

The Case Study of Two Types of Arts Infused Curriculum: Painting and Music

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Abstract

Arts infused curriculum has been implemented about 20 years abroad. There are plenty of implementations, and each has one's unique features and teaching models. Although arts infused curriculum has been vigorously pushed, it hasn't develop rapidly in an effect way in Taiwan. Therefore, the core concept of research was arts infused curriculum that used two types of arts (painting and music) to explore their teaching models and curriculum's application. The research findings may serve as a guide for further research on the teaching models of arts infused curriculum in Taiwan, as well as enhance the implementation of arts infused curriculum.

The main research method was Case Study. Two artists imported two different types of arts into Mandarin learning areas of the elementary school in Yunlin County individually. Two different cases that through team-teaching teacher's communication and the curriculum's design were given to analyze the learning impact and the comparison of teaching models for team-teaching teachers and students. Using qualitative research method

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which included direct observational method and depth interview method documented the implemented process, interviewed the major objects and summarized students' learning sheets.

The results revealed that the teaching models through arts infused curriculum actually enhanced students' learning interesting. If the artists, teaching assistant or team-teaching teachers had implemented experiences, it could better the communication between them. Story-type curriculum had the advantage of implementing arts into curriculum. Two different types of arts stimulated students' different senses. By the way, using innovative materials also made the curriculum more interesting.

Keywords : Arts infused Curriculum, Painting, Music, Mandarin Learning Areas

Introduction

Following the appearance of creative industry and the evolution in educational theories, the advocacy for oppressive education in the past has gradually declined while the emerging arts education today is highly valued. A vast number of foreign arts education programs and organizations have been established one after the other while Taiwan also adopts positive educational reforms in arts infused curriculum, which can be widely observed from the field in Arts and Humanities from the Grade 1-9 Curriculum Guidelines promulgated by the Ministry of Education in 2003 (Ministry of Education, 2003) . In spite of the considerably fast and gradually expanding development of arts education programs worldwide, the promotion of arts infused curriculum in Taiwan has not received wide valuation and application.

For this reason, the study employed two types of arts as teaching tools, namely painting and music, infused into the Mandarin learning areas for 4th graders in one elementary school in Yunlin County. The study discussed two case teachers of different types of arts through case study with emphasis on their implementation process, difficulty and response, thereby to analyze the types of teaching models, curriculum design and teaching tools as well as the differences and similarities. Finally the study further analyzed the impact of the two types of arts on team-teaching teachers and students of the two classes. In sum of the aforementioned, the study developed three research questions described in the follows:

1. What are the implementation process, difficulty and response from the two case teachers when executing arts infused curriculum?
2. What are the teaching models, curriculum design and teaching tools as well as the differences and similarities between the two different cases?
3. Do two types of arts have impacts on the team-teaching teachers and students from the two cases? What are the impacts?

Literature Review

The paper primarily discusses the definition, characteristics, and the

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overview and development in Taiwan and abroad of arts infused curriculum, and on the other hand, attempts to comprehend the definition of painting and music, and the impact on current education through relevant literature review. Finally the paper discusses the relationship between the teaching plan in Mandarin learning areas and the 10 core competence under Grade 1-9 Curriculum Guidelines in the two cases.

Characteristics and the development of arts infused curriculum

Arts have been proved to cultivate creativity and self-expression that can promote team participation and provoke critical thinking ability, in addition to provide effective teaching assistance through different learning styles (LaJevic, 2013). Mr. Duncan, the U.S. Department of Education has announced in public that arts can significantly boost students' sense of self-achievement while reducing problems with subjects and thereby increasing university graduation rate (Duncan, 2012). In general, arts infused curriculum refers to the integration of multiple subjects through arts and infuses arts into subject curriculum as a teaching tool. Simply put, arts infused curriculum is one teaching method of arts that allows students to participate in one creative learning course through different art types. This process connects one art type with the other subject area while students absorb and comprehend the dual learning objectives (Lynne & Sean, 2010). For example, in mathematics class that students learn the difference between long and short, the teacher can prepare objects of different lengths and ask students to collage these objects into one painting. In this teaching process, students can concurrently learn arts and mathematics while the length learned in mathematics subject affect the students' arrangement of collaged painting. Moreover, arts infused curriculum also requires teachers' basic understanding of arts and their thinking on how to connect arts with various subjects.

Chicago Arts Partnerships in Education [CAPE] is the most creative art education program among many, concluding the three features of arts infused curriculum as described below: 1. Curriculum teachers and art experts shall become co-planner or co-teaching teachers. 2. Pay attention to the concept of teaching and learning as well as interdisciplinary learning

process. 3. Implement multiple evaluation methods for each activity. Arts infused curriculum has been proved to benefit all education compared with many arts education programs (LaJevic, 2013). The study projects to help students comprehend the basic learning process through arts teaching but also convert interdisciplinary learning model at the same time.

Foreign arts infused curriculum has been implemented for approximately 20 years and each with its own teaching models and characteristics. For example, the main core objectives of Arts Impact [AI] in the United States aims to bestow instructors with basic art skills and confidence of becoming the leader in standard fundamental arts curriculum in addition to injecting arts into core curriculum to increase students' participation (AI, 2007). American Chicago Arts Partnerships in Education [CAPE] designs interdisciplinary and arts based comprehensive curriculum through the mutual cooperation between teachers and teaching-based artists (CAPE, 2007). A new direction for arts, culture and young London [A.N.D.] from London supports the instruction of arts and culture to children's and youths' education, advocating the value of arts and culture in school and cultural institutions (A.N.D, n.d.). Canadian Society for Education through Art, Société canadienne d'éducation par l'art [CSEA-SCÉA] from Canada is committed in the development of arts education and promotion for high-standard art teaching (CSEA-SCÉA, n.d.). Art Education Australia [AEA] encourages and promotes visual arts education activities in addition to assisting the development of art education as national policy (AEA, n.d.). Centre for Arts Research in Education [CARE] in Singapore is responsible for producing, collecting, propagating and promoting arts infused education, and projects to become the outstanding art education research center in Singapore (CARE, n.d.). National Art Education Association [NAEA] intends to stimulate people's potential through visual art education and enrich people's experience and social recognition based on schools and supplemented by community art resources (NAEA, n.d.). These programs and organizations have demonstrated the valuation of different countries on arts infused curriculum. In spite of the differences between the objectives in program training, these programs eventually expect to implement arts infused curriculum in all schools or communities.

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Although Taiwan government has promoted arts education with great efforts, the effect has not met the anticipated rate of development. In particular, the most influential program is the “White Paper on Arts Education” which was a 4-year art education program advocated by the Ministry of Education in 2005(Cheng, Chun-Wen, 2011). The basic concept was to cultivate modern citizens with aesthetics, strengthen arts and interaction with other areas and promote museum-school cooperation through art education, thereby to carry forward arts of Taiwan (Ministry of Education, 2005). The other project “Learning through Arts - Arts Education” funded by the “National Culture and Arts Foundation [NCAF] ” has been executed for about 13 years and has received funding for 55 projects since August 2003. A total of 90 elementary schools and junior high schools have benefited from the program (NCAF, n.d.). The implementation of “Learning through Arts - Arts Education” is divided into three sections: “Arts and Humanities”, “Learning through Arts” and “Inspiring Creativity”. The main purpose is for school teachers to combine with scholars of related areas and on-campus arts and cultural groups to carry out curriculum design through team-teaching or interdisciplinary cooperation. Consequently students will be able to perceive, appreciate and have the courage to create but will also be inspired with creativity to jointly build diverse creative thinking. Moreover, there is an increasing number of “arts” based junior high schools and elementary schools in Taiwan now. For example, Dayuan Elementary School in Taichung City, Wenzheng Elementary School in Tainan County, Da-dong Elementary School in Ksohsiung City and Beigang Elementary School in Nantou County, that define their main teaching plans as “arts” and use “art parks”, “children’s art museum”, “hand puppet arts” as supplementary art resources, all with the intention to build an exceptional art elementary school. In spite of the constant implementation of arts education programs or building of art elementary school in Taiwan, there is still a significant difference with the effective execution abroad and hence Taiwan is under the urgent obligation to promote effective execution of art education.

The educational influence of painting and music

Painting and music were the art types selected for the case study and the following definitions describes their influence on education respectively.

Painting refers to the visual arts of the eight arts, which transforms the objects observed in 3D space into 2D plane and hence belongs to plane arts (Yang, Shu-Ching, 2012). 2D plane could comprise of paper, canvas, wood, and glass while coloring tools consists of brushes, paint, oil or water coloring. Painting also presents the subjective, pure and natural side of children. The painting forms in visual arts are more frequently implemented in classes due to accessibility to teaching materials and teaching convenience. The U.S. Department of Education, Duncan, expressed that over 80% of elementary school classes in U.S. regard art education as teaching tools and extensively apply art education in various purposes, i.e. youth detention center or art education program(Duncan, 2012, 2013). Currently most junior high schools and elementary schools in Taiwan use crayon, watercolor and brushes as the main painting media for painting teaching and primarily emphasizing on plane painting with rare concept of creativity (Chen, Yu-Rou, 2014). In contrast, music belongs to abstract art language among the eight arts (Fan, Ya-Chu, 2010). In general, music represents the sign of sounds and belongs to hearing art, providing imagination and creativity when compared with sounds. People exchange sentiments, convey emotions and enjoy the image of aesthetics through music. The basic elements constituting music include: melody, musical phrases, intensity, duration, tempo, and articulation (Chang, Chin-Hong, 1979). In 2012, U.S. Department of Education, Duncan, once announced music as the highest art types used by American elementary schools (Duncan, 2012). In contrast, the Grade 1-9 Curriculum Guidelines implemented in Taiwan consolidated arts, music and performing arts into Arts and Humanities learning areas with three curriculum objectives targeting at “Exploration and Performance”, “Aesthetics and Comprehension” and “Practice and Application” as well as other diverse learning models (Ministry of Education, 2008). Nonetheless it is easily observed from the current Arts and Humanities classes in junior high schools and elementary schools that music classes mostly consists of western classical music, flute playing and mass popular music as the mainstream teaching course, which is in conflict with the idea of diverse learning advocated by the government (Hong, Jia-Hua, 2011).

Painting and music in the two cases are most frequently used arts and in

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touch by current junior high schools and elementary schools. The U.S. Department of Education also regarded the two as the art types most frequently used. Nonetheless the existing Art and Humanities curriculum design mostly consists of plane painting and popular music. For this reason, the study intended to discuss issues on how the two art types were implemented in subject curriculum and the relationship between the implementation method, teaching process and team-teaching teachers, and students response after infusion into different teaching contents.

The curriculum objectives of Mandarin learning areas and 10 Core Competence

The study adopted the 4th grade Mandarin learning areas from elementary schools as the scope of research. The Mandarin learning area in Grade 1-9 Curriculum Guidelines corrected and announced by the Ministry of Education in 2011 and mainly comprised of reading comprehension as the core teaching materials, supported by proficiencies in speaking, listening, composition, and writing as the comprehensive consolidated teaching, in addition to proposing 10 Core Competence and 6 levels of Competence Indicators or Benchmarks(Ministry of Education, 2011). In particular, the 2nd (Appreciation, Performance and Innovation) and 4th (Expression, Communication and Sharing) skills of the 10 Core Competence were significantly related to the curriculum design of the two cases in this study and such two Core Competence was considerably emphasized with significance from the discussion period to the determination of teaching model in each case as well as the proficiency indicator which the team-teaching teachers of the two classes wish to train students. Hence, the study consolidated the Competence Indicators or Benchmarks from the 2nd learning stage and the 2 Core Competence. The relevant content had been organized as shown in the following Table 1.

Table 1 The relationship of 2nd learning stage and the Core Competence

Core Competence	Curriculum Objectives	Main Target	Competence Indicators or Benchmarks
2 nd Appreciation, Performance and Innovation	Cultivate the interests of Chinese creation and enhance the ability of appreciating literature	The ability of using Taiwan's phonetic symbols	1-2-2 Understand the changes of Taiwan's phonetic symbols and intonation, and applied to read literary works.
		Listening ability	2-2-1-2 Cultivating the habit of listening different media.
		Speaking ability	3-2-1-2 After observing pictures or something, be able to use a brief sentence to explain its contents. 3-2-2-2 Be able to read literature works in correct, fluent and feelings.
		Reading ability	5-2-3-1 Be able to recognize the various expressions of the articles (such as: narrative, descriptive, lyric, description, discussion, etc.). 5-2-4-1 Be able to read different presentations of the articles. 5-2-4-2 Be able to read out the cadence and emotions of the sentence. 5-2-11-1 Be able to share the reading reviews with others. 5-2-14-5 Be able to speak the writing skills or characteristic of the articles.
4 th Expression, Communication and Sharing	Using language to express emotion, sharing experiences and communicating insights	Listening ability	2-2-2-4 Be able to feel the emotion of the speaker in a listening process.
		Reading ability	5-2-7-1 Be able to understand the sentence in different languages and use different words and sentences according to the language situation.
		Writing ability	6-2-1-2 Be able to observe works each other. 6-2-2-1 Be able to practice writing brief articles. 6-2-7-2 Be able to learn the expressive skills (such as: narrative, descriptive, lyric, description, discussion, etc.) and learn how to write. 6-2-7-4 Be able to coordinate the reading teaching and practice writing reviews and abstract, etc.

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Source: this study

Research Design

The study mainly discussed the two art types combining elementary school 4th-grade Mandarin learning areas. The study adopted qualitative study on the basis of case study and supplemented by in-depth interview, observation and the quantitative statistics of the students' learning sheets to conduct data analysis. The research process steps are shown in Figure 1:

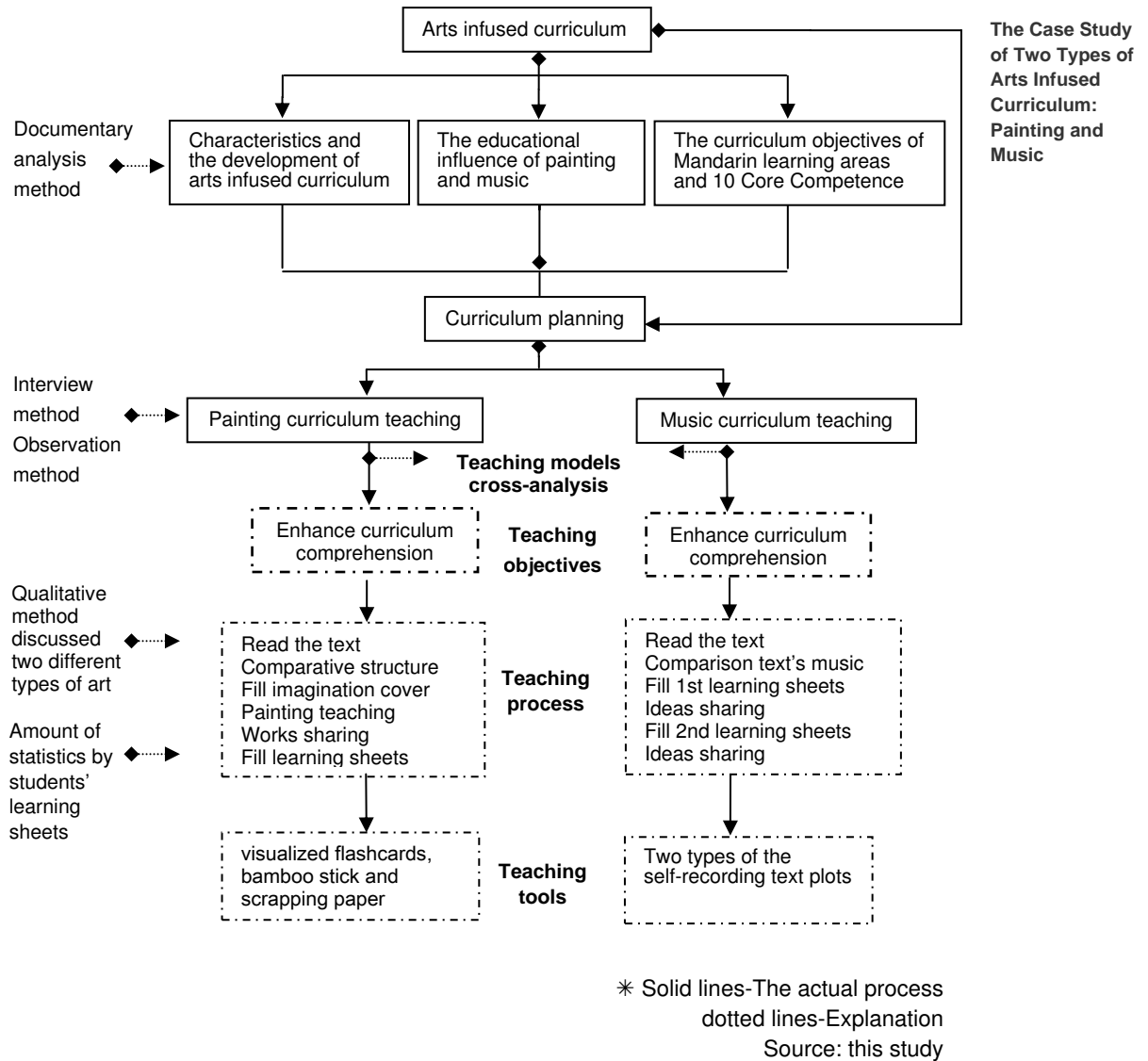


Figure 1 Research process

Research field, objects and participants

The research fields of two cases took place in one elementary school in Yunlin County, adjacent to downtown and school districts in south of Douliu City, where teachers highly value “creative teaching” and the competition of students is quite intense. The elementary school owns a total of 43 classes,

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consisting of 871 students. The main research objects consisted of painting teacher and music teacher, who painting teacher has over 10 years of background in arts with expertise in composite media and the music teacher has over 5 years of experience in music with expertise in piano. Both two teachers did not own experience in implementing arts infused curriculum. The research objects of the different cases had similar education and experience, research fields, participating student grades, and types of Mandarin textbook, with one implementation of execution period.

The research participants included the teaching assistants of painting and music teachers as well as the team-teaching teachers from the two classes and the students. Both teaching assistants lacked the background in art. However, they had the same education and background with the research objects in each case. Both team-teaching teachers were mentors of the two classes, who were quite familiar with the personality and background of students in each class. The painting team-teaching teacher had over 10 years of teaching experience without relevant experience in arts infused curriculum. The music team-teaching teacher had more than 7 years of teaching experience and had worked as the team-teaching teacher for one arts infused curriculum, hence the music teacher had more ideas and experiences in this implementation. Finally, the number of students of the painting teacher's class was 21 students, how often work as a teaching demonstration class. The music teacher's class consisted of 25 students who were energetic and could not be controlled. Students of both classes had accepted teaching for arts infused curriculum for the first time.

Research tools, data collection and analysis

The study selected Case Study with interview and observation method. In the execution of arts infused curriculum, the study adopted direct observation to record the implementation of two different art types and the students in class, in addition to conducting the semi-structured interview of in-depth interview with research objects and participants after class. The students underwent data conclusion and analyzed based on the study units of the class, in addition to sorting the identification and data code table of the study (Table 2).

Table 2 The table of identification and data code

Identification code	Identification	Highest Degree	Professional background	Professional qualifications
PT	Painting teacher	National Yunlin University of Science & Technology, Department of Design, Doctoral program	Composite media	over 10 years
PTA	Painting teaching assistant	National Yunlin University of Science & Technology, Department of Design, Doctoral program	Engineering management	over 10 years
MS	Music teacher	National Yunlin University of Science & Technology, Department of Creative Design, Master program	Piano	over 5 years
MSA	Music teaching assistant	National Yunlin University of Science & Technology, Department of Creative Design, Master program	Informational management	over 4 years
Identification code	Identification	Positions	Teaching experience	Art related experience
T1	Painting team-teaching teacher	Mentor, Chinese teacher and administration	over 10 years	zero
T2	Music team-teaching teacher	Mentor, Chinese teacher, mathematics teacher and administration	over 7 years	once
Identification code	Identification	Highest Degree	Professional background	Professional qualifications
RS	Researcher	National Yunlin University of Science & Technology, Department of Creative Design, Master program	Graphic design	over 2 years
Identification code	Amount of student	Students' Characteristics		Art related experience
PTS1~PTS21	Painting class, 21	Often as a teaching demonstration class, who are interested in art teaching model; no group system.		zero
MSS1~MSS25	Music class, 25	Relatively noisy, lively, emotional, but be obedient to their mentor; group system.		zero
Code	Data type			
Os	Observation			
Iv	Semi-structured Interviews			
LS	Learning sheet			

Source: this study

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Interview outline

The study adopted semi-structured interview with painting and music teachers, teaching assistants and team-teaching teachers executing arts infused curriculum for the first time, in addition to conducting individual interview. Painting, music teachers and teaching assistants interviewed on December 19, 2014, and two team-teaching teachers interviewed on December 26, 2014. The interview location was the conference room of National Yunlin University of Science & Technology. The interview outline included three sections, namely: “Preparation for executing arts infused curriculum”, “Actual execution of arts infused curriculum” and “Subsequent considerations for arts infused curriculum”. The topics of interview also varied according to the different interview respondents. The table below shows the interview outline and respondents.

Table 3 The interview outline of painting teacher, music teacher, teaching assistants and team-teaching teachers

Interview outline	Interview questions	Interview objects		
		Case teachers	Teaching assistants	Team-teaching teachers
Preparation for executing arts infused curriculum	1. Before executing arts infused curriculum, how was the communication between three?	✓	✓	✓
	2. What would you do if the discussion different from others?	✓	✓	✓
	3. Who was the guiding role of the teaching process and timing arrangement ? And how ?	✓	✓	✓
	4. How to choose these teaching tools? Why?	✓	✓	
Actual execution of arts infused curriculum	5. Was there a difference view between the actual condition and your ideal condition?	✓	✓	✓
	6. What was your feel of Students' reaction?	✓	✓	✓
	7. Was there any problem of the teaching process and timing arrangement ?	✓	✓	✓
	8. What was the difficulty in using teaching tools?	✓	✓	

Subsequent considerations for arts infused curriculum	9. After executing arts infused curriculum, what did you think the learning effectiveness of students?			✓	The Case Study of Two Types of Arts Infused Curriculum: Painting and Music
	10. Do you think that arts infused curriculum is worthy to do? What is the reason?	✓	✓	✓	
	11. Did you encounter the difficulty when executing arts infused curriculum? What was your response?	✓	✓	✓	
	12. Will you consider the next implementation after executing arts infused curriculum?	✓	✓	✓	

* 「✓」 represented that the study interviewed different objects for different questions.

Source: this study

Analysis of Research Outcome

The study infused two different art types into the 4th grade Mandarin learning areas of elementary school to conduct case analysis and conclusion, as shown in the following analysis of research outcome.

The implementation process, difficulty and response for the two case teachers when executing arts infused curriculum

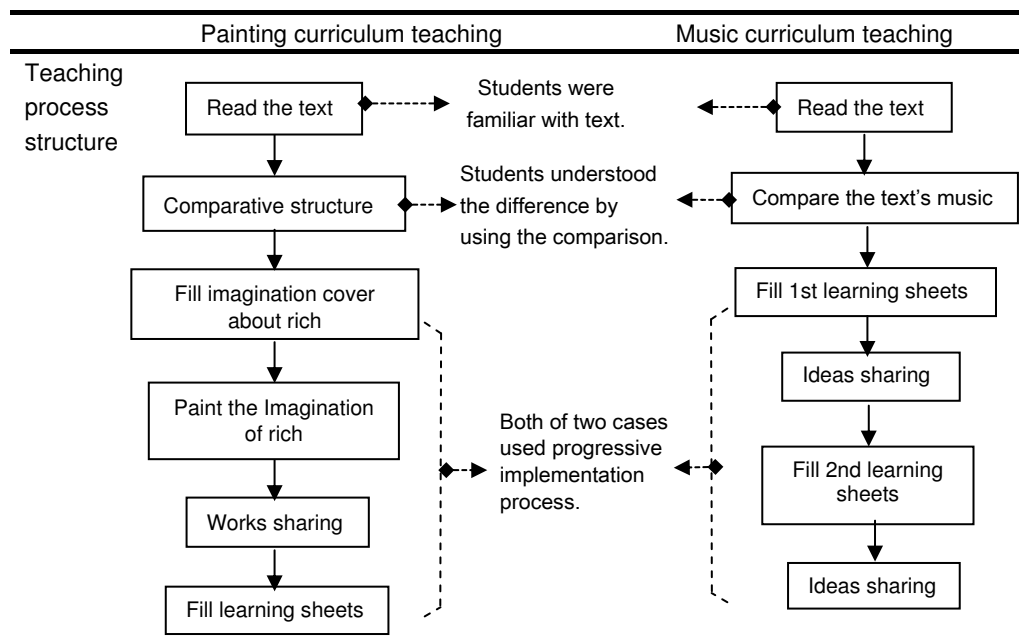
Progressive implementation process guided students into arts infused curriculum

The teaching implementation process for PT used different visualized flashcards to specifically compare the content of text, followed by asking students to write down the life of rich people in their imagination and then depicting the idea on special painting paper. Finally students were asked to give presentation in front of the class. The teaching implementation process of MS was compared through audio recording with music and without music, associating the music through the relationship between colors and emotions, and then finally connected using classical music and text content (RS-Os). The following Table 4 compares the implementation process structure of the two cases with significant findings show that both cases were similar in terms

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of applying guidance-oriented teaching method to lead students into the Mandarin curriculum and arts.

Table 4 The teaching process structure of painting teacher and music teacher



Source: this study

Team-teaching teachers with arts related experience can promote good communication

For the communication on the pre-discussion of the two cases, determination of teaching model, implementation and the post-class review, the cooperation between MS, MSA and T2 was smoother while there was already communication problems occurred in the pre-discussion between PT, PTA and T1, which was to be contributed to T1 teacher's lack of relevant experience but more interference with teaching model design (RS-Os) . There were more meetings held while more time was spent on the content of integrated interdisciplinary learning. In contrast to PT, T2 adopted laissez-faire, allowing MS and MSA to brainstorm for curriculum content before discussing together. The reason could attribute to T2's past experience in participating in arts infused curriculum while this experience

also provided the strongest support and suggestions for MS and MSA (T2-Iv) .

I was always afraid of interfering with you. I wanted to try but I didn't know if I was doing it right. I worried that if I give you too many opinions and then you will execute using my opinions (T2-Iv) .

I think we need someone to lead us when first implementing this curriculum otherwise we did not know how to start. It was good that the teacher helped us, gave us direction and guidance. Thank you so much (MSA-Iv) .

Contents of two curriculums were varying and difficult, which should be designed based on students' conditions

It was the first formal experience for PT, MS and the teaching assistants to execute the arts infused curriculum while the curriculum content was designed to be quite interesting and instructional with full timing control over teaching prior to the implementation. Nonetheless, the noises from students, teachers' tension and unfamiliarity, and even the difficulty of curriculum content in real teaching at the site all affected the progress of teaching, causing both classes to be delayed for dismissal by 5 to 10 minutes. On the other hand, not all learning sheets from both classes were collected on time and the team-teaching teachers collected them all before turning the sheets to PT and MS. In the case, the curriculum content of PT was designed with too much content and difficulty while the four pieces of classical music selected for MS were relatively too difficult for elementary school 4th graders (RS-Os, MS-Iv) .

The curriculum was not well arranged because we designed the curriculum on the viewpoint of adults before scheduling. We might have arranged too many and intense contents. Some students were too excited to see us or the different class style, so they were out of control and we did not control the time well (PT-Iv) .

We chose classical music for the convenience because we thought these pieces of music were popular but we did not notice that students may not be familiar with them and it seemed to be difficult for them (MS-IV) .

Team reward system can promote teamwork, increase learning interests but must pay attention to fairness

Both MS and PT cases applied reward system as an incentive and the study revealed significant excitement and expectation from students for the rewards. The biggest difference between PT and MS was that PT was not divided in team but adopted drawing-based personal answering. On the other hand, MS divided the class into five teams competing for answers and they were given points for the speed of raising hands. Although students in MS class discussed enthusiastically at the beginning, but the class appeared to be in low mood when the results came out. The students did not give applause and encouragement to the winners. MS and MSA felt panic and the atmosphere only turned around under the leadership of T2 teacher (RS-Os) . The difference between the reward systems of the two cases could be related to the fairness with drawing.

Students liked team system, but not so much when it involved prizes. They were lack of sportsmanship and it would be fairer if someone receives points with better answers (T2-Os) .

Both cases teachers provided individual presentations to provide students slow of speech with presentation training

The similarity between two cases was the students were requested to share and present on the stand. Both painting and music teachers intended to apply the 4th skill in “Expression, Communication and Sharing” from the 10 Core Competence of Grade 1-9 Curriculum Guidelines as the standard, so the students can receive individual presentation through enthusiastic hand-raising, speaking or introduction of works on the stand. There are some students from both classes that were slow of speech or were quiet. Although there were a number of enthusiastic students raising hands to answer, there were only specific students who were answering with PT students accounted for the majority (RS-Os) . The reason was inferred to be

related to the long-term teaching pressure and the negative impact produced from teaching progress. On the other hand, the painting and music teachers responded by asking the team-teaching teachers to assist the students with guided answering while timely letting students to interact with painting and music teachers so that students could be more encouraged to express themselves.

I think the class was quiet due to pressure and the students were used to such teaching style since they have been observed frequently. It could also be because of the many competitions in the city (PTA-IV) .

What the teaching models, curriculum design and teaching tools as well as the differences and similarities between the two different cases

Different art teaching models implemented teaching design through “comparison”

The primary teaching model of PT led the students understand the relevant content discoursed by the text through simple visualized flashcards, using the structural comparison terms of “rich people vs. poor people” to interpret the conceptual relationship portrayed by the text. Finally students attempted to understand the meaning which the textbook expressed through painting. The main teaching model of MS led the students into the plot of the text through the comparison of incidental music to the text content in addition to inducing students through two-stage progressive learning sheets, so that students could finally understand the connotations of the text through music. It was discovered from the analysis of both teaching models also carried out the design through “comparison”, in spite of the two different art types, which is not unconstrained by the comparative structure of text while the art types could also be compared to strengthen the “comparison” teaching tools. For example, the visualized flashcards and the incidental music files could help students clarify the true meaning of the text. Please refer to Appendix 1 for teaching photos.

It was easy and understandable. The image was easier to understand than text (PTS9-LS) .

I felt it was very dull in a dark and gray world when I first heard it without music. When I heard the music at the second time, I could feel that there were lights protecting us in life and I also thought it was exciting, fun and interesting. It felt like living in the mountain of faire because I could hear the flames so it made me feel like living in the mountain of fire (MSS10-LS) .

Different arts types, same curriculum types and teaching objectives

Nan I Publishing's Lesson 11, "Rich people could be very poor" was chosen for PT curriculum as the comparative story-type text, with the teaching objectives in helping students clarify the contents mentioned by the text through visualized tools. MS adopted the lesson 12, "Sun Wukong borrowing Palm-leaf fan for three times" from Nan I Publishing, a classical plot based story-type text with teaching objectives in associating emotion and colors through music and thereby enhancing comprehension of the text. Both texts were story-type with significant personality contrast and strong changes in introduction, supporting paragraphs and conclusion. In spite of using different arts types and teaching curriculum on both two cases, nonetheless both cases ended in comprehension of core text as the foremost important teaching objectives.

I chose this class because it was easy to arrange and also because I have background in painting. Such text was easy to start with painting while such method was faster for them to use in such a short time. Students could also understand the differences among them through this comparison method (PT-IV) .

We immediately chose this lesson when we founded out that we were to use music. It was an interesting presentation and the last of the text all emphasized on reading and we expected to help the students distinguish the different tunes (T2-IV) .

Both two arts types used novel teaching assisted tools

The use of assisting tools in teaching premise often helps teachers save time and space while the average assisting tools consist of magnetic

flashcards and large teaching tools which students are accustomed. Nonetheless PT and MS used more special teaching tools as PT used self-prepared visual flashcards, bamboo stick and scrapping paper while the two ends of the stick came with different size of thickness for students to use interchangeably. The special texture of scrapping paper properly stimulates the sensitivity of color in students. Moreover to retain the brilliance of plot-based text, MS and MSA even recorded some text plots (Appendix 2) without music and with music version. The observation records of the study revealed that the use of special teaching tools can effectively help students concentrate and enhance their memory.

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All students were crazy about it probably because they did not hold such a strange brush before and they had mostly painted with watercolor and crayons. Painting could have been a different experience for them. I also wanted to train their ability to “hold” because being a teacher for a long time, I had discovered that most students did not know how to hold brushes and I had taken some time to teach them (PT-Iv) .

When I was going to play the computer, the students were looking around to find out what I was doing. When I started playing the recording without music, the students thought it was funny and kept laughing. They wanted to know which character I was dubbing and were all guessing (MS-Iv) .

Two arts types trained students with different Core Competence, but both projected to increase abilities of independent thinking and problem-solving

Among the 10 Core Competence selected by Grade 1-9 Curriculum Guidelines, the 2nd and 4th Core Competence were significantly related to the teaching content of the two cases. Upon conducting interview with the case objects, the 10th Core Competence on “Independent Thinking and Problem-Solving” from the 10 Core Competence of Grade 1-9 Curriculum Guidelines was more valued by both case objects. In spite that painting and music teachers expected student to train through arts innovation or courageous sharing from previous discussion, but PT and MS expected students to develop independent thinking and problem-solving abilities through “Art” after executing arts infused curriculum. Literature review also

proved that arts could stimulate critical thinking and thereby develop problem-solving abilities (LaJevic, 2013, Duncan, 2012).

I wish to train them with thinking ability when I ask them questions before they express themselves or ask me questions. This way they will solve problems and train communication skills (PT-Iv).

Although I'd like to let them ask me questions, I think the music teacher's handling was also good and that was to ask rhetorical questions by throwing the questions back to the students, so they could answer their own questions. I think this was also a good method, but it also depends on the difficulty level of questions (MSA-Iv).

For two different types of arts cases, what the impacts on the team-teaching teachers and the students

Art infused curriculum triggered interests in students however the time was too brief to determine the learning effectiveness

Based on the learning sheets filled out by PT and MS students, 16 and 22 students from each class responded to have liked this teaching content, consisting mostly of answers such as: "This instructional approach is fun (MSS4, MSS17, MSS21, PTS2, PTS7, PTS22)", "Team discussion is good (MSS2, MSS5, MSS25)", "I'd like to have all Mandarin classes this way in the future (MSS9, PTS11)". The answers from learning sheets revealed that most students liked the teaching design from the painting and music teacher. Moreover, there were 5 and 3 students from PT and MS classes who expressed dislike over the teaching design with answers such as: "I don't like it because of game-based competition and my classmates would ask me to answer questions (MSS13-LS)" or "I can't understand the questions through image (PTS11-LS)". Moreover, it was not withstanding that only 3 people from PT's learning sheets mentioned information related to painting execution and arts infused curriculum while only 6 people mentioned the art types executed in class from MS's learning sheets. In conclusion, the students had produced positive learning interests in arts infused curriculum, but few rarely

mentioned the “art types” executed. The learning effectiveness was difficult to assess due to the one time execution.

I think the class was different under the teacher and the older sister’s instruction. In team discussion, we could collaborate and answer the questions clearly. I appreciate the fun curriculum arranged by the older sister (MSS4-LS, MSS6-LS, MSS11-LS, MSS16-LS, MSS17-LS, MSS19-LS, MSS21-LS) .

This learning method was fun and interesting. We could discuss in teams while learning new knowledge. I could also match between music and conversation (MSS5-LS, MSS7-LS, MSS12-LS, MSS20-LS, MSS23-LS) .

I like the perception of collaboration with the bonus point form, which allows us to answer by music, associating emotions, colors and other points. It was a good idea and I liked this lecturing style (MSS18-LS) .

It was easier to remember by replacing text with image and also better understood (PTS16-LS, PTS20-LS, PTS22-LS) .

I could not understand what it means by looking at the text but image can help me understand better (PTS1-LS, PTS10-LS) .

I could use many methods such as colors, painting imagination...etc. (PTS18-LS, PTS20-LS, PTS23-LS) .

The gaming characteristics of art teaching easily obscured the basic concept of arts infused curriculum

According to the students’ learning sheets from PT, 9 students answered on the learning sheets with answer such as “ The game of this class was really fun (PTS1-LS, PTS3-LS, PTS11-LS, PTS12-LS, PTS17-LS, PTS18-LS, PTS20-LS, PTS21-LS, PTS22-LS) ”, while 3 students from MS class answered: “The older sister was nice to us and we could play and compete (MSS1-LS, MSS12-LS, MSS25-LS) ”. It showed that students seemed to have thrown behind the curriculum objectives learned from Mandarin learning area while the painting teaching brought by PT’s scrapping paper and bamboo stick and the music teaching brought by the self-recording text plots from MS seemed

to have obscured the core concept in arts infused curriculum. Consequently, the students regarded this Mandarin course with a playful attitude. Nevertheless, each one student's learning sheets in PT and MS classes showed that: In spite of the variation from past traditional lecturing, the process of arts infused curriculum resulted in considerable relaxation of learning process and it was very easily accepted compared with past class methods.

Infusing painting and games into Mandarin class would be extremely fun and interesting, so the class wouldn't be so boring (PTS1-LS, PTS3-LS, PTS11-LS, PTS12-LS, PTS17-LS, PTS18-LS, PTS20-LS, PTS21-LS, PTS22-LS) .

We could enjoy the class. (PTS14-LS)

I liked this teaching method because I could understand the meaning of text through games while discussing with my classmates for enhancement of relation. I liked the teaching method for this class because it helped me learn new knowledge and enhanced our relation (MSS1-LS, MSS12-LS, MSS25-LS) .

I thought it was special and fun. The rich content of the text inspired our imaginations while the role of the teacher turned into an older sister. It felt different and refreshing. I usually concentrated with full attention in class so I would not miss out any information. But with the older sister, I was more relaxed and it felt as if I was listening to a story (MSS15-LS) .

Conclusions and Recommendation of Research

Conclusions of research

The analysis of research results revealed that the implementation of progressive arrangement for arts infused curriculum can guide students while team-teaching teachers could promote better communication with relevant experience in the execution. It was also discovered from the implementation process that the curriculum should be designed from the students' point of view in addition to training students with presentation

ability and attention to the rewards fairness. Moreover, in spite of two different cases of arts types, both offered the same teaching objectives, comparative teaching design and identical Mandarin curriculum types while using novel teaching tools. In spite of different Core Competence of training, both expected to improve students' independent thinking and problem-solving abilities. Nonetheless the short period of time could hinder the determination of learning effectiveness in impact of the positive impact from implementing arts infused curriculum. Moreover the gaming nature of art teaching could obscure the basic concepts in arts infused curriculum. The conclusion of the study is described in the following 5 issues.

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The collaboration of experience in art teachers with professional background, teaching assistants and team-teaching teachers can effectively promote excellent communication

The above research results showed that the among the team implementing arts infused curriculum, including artists with professional art background, teaching assistants and team-teaching teachers, if anyone has relevant executive experience or has experience in similar participation, will promote excellent communication process, facilitate the operation and thereby increase the development of tacit understanding between the three people.

Story-type text was equipped with the advantage in implementing arts infused curriculum

The texts incorporated with two different arts types belong to story-type text and could attract more learning interests from students due to the changes of plots from the introduction, supporting paragraphs to the conclusion in a story. The teaching process was also abundant and varying. In contrast with descriptive and vernacular Chinese courses, story-type text can implement arts infused curriculum easier. Moreover, both cases conducted curriculum design through "comparison" while students can produce contrast through this teaching method, thereby increase their comprehension for the text. Hence, the key does not on the art types but whether if the attribute of Mandarin text takes art types into consideration of priority.

Using creative media or self-prepared teaching materials enriched the teaching curriculum with variance

The analysis of the teaching tools with two different arts types showed that the use of innovative media and self-prepared materials increased students' learning interests and the novel experience of students through assisting tools which they have not contacted before. Students can also increase their concentration in class.

Different arts types can stimulate the different sensory experience of students

The perception of the five senses can induce the preliminary image on the brain while interconnecting memories when accepting stimulation, resulting in perceptive experience, known as the five-sense experience(Lee, Kuei-Lien, Chen, Jun-Hong, Yen, Jen, 2008) . These two cases significantly showed that painting teacher used self-prepared flashcards, scrapping paper, and bamboo stick to induce the vision and tactile as well as the observation on perception of non-standard "pen holding gesture" from the students after being a teacher. The teacher even trained students the ability to "hold". The music teacher induced hearing from students through self-recorded text plots and used team-based answers to train the students with expression and independent thinking ability. The different arts types would result in different senses stimulated and relatively different abilities of training. Nonetheless the similarity was to enhance the impression of experience.

Learning sheets can support the boosting of learning interests but not the improvement on overall learning effectiveness

It was discovered from the learning sheets recovered from the students and the interview of the team-teaching teachers, the change of past teaching model with implementation of different arts types to subject curriculum can impose positive impact on the learning interests of students. Nonetheless since the students were too young without judgment ability, the time for teachers to prepare, the amount of executions and executing time were all too short to truly measure the overall learning effectiveness of students. Moreover, the feasibility and future development of arts infused curriculum could also be acquired through the learning sheets. Although the study only

adopted basic learning sheet questions as data of statistics, such learning sheet after improvement can be used repeatedly in the future.

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Recommendation and future development

The study adopted qualitative research method to conduct short-term and extensive investigation on two different arts types, that the teaching method of art infused curriculum was perceived to truly and effectively increase students' learning interests and that different art types can stimulate the five senses of students. Moreover, the different arts types derived from the cases could be incorporated with the same story-type texts. In particular, the use of innovative media or self-prepared teaching materials in class could enhance the fascination of the teaching curriculum. However, due to the constraint with time and manpower cost at the teaching premise, the relationship between the two cases could not be effectively reviewed in-depth. Although the study discussed two cases concurrently, it did not apply circulation of mobile research to improve nor did it evaluate the teaching effectiveness. The study emphasized on the execution impact of different arts types and the exploration into teaching model, while such deficiency is projected to be supplemented and used in future research. Moreover, the FTC model proposed by Sandell in 2006, FTC (Form, Theme, Contexts) a model used for analyzing art works and art teaching, can be referred to as reference on the teaching effectiveness and helps observers to understand art works in-depth or explore the profound meaning of investigating phenomena. Its formula is Art= Form+ Theme+ Contents. FTC users must constantly discuss from the dimensions of formality, theme and context (Sandell, 2006) . In sum of the above, the conclusion of the study was drawn and proposed through the following 5 suggestions:

Design a subject curriculum based on arts or sense cultivation

It had been discovered from the communication and implementation process of the two cases that prior to the implementation of arts infused curriculum, a specific Mandarin course would be chosen for arts infused curriculum before seeking for art types that could be implemented. However from the perspective of arts or when prioritizing the cultivation of students'

senses as the foremost important objectives and followed by seeking implementable curriculum category or content, such implementation results in comparison with the implementation results of the case could somewhat differ.

Develop multi-senses or multi-arts types for art infused curriculum

Most of the cases involving arts infused curriculum only use one art type without connection with other curriculum content using other art types. The study suggests the development of arts infused curriculum containing multiple art types or multiple senses instead of implementing only one art type.

Develop a learning effectiveness scale for student evaluation

The study applied qualitative method to discuss the teaching process implementing arts infused curriculum, comprising participants from elementary 4th graders. However due to the students were too young and the execution period was too short, the real learning effectiveness of students could not be measured. Hence, the study expects to exclude various factors and develop the learning sheet that can evaluate the real thoughts of students or compare the students before and after the test, prior to obtaining the real learning effectiveness evaluation.

Design a set of teaching model template for arts infused curriculum

In the teaching design for arts infused curriculum that has been executed, most executing teachers design and implement this curriculum individually or by group while the teaching tools and teaching process used in the curriculum were only used once. Nonetheless the integration of these executed teaching processes can be developed into one teaching model as reference for teachers intending to execute or can re-utilize these teaching tools. Consequently this set of arts infused curriculum teaching model will be repeatedly used in the future.

Teachers need to constantly guide students into the core concept of arts infused curriculum

In view of the research results, although arts infused curriculum often applied “gaming” as supplementary approach, teachers must be equipped with exceptional viewpoints and master the interdisciplinary core concepts before guiding participating students through activities or gaming process. Teachers must also often remind and guide students into the core of arts infused curriculum in addition to constantly emphasizing arts types through the guiding process. Teachers are further expected to uphold the basic concept of arts infused curriculum and not to confuse art’s gaming and arts infused curriculum.

The comparison of the cases on two different arts types showed the following: Painting and music teachers contacting arts infused curriculum for the first time had a very profound perception and this curriculum not only stimulated the teaching enthusiasm in teachers and even perceived arts as more than one performance but can also be used as a teaching tool to transform the meaning of arts. The observation records of the study also showed that team-teaching teachers executing for the first time and team-teaching teachers with execution experiences had different approach to acceptance and communication, that team-teaching teachers with execution experience tended to substantially increase the acceptance and were willing to release and let art teachers to execute. For the students, arts infused curriculum simplified the learning process with more fun and acceptance while students learn the capability of interdisciplinary integration. The education scale in Taiwan is slowly declining due to the trend in low-birth rate, reduces number of students per class, number school classes and even the gradual expansion or urban-suburban educational gap. These factors lead to the new trends of Taiwan’s current education and will have more possibility and future development when incorporated with new teaching methods. Finally, we hope to continue promoting arts infused curriculum even through one or two teachers’ impact. We look forward to enhancing the promotion and execution of domestic arts infused curriculum through the discussion on different arts type based teaching as future academic and teaching reference.

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Appendix

The situation of executing arts infused curriculum

Painting teacher			
	Comparative structure of text and visualized flashcards	Using bamboo stick and scrapping paper	Students shared their works
Music teacher			
	Separated students into 5 groups	The situation of music teacher	Students shared their ideas

Source: this study

The teaching tools of executing arts infused curriculum

Painting teacher				
	bamboo stick	scrapping paper	visualized flashcards	Imagination Cover
Music teacher	The self-recording text plots of music teacher and teaching assistants			
	Links of non-music file:			
	https://drive.google.com/file/d/0B5zSUEIYy5abZTFDNGp5QkxINjg/view?usp=sharing			
	Links of music file:			
	https://drive.google.com/file/d/0B5zSUEIYy5abWS1BSjBtV19JclE/view?usp=sharing			

Source: this study

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