum, these approaches, having been extensively used, making a great contribution to curriculum study. The approaches are also broadly employed in discussions of various topics, ranging from the contents of textbooks to the implementation of curriculum and the use of textbooks in the classroom (Cheng, 2000; Ku, Lin, and Chu, 1999; Wang, 1996).

In the last decade, curriculum researchers have favored the methods of autobiographic inquiry, auto-ethnography, and narrative inquiry, and have devoted themselves to individual teacher’s curriculum practices (e.g., Chou, 2004; Ho, 2009; Hung, 2007; T. Y. Lin, 2004; Ou, 2004) or to the scholar’s curriculum thoughts (e.g., Chang, 2008).

### **The Tendency of Curriculum Study in Taiwan**

All social and educational changes since the late 1980s led Taiwan’s curriculum study to a more diverse state. In the first place, the analysis of hidden curriculum, already recognized as existing in schools, sparked the contestation against the Han-centered and monocultural educational environment; then it shifted the concern of curriculum study to the approach of curriculum study. Accordingly, this resulted in the founding of new organizations related to curriculum study.

*The Analysis of Political Ideology in Curriculum* The reviewing of ideologies in curriculum was a key issue of curriculum study in Taiwan after the lifting of Martial Law. As shown in a good deal of extensive analyses, the status and contents of subjects, including Scout Education, Military Training, Three Principles of the People and Thoughts of Dr. Sun Yat-Sen (the founding father of the Republic of China), have never before been critically challenged. It is claimed that this somewhat politically related teaching subject was designed to imbue students with the KMT-led (the dominant political party, 1949-2000) governmental ideology, with a view to maintaining its stake and privilege, and to control its ruled people. Incidentally, the less politically related subjects, like Chinese, social studies, geography, music, and so on, have also been under investigation.

In addition, the former ways, through curriculum and instruction, to implement the kinds of education such as Japanese decolonization, patriotism, and anticommunism, namely, those that intended to strengthen the political control of government, were likewise being reexamined during this period (Ou, 1990; Tseng, 1994).



**The Inquiry of Emerging Issues in Curriculum Study**  
*Multicultural Curriculum and Culturally Responsive Curriculum* Aroused by the awakening of local consciousness, as well as by the controversy of mainstream cultures and values during social transformation, multicultural curriculum has undoubtedly become one of the several emerging issues in Taiwan's curriculum study. The treatises and studies on multicultural curriculum are blooming. Curriculum study, particularly dealing with the multicultural issues, has come to the forefront.

At present, how to design models for multicultural curriculum from kindergarten to university, how to select and organize multicultural curriculum contents or activities, and identifying criteria of multicultural curriculum evaluation are all on the agenda of curriculum study (see Chen, 1999; Chuang, 1998; Hwang, 1995c; Wu, 2000).

In 1989, the Democratic Progressive Party (DPP) won a partial victory over the election of county magistrates and city mayors. By taking this opportunity, some DPP magistrates and mayors started to challenge the long-term mono-language policy, which had been brought into force by KMT. They undertook the new language policy of resurrecting the mother-tongue by means of issuing an executive order to all of their subordinate schools, compiling supplementary textbooks and mandating native languages to be taught in schools. Hereby, the previous Mandarin Policy, to which public opinion had long been opposed, abruptly changed its course. It was regarded as an action of educational localization and has received favorable opinion from all circles of society. As a result, the central government also shifted its exclusive language policy and adopted native language learning into the revised curriculum standard of elementary schools of 1994 and the revised curriculum standard of junior high schools of 1996.

Meanwhile, this movement also pushed forward the issues of curriculum study regarding "local studies" content, including the analyses of its teaching materials and curriculum decision making and implementation (such as Huang, 1994; Lin, 1998). In Taiwan, the issue of local studies education is always subject to political struggles; educational issues related to local studies content are commonly complicated, politicized, and at times even perverted, especially while taking the influence of localism into account. Owing to this, the involvement, causes of problems, and improvement of local studies education, including mother-tongue language teaching, have proved to be the important issues in contemporary curriculum study. And these efforts contribute to the local culture and the mother-tongue language.

The curriculum for aboriginals is another issue and tendency of curriculum study for three reasons: (a) removal of political pressure, (b) introduction of multicultural education thought, and (c) aboriginal people's petition for the school curriculum to be more responsive to the multiethnic demography of society. As the multicultural curriculum was put into implementation, the controversies regarding this

issue were: (a) what counts as worthy knowledge, (b) how to organize pertinent subject matter into textbooks; and (c) to whom it should be taught. All those questions are currently listed in the agenda of curriculum study in Taiwan.

Gender equity in education is also getting more attention, as shown in the works of Awakening Foundation (1988) and Hsieh (1990). The issues surrounding gender rights by researchers now aim to eliminate sexual stereotypes and prejudices in school textbooks. Arguably, determining how to reconstruct the whole school curriculum along with the issue of gender equity is no doubt another important topic in the present curriculum study (Hwang, 1995b; Lee, 1993).

The recent increase in the number of children born from international marriages has led to an escalation in the proportion of minority students in the public education system, and determining how to implement a culturally relevant pedagogy in a multicultural environment has emerged as a new issue in school practices. Based on the diverse ethnic groups in Taiwan society, the *culturally responsive education* and its curriculum research are important considerations.

*ii. Emerging Social Issues* Various emerging issues have thrived recently in Taiwan. These emerging issues include environmental protection, sex education, parents' education, human rights education, drug education, information education, moral education, career education, marine education, etc. Various interest groups strongly ask that those issues be included in formal curriculum of elementary, junior high, and senior high schools, while the practitioners and academia still have to confront the existing problems of heavier teaching loads with limited instruction/learning time.

*iii. Curriculum Control and the Politics of Curriculum Reform* Amid the deregulation of curriculum policy in Taiwan, determining how to share the responsibilities of curriculum control among the central government, local authorities, schools, and teachers, and what is the most appropriate model of curriculum development for each level of schooling are the problems that curriculum researchers often contemplate (such as Kau, 1998, 1999; Tseng, 2000). As the changes to the school-based curriculum are initiated, the distribution of jurisdiction and operating mechanisms relating to curricula at the central, local, and school levels becomes an impending issue.

The politics of curriculum reform have also been incorporated into the field of curriculum study as a weighted issue in Taiwan. As time passes, the process of curriculum decision making (see the analyses of S.F. Chang, 1994; Hung, 2000; Yo, 1992) and the politics of curriculum reform (Hwang, 1995a; C.L. Chang, 2002; Chang, 2011) are widely discussed; however, during the latest decade, the launching of several of the government-led curriculum reforms has met with little success.



There have been several vital changes in curriculum since the 1980s in Taiwan. The results of curriculum implementation, the effects of curriculum reform, and the attitudes of educators toward curriculum reforms are ongoing issues. A number of researchers focus on studying these issues (see Wang, 2000).

*iv. Textbook Censorship and Selection* Previously, due to centralization policy and practice, the highest authority of education, namely, the Ministry of Education (MOE), was in charge of all curriculum decision making. Previously the MOE, in conjunction with specialists, usually took charge of developing the curriculum standards on all phases of education. Later, based on the standards, the related official organizations engaged in textbook compilation helped with the compilation, publication, and issuing of official textbooks with the titles of *National Edition* or *Unified Edition*. Schools must use these specific editions exclusively. Therefore, the school curriculum knowledge has been monopolized by the government.

Several questions arise from this situation: (a) How do the official textbooks interplay with a society full of ideologies and values? (b) In what way do these one-dimensional textbooks control teachers' teaching, define school curriculum, and restrict students' learning experiences? and (c) What will be the relationship between examinations and textbooks? All of these are important topics in the field of curriculum study.

However, beginning in 1989, the government allowed private publishing companies to participate in textbook compilation. Schoolteachers, therefore, gained access to textbook writing and selection. Motivated by this new policy's potential profit, publishers soon started to invite schoolteachers to join their concerted efforts to restructure the previous, unified textbook content. Nonetheless, the investigation of how to set up a feasible textbook assessment system, what should be the reviewing standards, how the diverse content affects teaching and learning, and what constitutes proper textbook selection have been under close investigation (ACI, 1997; C.F. Chang, 1994; Chuang, 1991; Hwang, et al., 1994). Textbook evaluation also becomes a very important research topic for teachers, parents, students, and publishers. Several textbook evaluation projects have been conducted by the Association for Curriculum and Instruction, Taiwan, ROC (ACI) (ACI, 2004a, 2004b, 2005).

The textbook policy has resulted in new problems that need to be resolved. First, with the demands of high school entrance examinations and as textbooks and related materials are becoming more extensive, many pupils and their parents cannot afford the increasing costs, particularly in the recent world economic meltdown. Second, as the textbook publishers compete vehemently to win the school textbook adoption market, they provide abundant materials for teachers to use in their classrooms, which, in a way, inhibits teachers' teaching abilities and thereby standardizes teacher instruction. Third, the researching,

editing, revising, experimenting, marketing, adopting, utilizing, evaluating, and improving of textbooks and related materials are very important themes for researchers to study (C.F. Chang, 1994; Hwang, 2005a; Lin 1997).

*v. Curriculum Experimentation* Encouraged by the trend of curriculum autonomy and curriculum reform, the local education authorities have given impetus to various curriculum experiments, which were characterized as school-based curriculum, open education, and curriculum integration.

Among the three, curriculum integration aims to improve school curriculum and to overcome the problems of over-divided subjects and disconnected contents. Based on the school-based plans, the urge for schools to invoke more autonomy in reforming and developing programs by themselves calls for schools' reflecting on their own conditions and catering to each student's specific needs. The directions of reform request reestablishing national key competency standards and implementing curriculum deregulation deviate from the traditionally centralized education in Taiwan. However, in dealing with national key competency standards, not only is the pilot test necessary but also further study is essential. Currently, how to operate the School-based Curriculum Development (SBCD) and curriculum integration are two significant issues (Lin, 1998; Tsai, 2001; Yeh, 2000).

*(IV) The Establishment of Numerous Institutes for Curriculum Study* Curriculum study could provide a sound foundation for action and evaluation when implementing curriculum reforms. During these years, following constant curriculum reforms, considerable quantities of forums, research institutes, and professional associations related to curriculum study in Taiwan have been created.

Now there are several institutes or centers of curriculum and instruction grounded in universities. They not only conduct curriculum research, but also train researchers who later devote themselves to the field of Taiwanese curriculum study. In 1996, the Association for Curriculum and Instruction (ACI, Taiwan, R.O.C), a national and nongovernmental academic organization, was founded by a group of scholars and educators concerned with the development of Taiwan's curriculum field. ACI not only publishes *The Curriculum and Instruction Quarterly*, first published in 1998, but is also the only learned and most momentous journal that focuses on curricular issues in Taiwan. Other dedicated agencies include: the Institute of Multicultural Education, the Institute of Ethnic Relationship, the Center for Educational Research, the Center for Research in Curriculum and Instruction, the Center for Local Studies Education, and the Center for the Aboriginal Education. Moreover, various committees concerned with gender equity education, aboriginal education, and so forth, have also been established at schools and universities and in government offices.

### III Pending Issues for Research

In a comprehensive survey of Taiwanese curriculum study for the past half century, there are patently manifold attainments. First, the field of curriculum has taken root in pedagogy and has proven to be an important part of it. Second, the research population has increased. Third, the accumulative outcomes of studies, including monographs, research reports, theses, periodicals, and so forth, are fruitful. This indeed shows that curriculum study is a powerful and significant field of educational research. Fourth, the different kinds of organizations that advance curriculum study and train researchers have been built up nationwide. Fifth, curriculum study and curriculum reform are now combined and are dealt with as a whole. Furthermore, researchers are no longer ivory-towered; they have become more and more influential over practice. However, there are still some pending issues in need of exploration when we review the development of Taiwanese curriculum study.

**(I) The Range of Curriculum Reform** Curriculum reform has taken place several times in Taiwan since 1949, and each time the range of reform was controversial. As we know, the range of reform involves debatable philosophical thinking. Some argue that only large-scale curriculum reform could bring on a thorough and fundamental success, whereas the disinclination of doing so only safeguards the status quo against advantageous change. What is more, educators previously resisted large-scale reforms due to their conservative attitudes, and they were often inclined to scale down a reform's ideals. Therefore, reformers often address proposals in a more radical way to hold the bottom-line while bargaining with educators. Yet others who stand for small-scale reform believe it is evolution, not revolution that could avoid incoherent reform and could provide the time needed to take deliberate action. The small-range change is more acceptable by those people involved.

In essence, both of these approaches of reform are reasonable, and determining how to choose the most appropriate one depends on the social situation and claims of the curriculum reform. Definitely, making the right decisions is not by the intuition of the decision maker, but by that information provided by the curriculum research.

**(II) The Deregulation of Curriculum and the Teachers' Role in Curriculum Development** Since 1949, there has been a nationally unified curriculum standard used to regulate and implement entrance examinations. However, after the lifting of Martial Law, deregulation in education has become an imperative.

Under the textbook reform policy, teachers should play roles that are more important in effectively interpreting and transforming curriculum (Hwang, 2010); however, they lack adequate training to do so. They continue to view the contents of textbooks, which students have to memorize, as the most important aspect of curriculum.

As the curriculum elasticity is magnifying, concerns such as teachers' competencies of designing curriculum, curriculum evaluation system, and other supplemental measures have been installed. Whether curriculum autonomy is implemented with responsibility, with teachers actively involved, is the interest of curriculum study (see C.S. Chang, 1994; C.Y. Chang, 2002; Chen, 2000; Chou, 1996; Lin, 1997; P.S. Lin, 2004; Pung, 1999).

**(III) School-Based Curriculum Development** The curriculum autonomy of schools has now become a priority in curriculum reform, and its implementation mainly emphasizes school-based curriculum development (SBCD), termed as *grassroots reform*. Yet, with the advance of the SBCD, some misunderstandings and panic among teachers and parents has arisen. Some are under the misconception that under the SBCD, teachers are solely responsible for the construction of all teaching materials (e.g., textbooks) and the development of modified school courses. For the time being, how to fulfill the SBCD concept, how to maintain educational quality, and how to justify educational equity are the follow-up issues of curriculum study (Chang, 1999; Lin, 1999).

**(IV) Emerging Curricula** With regard to social transition, there are some emerging issues like environmental protection, human rights, career planning, and so on, to which our school system needs to respond urgently because they contain important knowledge for cultivating good citizens (Hwang, 2005b).

As issues emerge, some questions require further study. They include the limited capacity of school curriculum and the knowledge of attending to these emerging curricula. Therefore, determining how to define emerging issues and evaluate their imperatives for inclusion into the school curriculum, and what is the best approach for curriculum development regarding emerging issues in elementary and junior high schools requires further investigation.

**(V) Curriculum Differentiation and Curriculum Integration** "Teach what to whom" is the key question about curriculum design. In our view, curriculum designers should honor two principles: education equity and adaptive development. The former, focusing on the common curriculum, aims at providing students with common experiences; and the latter, stressing the differentiated curricula, points to providing opportunities for each individual student to develop his or her potential.

We should understand that carrying out the principles is quite difficult, and bringing them into practice can even be painful. For example, we argue that special needs students should return to the mainstream while hoping that the curriculum differentiation could serve as a mechanism in providing adaptive teaching. Nevertheless, when, what, and how in terms of differentiation are the tough questions that need to be resolved.

Curriculum integration at the phase of compulsory education has been an important trend in Taiwan. Nevertheless, it is not only a complicated concept, but also a difficult task. Problems of implementation, exacerbated by resistant educators who have only vague concepts about curriculum integration, are the focus of current curriculum research.

**(VI) Localization and Internationalization** Since the lifting of Martial Law in 1987, the notion of whether the indigenous people in Taiwan hold supremacy has been critically challenged. This contributed to Taiwanese indigenous people striving to return to their native culture, a legitimate status in school curricula. As we can see, there are several new teaching subjects related to local studies and mother-tongue language teaching being added into school curricula.

However, there are still a few issues to address. First, although the addition of new subjects is a meaningful move, the source of qualified teachers is another question. Second, because the content of local culture is so multifarious, including many detached courses (e.g., history, geography, art, science, social studies, language, etc.), the already heavy learning load becomes even heavier, making these courses hard to integrate with other former courses and giving doubt to this new policy.

In the age of globalization, curriculum study on foreign language teaching has also become another urgent issue. In response to internationalization and globalization, foreign language teaching is expanding its scope in English teaching from the high school level down to the elementary school level, and the learning of a second foreign language has been added as an elective into the junior high school curriculum. However, finding out how to make the school curriculum more responsive to both localization and globalization is also a difficult challenge for curriculum researchers.

## VI Conclusion

Curriculum study is evolving, having accumulated and localized some outcomes after many endeavors to study, emulate, follow, and join the developed countries' curriculum studies. Facing a culturally diverse society, a rapidly changing economy, and a globalized environment, curriculum research in Taiwan has struggled with many challenges.

While envisaging the future, curriculum study in Taiwan still needs to: (a) establish more responsible research organizations in charge of assorted duties respectively at the national, local, and school levels; (b) link up the efforts of existing institutes, schools, and nongovernmental agencies; (c) invite many more experts for further international and interdisciplinary collaboration; and (d) form systemic and integrated research by way of concerted teamwork. The task of curriculum study belongs to not only learned

scholars, but also to teachers. The aim of curriculum study is to establish theory and improve practice.

The curriculum field needs systematic and long-term studies to support sustainable curriculum development. Appropriate curriculum decision making is necessary for effective teaching and learning, and sufficient annual budgets need to be provided for curriculum research and improvement in schools and universities. Central and local government support is also urgently needed. Since it is important for schools and universities to prepare high quality human power for society, they need more support from industries. Curriculum decision making is a highly value-oriented endeavor, which needs objective examination of research results rather than political intervention. Determining how to create an appropriate mechanism for high quality curriculum decision making will become a very challenging research theme for Taiwan's curriculum researchers.

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