Chapter 26

FOUR-DIMENSIONAL MODELING: A TOOL FOR IMPLEMENTING THE ARTS EDUCATION ACT IN MUSIC EDUCATION AT A SCHOOL IN TAIWAN

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ABSTRACT

In this paper, the merits of using Cooper, Fusarelli, and Randall’s (2004) four-dimensional model as a tool for evaluating policy making when implementing the educational policies for arts education in Taiwan are explored. In 1997, the Arts Education Act directed the Ministry of Education (2000) to implement teaching art theory and techniques at schools, carry out artistic research and creation, and cultivate a diverse group of arts professionals. The reauthorization of the Act in 2000 as the Arts Education Act of 2000 (AEA) mandated that the aptitudes and strengths of gifted students be taken into account and follow the model of the Special Education Project (Ministry of Education, Taiwan, 2013). The evaluation methodology outlined by Cooper et al. (2004) is structured into a four-dimensional framework, namely, normative, structural, constitutive, and technical, and applied to the policy implementation process. The purpose is to show how the model can be applied to evaluate the implementation of policy using the case of implementing the Arts Education Law at the Tainan University of Technology, Taiwan. Each dimension is applied to analyze the implementation of the AEA policies at the TUT, and in particular, in music education. Application of the model is shown to be beneficial in so much as it provides a means for reflecting on policy implementation and a language through which educational policy in the arts might be constructively developed.

Keywords: educational policy, integrative change, policy analysis.

1. INTRODUCTION

Education in the arts is at the core of developing a knowledge economy for the Arts Education Act (AEA) of 2000. The AEA outlines a vision for how arts education might transform the cultural arts industry. The rationale for the Act is based on claims that current arts education practices in Taiwan lack the capacity to support the changes required to raise the standards of teaching materials and methods that would yield increased effectiveness and efficiency. The AEA explains that effective implementations of policy are central to the demands of arts training courses and will be even more necessary with the advent of globalization. The AEA asserts that the elements that constitute effective training formats can be divided into professional arts education offered at schools, general arts education offered at schools, and arts education training offered to the public.

Many changes to music education programs and practices have occurred in response to the various policies promoted by the AEA (Kos, 2010). Kos (2010) noted that scholars in music education such as Hope (2004) and Jones (2008, 2009) have called for increased attention to policy studies. Policies can be useful tools for effecting change (Morse & Struyk, 2006), but policy analysis, which shapes and informs policy recommendations, has not yet been widely employed by music education scholars who have called for widespread changes to curricular content and pedagogical approaches.
One of the most notable changes to music education programs and practices has been to the quality of music programs in academically selective contexts and the perceptions of students regarding their levels of challenge and engagement in classroom music lessons (Clarke & Rowley, 2008). In 1997, the Arts Education Act, reauthorized in 2000 as the AEA, directed the Ministry of Education in Taiwan to implement teaching art theory and techniques at schools, carry out artistic research and creation, and cultivate a diverse group of arts professionals. In addition, the AEA authorized the Ministry of Education to provide states with financial assistance in their education programs and designated academically selective contexts to support the learning needs of students with appropriate guidance and stimulation (Betts & Neihart, 1988; Gross, 2000).

The policies for music education in the national curriculum until 2000 were based on the Arts Education Law from 1997. Policy amendments in 2000 encouraged significant changes in special education support systems to include its effect on students and involved implementing a single-track educational system after receiving approval from the required administrative authority for arts education (Chang, 2006). The AEA allows schools to provide special classes for students with artistic talents or inclinations, such as arts, music, and dance. Providing special classes for gifted children, however, raises issues with respect to curriculum and assessment, or the setting of standards. The basic elements of music—harmony, melody, rhythm, and tone quality or timbre—ensure music appreciation as a question of personal taste, so evaluation of a work of music lends itself to subjectivity and challenges the attempt to set standards. In the setting of standards, it is important to the quality of music programs that personal opinions not interfere with the decisions of educational experts working within the school system to construct educational policy (Betts & Neihart, 1988). Furthermore, it is critical that the quality and effectiveness of music teaching and learning experiences maintain alignment with the appropriate music programs and the quality of music programs intended by the AEA.

The demand that new policies be implemented and challenges with respect to setting objective standards in arts education provided an opportunity to explore the usefulness of Cooper, Fusarelli, and Randall’s (2004) four-dimensional model for policy change as a tool for evaluating policy making when implementing educational policies for music education at the Tainan University of Technology (TUT) in Taiwan.

2. STATEMENT OF THE PROBLEM

The problem motivating the need to reflect on policy making and the application of Cooper et al.’s (2004) model is that existing “school music programs do not prepare students to engage musically in today’s society” (Kos, 2010, p. 98), a policy required by the AEA of 2000. In the USA, concerns have been expressed about the lack of higher education music education programs and practices in response policies, for example, the Goals 2000: Educate America Act of 1994 (Ohanian, 2000) and the No Child Left Behind Act of 2001 (Elpus, 2014). These policies clarify state laws governing graduation requirements and local school authorities’ decisions about school curriculum (Kos, 2010). In Taiwan, the emphasis of the legislation is on locating arts education in national concerns, which suggests that existing teaching strategies and curriculum, arts education powers, and life aesthetics will need to be integrated into the fullness of and arts education as per governmental policy.

The specific problem in Taiwan is that little attention has been paid to the social context of music and music education. Music education does not reflect the needs and cultures of music students and their communities. The lack of musical skills and knowledge
within communities illustrates a dearth of people in Taiwanese society that produce and consume music because they are unable to relate to music. This integrated research approach will involve applying Cooper et al. ’s model to music education at the TUT in order to examine the usefulness of the model for evaluating the policy making process.

3. PURPOSE OF STUDY

The four dimensions of policy theory outlined by Cooper et al. (2004) is applied as a conceptual framework to assess the implementation of the Arts Education Law in professional arts education, and more particularly, music education, at the Tainan university of Technology in Taiwan. In the course of assessing practices, including curriculum and instruction, the need for evaluating the techniques applied to improve educational effectiveness was emphasized. The goal of the policy-making evaluation was to synthesize accountability trends, support curriculum integration needs, and make policy evaluation possible, thereby promoting the goal of improving cultural standards in Arts Special Education. The goal of this paper is to assess the merits of applying Cooper et al.’s (2004) four-dimensional tool for evaluating policy making to the policy implementation of the demands of the AEA.

4. IMPLICATIONS OF THE ARTS EDUCATION ACT

Special education programs are available for individuals with learning or other disabilities and for children demonstrating strong abilities in mathematics or the sciences, as well as for talented students who excel in the fine arts, performing arts, or sports (Executive Yuan, 2014). Education policy is shifting toward recognition of abilities beyond traditional academic gifts in Taiwan (Gao, 2010). The TUT provides arts education programs, which are now divided into the three disciplines of music, dance and fine art. This philosophy is supported by the AEA of 2000, which allows schools to provide special classes for students with artistic talents or inclinations. In the past, schools could choose to allocate dedicated classes to these students or educate them separately within regular classes. Recent revisions to the Act, however, specify that elementary and junior high schools can no longer offer dedicated special classes to gifted students. This could allow schools to form classes grouping fine art, drama, dance or music students and receive funding for the classes. It is very important for art students to spend time together with their peers as part of their training. Music is not just about playing alone, but also about playing with other musicians.

These provisions are important underpinnings for the AEA. The AEA does not mandate that all students with artistic talents or inclinations not be educated in general education classrooms, but the law does premise that as educational needs require, universities, colleges, junior colleges, and senior high schools for arts education implement a single-track educational system after receiving approval from the designated administrative authority for arts education.

5. CONCEPTUAL FRAMEWORK

Policymaking is not entirely a bureaucratic add-on. In their book Better Policies, Better Schools, Cooper et al. (2004) asserted as follows:
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Systems of and approaches to educational governance will always remain topics of controversy and contention for two basic reasons. First, too much is at stake with educational decisions in terms of individual development, socialization, and societal norms. Second, the nature of education in both its content and access is inherently political and permeated with fundamental values (p. 157).

Drawing attention to the importance of integrating learning through an Arts Special Education program is not a new. Eisner (1985) claimed John Dewey (1859-1952) mentioned how curriculum should be “interconnected and interdependent” (Kieffer, 1997, p. 14). It makes sense to use Cooper et al.’s (2004) four dimensions (the normative, structural, constitutive, and technical) of policy theory as a conceptual framework to evaluate the curriculum integration process of the Arts Special Education program in Taiwan. While the professional arts education offered by the TUT’s seven-year program (established in 2001) for music students reflects only one community of students from high school who moved directly to a bachelor’s degree for academically and artistically talented musicians among 91 higher technological and vocational education institutions in Taiwan, it is anticipated that using the TUT as a case study and applying the designated conceptual framework to its policy decisions would make an important contribution to curriculum integration for Arts Special Education. The analysis is a pragmatic approach and means for providing feedback about the evaluation of policy making for arts special education programs in a particular context.

6. HISTORY OF ARTS SPECIAL EDUCATION POLICY

Art represents humanity’s dreams, traditions, and cultures. Ansalone (2004) asserted, “Education has always held the promise of upward social mobility, economic stability and equality” (p. 37). There are a number of issues related to the policies and practices of arts special education for art, music, and dance students in Taiwan. One issue is “the perceived incompatibility of equality and excellence in a climate of competition for limited financial resources” (Frydenberg & O’Mullane, 2000, p. 78). Ideally, the needs of gifted art, music, and dance students can be accommodated within the usual formal institutional provisions of the school system, and there is no need to form a separate special program for gifted students. In a holistic educational learning practice, an interdisciplinary curriculum should be allowed and encouraged (Browning, 1994). Kieffer (1997), for example, specifically advocated such an “interconnected and interdependent” system (p. 6).

Contemporary implementation policies in music education must be understood in the context of the history of music education in Taiwan. According to Tchen (1998), the Minister of Cultural Affairs, Taiwan’s music education development can be divided into five stages. During Stage 1, from 1624-1661, the Netherlands and Spain occupied Taiwan. They established churches and schools. Their missionaries used the Christian gospel to teach sacred music to the native peoples. Koxinga (a great Chinese general) defeated the Dutch and claimed Taiwan in 1662 (Tchen, 2002); he had a closed cultural policy, thus excluding Western arts and music. Consequently, all contact with Western culture was broken off. At this stage, Western music as an intentional channel to enrich Taiwanese civilization was curtailed.

In Stage 2, from 1860-1895, after the signing of the Treaties of Tianjin in 1858 by the Chin Dynasty (Tchen, 2002), Western music was allowed in Taiwan for the second time. The Christian Presbyterian missionaries from England and Canada established Presbyterian Churches in Tainan and Danshui and had their own schools. They taught a music
curriculum, using music to bridge the language barrier. Music education was developed systematically by means of these schools’ music curriculum and through active missionary work. This created a love of Western music in the hearts of Taiwanese citizens.

In Stage 3, from 1895-1945, after signing the Shimonoseki Treaty, China ceded Taiwan to Japan in 1895 (Tchen, 2002). Japan selected a Western education system of elementary and secondary schools. An institute for teachers’ education was set up, and a music curriculum established. Japan, as the ruler of China and Taiwan, actively set in action the new music curriculum. This provided a solid basis for Taiwan’s future music education.

In Stage 4, from 1945-1987, Taiwan separated from Japan as its colonial ruler. The Kuo-Ming Tang (KMT) government retreated from mainland China to Taiwan and promoted its former educational system and school system, establishing a music department in higher education and an enlarged music curriculum in secondary schools. At this stage, some changes were made, such as music teachers coming from various genres who tended to promote their own cultural and artistic awareness. During this time, there was, in a normative dimensional sense, a change: Music education became more respectable, even prestigious, and at the same time, more exclusive and even slightly elitist.

In Stage 5, 1987 to date, arts education advocates have attempted to integrate dignity culture into the general public culture, with an emphasis on diversification (Taiwan Ministry of Education, 2005). Currently, Arts education’s form is not only focused on developing student’s creativity, but also emphasizes artistic cultivation that can be combined with students’ life interests and social development. This form of music education reflects cultural trends, which can promote students’ environmental sensitivity. The current system involves three key elements. The first element is education for curriculum design (Kieffer, 1997), which reflects constructivist-type multiple learning relationships. Second is education for collaborative performances (Kieffer, 1997), which combines the efforts of different departments, such as music and dance, which were formerly separate and competitive. Finally is education that includes cross training, such as giving dancers better and more in-depth grounding in musical basics, such as history and classical music theory.

7. ASSESSMENT PROGRAMS FOR ARTS SPECIAL EDUCATION LEARNERS

Cole (1990) claimed just two concepts constituting academic achievement, namely, higher order skills and advanced knowledge, are inadequate in helping educators think about learning and concluded that educators need to formulate an alternative conception that integrates divergent views of achievement. Integrating divergent views of achievement carries clear instructional implications and emphasizes the need to focus on long-term educational goals (Cunningham & Cordeiro, 2003). In Taiwan, under the Arts Education Law of 1997, programs that provided professional instruction to gifted learners were expected to stay within their specialties. The concerns rose ranged from recognition of and assistance to students with gifts in areas other than traditional academic subjects to how the focus on long-term goals might or should affect music practices in schools. The facilities, class sizes, criteria for teachers, number of personnel to support, and curriculum designs involved using coordinated and standardized assessment procedures to ensure accountability of the programs (Taiwan Ministry of Education, 2005). This policy was to be reviewed annually for progress in the field of arts special education instruction with respect to accomplishing educational goals and meeting the requirements.
Cooper et al.’s (2004) four dimensions was applied in order to explore the following questions in an effort to identify what Arts Special Education has in place and what Arts Special Education requires in order to become more effective and efficient.

- Research question 1: Is the normative evaluation of music education and its challenges associated with increased use of standardized tests?
- Research question 2: Is the structural dimension of music education associated with performed and interpreted standardized tests relevant?
- Research question 3: Is the constitutive dimension of music education associated with completed evaluations that demonstrate the adequacy of the policy?
- Research question 4: Is increased policy evaluation of music education associated with reduced cross-sectional compliance and access to short- or long-term evaluations with standardized tests?

Figure 1 illustrates the four dimensions of evaluating policy making and shows the network within which policies are linked by both a goals-to-standards (GS) and a state level-to-local level (SL) relationship. To demonstrate the process, four criteria are considered: The normative dimension, the structural dimension, the constitutive dimension, and the technical dimension. The model shows that each dimension is assessed using accountability systems to measure effectiveness and introduce policies that enhance educational performance.

Figure 1. Policy evaluation.
7.1. Normative Dimension

The first research question (RQ1) encourages stakeholders to focus on the normative dimension of music education and refers to the integration of decentralized (local interests) curriculum and normative standards (McNeil, 1988). It involves a delicate balance of decentralized (local interests) curriculum and centralized control and authority, in terms of “national and state goals, standards, and national tests” (Cooper et al., 2004, p. 161). The Arts Education Law of 1997 was designed to “set standards, align the curriculum, and assess the result” (Ministry of Culture, Taiwan, 2013). It is essential that assessment achieve the following:

1. Require the student to “engage and empower other domains of knowledge” (Hanna, 1992, p. 602, as cited in Kieffer, 1997, p. 28);
2. Ask students to “work together toward a common goal or vision” (Kieffer, 1997, p. 28); and
3. Involve students in learning concepts or principles related to the learning process.

7.2. Structural Dimension

The second research question (RQ2) encourages stakeholders to consider the structural dimension, or the extent to which teaching music enables students to achieve self-growth and self-knowledge and includes the unique emotional experience of musical enjoyment. The structural dimension refers to the formation of “increasing student achievement” (Cooper et al., 2004, p. 199). Cooper et al. (2004) cited Sunderman (2001), who examined how federal accountability mandates affect the design and implementation of Title I programs and how accountability requires credible assessment tasks. An assessment for structure is designed to achieve the following:

1. Enrich curriculum within the mainstream classroom (either individual or group-based) as the most prevalent option (Frydenberg & O’Mullane, 2000, p. 79);

7.3. Constitutive Dimension

The third research question (RQ3) helps stakeholders consider how research about educational policy has incorporated contemplation of the influences and intentions of policies and is focused on personal and professional concerns in the application, implementation, and evaluation of policy. Cooper et al. (2004) calls these “constituents” (p. 199).

Graham and Diamond (1997) found that competition among students and faculty for financial resources is enormous, and this factor derives from the various interest groups that frame problems during policy implementation. Assessments therefore need to achieve the following:

2. Actively involve arts educators, artists, and arts organizations in educational reform (Kieffer, 1997) as suggested by the Arts Education Partnership Working Group (Wolfensohn & Williams 1993).

Cooper et al.’s (2004) model for professional instruction was used. TUT chose a seven-year program in order to demonstrate how emphasizing secondary education (the formative years) is a crucial stage for the development of a musician’s talent. The Special Education Act also stipulates that a gifted student can enter a school at a younger
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age than usual or shorten his or her time there. For example, Yu Ling-yu was 16 when she won fifth place among 130 young musicians from 16 regions in the 2011 Asian piano competition held in Taipei earlier this year. The win assured Yu of admission to TUT’s Department of Music when the new school year started in August. Previously, she had been allowed to skip one year at junior high school saved more time when she attended TUT, as she did not have to take another national entrance examination to get into the university. Cases of students skipping grades are the exception, however, and do not represent the current mainstream model of gifted education. A major point of the White Paper on Gifted Education released by the MOE in 2008 is the recognition of and assistance for students with gifts in areas other than traditional academic subjects.

7.4. Technical Dimension
The final research question (RQ4) helps stakeholders consider Cooper et al.’s (2004) suggestion that when certain conditions are met, an increased likelihood exists of the technical dimension being used. These conditions include time, educators, resources, and instruction as well as an appreciation of the realistic influence of policies as an aspect of educational institutions (Cooper et al., 2004). Individual teachers may also apply a form of policy evaluation upon implementation or the evaluation may take place years after implementation (Cooper et al., 2004). Cooper et al. (2004) asserted, “The technical dimension of accountability policy is crucial to the effective implementation and ultimate success of the reform strategy” (p. 201). This dimension connects the academic and practical content. It is important an assessment achieve the following:

1. Use “inputs resources” or expertise (Cooper et al., 2004, p. 20) in a “supportive learning environment” (Frydenberg & O’Mullane, 2000, p. 78) for instruction.
2. Have throughputs “converting resources into energy” in teaching and learning (Cooper et al., 2004, p. 24).

The conclusions reached in applying the model to music education at the TUT is that educators in Taiwan need to ensure a system of local fitness for first, encouraging a more constructivist learning environment for integrative change of the policy to what were the changes implemented (steps in the process). Second, educators in Taiwan need to improving educational effectiveness. Third, educators in Taiwan need to introduce strategic management models to ensure continuity of change at the school level. Finally, educators in Taiwan need to increase student achievement by making more inclusive quality higher vocational education a reality.

8. CONCLUSION
McCool (1995, p. 396, as cited in Cooper et al., 2004, p. 8) claimed that policy theories should be practical and “directly relevant to applied policy problems”. The implementation of the AEA in Taiwan TUT’s music arts curriculum is a case to illustrates how Cooper et al.’s (2004) framework of four dimensions can be applied to evaluate the implementation of educational policy. It is educators’ responsibility to ensure “a system that models good assessment practice as it audits local fitness” (Cunningham & Cordeiro, 2003, p. 227) and encourage a more constructivist learning environment when policy is implemented. The application of Cooper et al.’s (2004) model in the particular context of the TUT music education program goes some way toward offering educators a means for reflecting on policy implementation and providing a language through which educational policy in the arts might be constructively developed. The aim of the paper was to show that it is possible to apply Cooper et al.’s (2004) policy evaluation framework to evaluate the
implementation of educational policy. The case of the TUT’s music arts policy making was used to demonstrate application of the model with respect to implementing the AEA in Taiwan.

REFERENCES


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Taiwan Ministry of Education. (2005). Yíshù jiàoyù zhèngcè báipíshū [Arts education policy white paper]. Taipei, Taiwan: Author. Retrieved from http://www.edu.tw/userfiles/94_12%E8%97%9D%E8%A1%93%E6%95%99%E8%82%B2%E7%99%BD%E7%9A%AE%E6%9B%B8.pdf

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