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#### Abstract

COVID-19 has caused a global pandemic crisis. The pandemic presented society with numerous changes and issues due to the shift in lifestyles, among which is the greatly impacted school education. To receive a complete range of educational resources without contacting other groups in the population, many curriculums were transformed to online learning using technological applications and incorporation. Given the impact of the pandemic on Taiwan being relatively controlled than other countries, on-campus classes remain the primary approach in school education. However, an outbreak of cluster infection in Taiwan this May worsened the epidemic crisis. The Ministry of Education urgently announced the halt of all on-campus classes, therefore forcefully changed Taiwan's model of education. With students' practice with actual materials being emphasized in teaching art curriculum and the provision of software and hardware being relied upon, art curriculums face greater challenges to adopting distance learning. Other than considering ways to use online learning resources to reach integrity in educational content, teachers also need to enhance abilities in applying technologies and designing curriculums, when different approaches and concepts are required to make adjustments and trials, especially regarding class and curriculum management. This qualitative research was used to study a interview with public junior high school and high school art teachers in Taiwan. Intends to grasp a picture of the forms and model of art curriculum in Taiwan at secondary education levels during this pandemic to explore and reflect the possibilities for art education in the post-pandemic era.

Keywords: Post-pandemic era, Art Education, Taiwan

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## Introduction

#### 1-1 Research Background

Covid-19 broke out at the end of 2019. Many countries have begun to order the closure of cities to avoid crowd contact with large numbers of people. These policies have not only caused changes in society, families, and lifestyles, but also school education: students cannot go to school for physical teaching.

Distance teaching became the main teaching strategy in the epidemic, and it has also prompted the education community to pay more attention to the importance of distance teaching, which became one of the most important issues in today's educational thoughts.

Since the epidemic has spread, Taiwan was originally affected by the epidemic less than other countries. Schools could still maintain physical classes. Until May 2021, serious cluster infections occurred in Taiwan, causing the number of confirmed cases gradually expand.

To prevent campuses from becoming a place for the spread of the epidemic, the Ministry of Education urgently announced that students at all levels would stop attending schools. As a result, Taiwan's education pattern is also facing a mandatory change. In this regard: schools, teachers, students, and parents all needed to adjust and adapt to the measures of distance teaching in a short time, and move towards a digital learning path of "Learning Never Stops" together.

Although distance teaching solved the limitations of time and space, it has also encountered many difficulties. For example: first, some students are easy to lose their learning direction. Second, the construction of the knowledge structure is incomplete. Third, the interaction between students and peers and teachers is limited, and they need to explore how to the use of technological tools, etc. (Lin, 2005)

With students' practice with actual materials being emphasized in teaching art class and the provision of software and hardware being relied upon, art curriculums face greater challenges to adopting distance learning.

#### **1-2 Research Motives**

Under the influence of the epidemic, Taiwan urgently announced the suspension of classes, causing many teachers to change to the remote teaching mode at such short notice. The Art classes always relied on physical teaching, also face many challenges. Researchers observed the strategies and methods of an art teacher facing online teaching, as well as the mentality of facing difficulties, which helped art teacher in Taiwan to apply distance teaching.

#### **1-3 Research Objectives**

This research uses interviews with two art teachers as individual cases to understand how they faced the transformation of online teaching methods and situations during the epidemic. The research objectives of this study are divided into the following:

- 1. Understand Taiwan's policy on distance education
- 2. How art teachers arrange and implement distance teaching
- 3. Implementation status and advantages and disadvantages of distance courses

4. Evaluation method and implementation effectiveness

# **1-4 Scope and limitations**

1. The case study cannot represent the teaching situation of all schools in Taiwan

It's for reference only.

2. The situation of the epidemic has changed greatly during this research period, and the policies and content mentioned in this research may not be fully applicable to future curriculum development.

# **Literature Review**

# **2-1** Characteristics of Distance Education

Distance Education refers to a model that is different from the general traditional physical teaching, breaking through the limitations of time and space, allowing learning to exist at different times and places, and is divided into two types: synchronous and asynchronous. According to Tang (2011), the definition of integrated distance teaching is a teaching process that uses media to deliver systematic teaching materials to learners. Teachers, teaching materials and students, can communicate and interact to achieve the expected educational goals. And remote teaching is divided into one-to-one teaching, one-to-many teaching, and classroom-to-classroom teaching.

Keegan (1990) believes that interaction is the main key in distance education, and proposes that distance education has the following five characteristics:

1. Distance teaching in the learning process, teachers and learners are separated for a long time, which is different from traditional face-to-face teaching.

2. The design and preparation of learning materials, as well as the two aspects of providing student services, are different from personal learning and teaching oneself.

3. Use scientific and technological media such as printed textbooks, audio-visual media, or computers to transmit teaching content to connect teachers and learners.

4. Provide two-way communication so that students can benefit from it or even drive dialogue.

5. There is a lack of similar long-term learning groups throughout the learning process, so learners are often treated as individuals rather than groups.

Based on these five characteristics, in distance teaching courses, the communication and exchange between teachers and students is the key to the important influence. The characteristics of distance teaching should be considered in the course design, not just the arrangement of traditional courses.

## 2-2 Taiwan's Education Policy under the Epidemic

In January 2020, the Ministry of Education of Taiwan issued the precautions for the epidemic to schools at all levels for the first time. At that time, it used the "unknown cause of pneumonia epidemic" as a reminder, and at the end of the month reminded schools at all levels to set up an "epidemic prevention team" as soon as possible. Each school is required to submit relevant plans to the Ministry of Education. At the beginning of the epidemic in

Taiwan, due to the rapid establishment of cautious and strict entry restrictions and isolation policies, most of the confirmed cases were imported from abroad, and Taiwan's international control of the epidemic was relatively stable.

In August 2020, conditions gradually allowed for foreigners and overseas students to come to Taiwan. Until the beginning of 2021, schools at all levels in Taiwan have adopted physical teaching as the main teaching mode, but the Ministry of Education still reminds schools to take protective measures at any time. It also supervised schools to conduct remote teaching drills for successively drafts and followed the epidemic policies. Adjustments include the formulation of detailed items such as relief projects, student internships, and large-scale examinations.

In May 2021, Taiwan suddenly broke out of multiple local cases. The Epidemic Command Center announced on May 19 that Taiwan has officially entered the level 3epidemic alert. The Ministry of Education has explicitly ordered all schools at all levels to change to "home online learning", and emphasized that courses can be mixed in a synchronized or non-synchronized manner. It also authorizes schools to handle courses, teaching, and assessment methods in a flexible and diverse manner. In addition, the Ministry of Education also provides online learning resources, including films, TV programs, learning platforms, websites for teaching materials, etc.

The level 3 epidemic alert lasted for two months. Due to the increase in vaccine coverage and the decline in the number of confirmed cases, it was downgraded to level 2 alert on July 27. The Ministry of Education announced the physical opening of school in September was allowed. At present, Some colleges and universities still use online teaching for several weeks, and then switch to physical teaching gradually.

## **Results and Discussion**

This research uses a middle school art teacher and a high school art teacher as the interview subjects. The following will be based on the content of the interviews with the two art teachers to understand the situation of the remote teaching of art classes in their respective schools.

## **3-1** Case of Ke: Preparation and Confrontation

Last year, at the onset of the epidemic, schools arranged for teachers to learn how to use Google Classroom on a regular basis. However, teachers tend to forget how to use it when they can still conduct in-person teaching. Although these online platforms keep updating and schools still provide regular training, over time, it becomes clear that many teachers reject technology applications, giving special prominence to the learning gap among teachers.

After the switch to distance learning, teachers have more flexibility in conducting distance learning in response to the government's flexible measures for allowing the use of non-simultaneous teaching. Ke said some art teachers would adopt the digital teaching materials provided by textbook suppliers to help teachers who are less skilled in the use of technology to successfully engage in distance learning.

The classes that Ke teaches fall into two types: art classes and regular classes. The following is an explanation of how Ke conducts his teaching in these two types of classes.

# 3-2 Distance learning in Art Classes

The art class mainly emphasizes the practice of drawing and copying skills. In the absence of in-person instruction, Ke employed the electric drawing function of the tablet computer and used an electronic brush that can express various textures and color ramps to help students modify their drawings and demonstrate how to do so during the online class.

Ke said that by using this kind of remote teaching, she solved the problem of one-on-one instruction in the physical classroom. While she was modifying students' works, other students could also learn and observe what she was doing, which solved the problem of differential teaching for students.

After her students have finished copying the photos provided by her, Ke would ask them to go online to find similar pictures to drill their skills so that they could observe the similarities and differences in details in the pictures.



Figure1: Example of Ke's Use of Table Computer to Modify Student's Sketch Works



Figure 2: Example of Ke's Use of Table Computer to Modify Student's Sketch Works

# 3-3 Distance Learning in General Classes

For the Art Appreciation course, Ke moved the original classroom Q&A to an online course. Since the classroom sessions emphasize interaction with the students, there is no great difficulty in using the materials as long as the teacher is familiar with the operation and switch of the video conferencing software.

It is a big problem to keep track of the students' attendance status in real time. At first, Ke used the Jam board function in Google Meeting, but due to the limitation of data capacity and

inconvenience of physical writing, it could only be used in classroom games. Ke thought that it was not enough, so she used the Google Slides, which can be edited online, and arranged a presentation file according to each student's seat number. In online class, students were asked to put the information they found or their assignments in the presentation, so that the teacher could read each student's work right away. For example, in the unit "Forest Magic House", the main objective is to understand the integration of ecology and public art. Ke would ask students to discover the public art in their hometown and copy the pictures on the presentation to be used as the assessment mark for the class activity, so as to enhance students' concentration in the class.

In the physical creation activities, students were assigned to use materials such as PET bottles, clay, and pigments to create their work. During the class, students were asked to turn on the camera for the teacher to monitor their work and to respond to their questions in a timely manner. "Even if a student fails to provide an immediate image, he or she can catch up with the progress during the week, so we only need to keep him or her on track," said Ke.



Figure 3: Example of Ke's Student Use Google Slides to Accordworks.

## **3-4** Advantages and Challenges of Distance Learning

Ke believes that distance learning offers students and teachers the opportunity to learn to trust each other, but the trusting relationship still needs to be built through physical classes. "A compliment from me in an online class may not be as powerful as a pat on the shoulder in a physical class," she said. Despite the initial difficulties in implementing distance learning, it has instead helped teachers to develop the ability to adapt and respond at any time. It also puts teachers' professionalism to the test. Moreover, it enables students to build up the ability of independent learning, integration of learning files, and resource utilization in the field of art. It is more important to open students' interest in learning than to provide rich teaching materials and content. However, distance learning also has its difficulties. Some students coming from poor economic conditions and incomplete family functions, the equipment and materials required for online teaching may be a burden to them. Ke says schools need to show more concern and understanding when dealing with such students, and provide support when feasible. These problems are not only encountered in art classes, but also in other courses where distance learning is implemented.

## 4-1 Case of Gao: Preparation and Confrontation

The following will explain the distance teaching of high school.

At the beginning of the epidemic last year, the school had a fixed arrangement for teachers to learn how to use google classroom. In response to the government's subsequent announcement of distance teaching, the school opened google classrooms for various subjects and hoped that teachers could follow the original schedule. For courses, the school also provides a live broadcast space, so that teachers have the most direct teaching space to use. Gao said that before the formal remote teaching, all students were invited to disperse in other spaces to practice remote teaching. Therefore, they already have a basic understanding of the equipment and displays needed, but they have a basic understanding of the need for remote teaching. Teaching inevitably feels nervous, and because the change is too immediate, it is impossible to adjust the original course content in the early stage, but after adapting, it can gradually teach based on the characteristics of distance teaching.

## 4-2 Teaching Equipment

Gao has three equipments to prepare for remote teaching, one for monitoring screen, one for playing slides, and one camera. It may be two computers and one mobile phone, depending on what equipment was configured at home or school.

In terms of software, the high society uses google jamboard, Mirror, Russian roulette and other functions to help the teaching activities.

## **4-3** Teaching Situation

Gao said that he divided the remote teaching of art classes into four steps (W-O-R-K), which are Warm up, Oral Presentation, Reaction, and Keep. Warm-up is the pre-class preparation stage, which handles roll call and leads activities to improve students' concentration in class. Development to formally enter the course teaching, as well as question-and-answer activities and group discussions.

At the end of the course, it enters the stage of creative practice or oral presentation to facilitate the integration of the course. Gao takes the "Text Artist" in the first year course of high school as an example. The following will explain the details of the course: In the preparation stage, Gao uses the relevant content of the famous Taiwanese picture book-love letter as a pre-class guide to understand the visual image and connotation given by the text . Gao invites students to collect various types of advertising text, discuss them in class, and classify them together, such as: what type of font is visible, readable, or what situation the text is suitable for. After the students have a basic understanding of text design, the course enters the practical stage. The high-level practical photography demonstrates the process of font design. After that, the students start the design exercises. The high-level conference asks the students to turn on the camera to check the progress, and encourages the students to ask questions at any time. After students complete their work, they will take photos and store them in the cloud, and record the time of submission. Gao can directly view the student's work through the cloud to give a score. Gao said that the most important thing in remote teaching for art classes is to consider the ease of obtaining media, so all this class needs is

paper and markers. If more materials are needed, teachers can consider making a package of materials and sending it to students.

In addition, Gao also has a part-time university printmaking course, which requires practice. Gao will demonstrate with a physical camera, and use online resources and media to discuss with classmates how to create and exhibit. Gao encourages students to break through the thinking of creating prints in the past. If the equipment is insufficient, how to use the unique characteristics of prints to create?

## 4-4 Advantages and Challenges of Distance Learning

Gao believes that the experience of this distance teaching is good. He believes that this way of teaching is very convenient. There are more adequate preparations and strategies, or the effectiveness of the course will not be compromised. The students said that the online art class is very interesting, because they had enough time for discussion and games, there was no worry about additional preparation for the actual media. But as we know, students' classroom conditions need to be inspected and tracked more carefully, "This is the most difficult thing to master in distance teaching, so a lot of interaction is really important." Because distance teaching is really important. Overcoming the limitations of time and space, and reducing the cost of learning, you can invite experts from different time zones and regions to attend classes or seminars, which was difficult to happen in the past. Gao believes that he has a new way of thinking in teaching materials and curriculum design, and that art teachers have more room for change in the choice of practical equipment. Classrooms also no longer rely on traditional narration methods. Because of the change of teaching rhythm, teachers need to provide students with more space for activities and publications in order to make online teaching more active. Therefore, students have many opportunities for independent learning. Such diverse teaching methods can conform to the "literacy-oriented" education. The cutting and structure of the course period also need to be planned before the class, so that students know in advance what they should do at what time, it can reduce the extra time that many classes need to adapt and adjust.

Gao also mentioned that "ICT" is gradually being implemented in such distance teaching. In the past, students were often asked to use sticky notes in the courses discussed, but it was more environmentally friendly and efficient after switching to online. Including study sheets and teaching feedback, all of them can be replaced with online questionnaires. Compared with paper, teachers can get information in real time. "Appropriate use of technological resources can help teachers maintain interaction with students, and can also transform many physical teaching strategies." Gao said.

## **Conclusion and Suggestions**

Even if there is no epidemic, the trend of using information in education is inevitable. It may not be a negative thing to have this opportunity to promote it. The researcher believes that most teachers in Taiwan have a very positive attitude toward distance learning and are very willing to share resources. In the case of Ke and Gao, they are remarkable to point out the advantages of distance learning to counter the misconception that art teaching may not be effective in distance learning.

In the art class of distance teaching, teachers need to pay more attention to the convenience of students to obtain materials and the arrangement of learning activities.

Teachers should also adopt a more flexible and open mind in distance teaching to make students more interested in class. In addition to the suggestions and problems put forward by the researchers above, there are many possibilities and discoveries hidden, which can be completely overcome through the accumulation of experience in teaching practice.

The researcher organizes several important items in the distance teaching of art class.

# 1. Arrangement of Learning Activities

Different from traditional physical teaching, distance teaching breaks the limitations of time and space, and is more flexible in the number of sessions and teaching methods. In the past general teaching of interdisciplinary courses, due to the division of subjects and sections, there are often many limitations in the implementation. Through distance teaching, teachers of different subjects in the school have the opportunity to cooperate with each other, and they can also be more supportive and assisted in class management and management of distance teaching, and it is easier to achieve the goal of collaborative teaching. By strengthening cross-subject links and appropriate activity arrangements, it can also solve the physical and mental burden caused by long-term use of computer screens in distance teaching, and strengthen students' willingness and motivation to learn.

# 2. Course Materials and Resource Utilization

In art courses, a large number of practical activities are usually emphasized. When implementing distance teaching, making good use of resources is a very important part of distance teaching. Regardless of physical textbooks, digital textbooks, web-based textbooks, etc., students need to consider the conditions of their equipment and resources to avoid unequal learning opportunities. During the epidemic, many textbook publishers in Taiwan have opened remote teaching aid websites for teachers, students, and parents to use such websites to obtain learning resources. The content includes textbooks, course videos, animations, quizzes, interactive games, etc. The combination of resources makes the learning content more perfect. In addition, many art galleries and museums at home and abroad have developed multiple online learning resources. Teachers can use these online resources to facilitate topic-based discussions. In addition to allowing students to have more specialized research on art-related issues, they can also help students develop the ability to learn independently, communicate with peers, and integrate information. For the media creation part, when resources are limited, students are encouraged to make good use of materials available in the environment and to strengthen creative concepts and narrative skills through examples. For example: use the dinner time at home to practice visual aesthetics, use mobile phones to practice photography and synthesis, and strengthen the understanding and application of conceptual art.

## **3.** Equipment for Teaching

According to the distance teaching curriculum and online teaching guidelines of universities and colleges (Ministry of Education, 2020). Computer, camera lens, headset, microphone and internet are the basic software and hardware required for online teaching. In the case of remote teaching, it is recommended that teachers establish additional connection and communication channels to communicate with students, so they can communicate with students immediately to avoid unexpected situations that may lead to failure to contact. The school administration should provide support to teachers and students in remote teaching. It is recommended to record and archive with the consent of the participants during the synchronization course, so that students who cannot participate in the course immediately and have limited equipment conditions can have other forms of learning. In the teaching of art courses, in addition to using presentations and picture playback for narration, pre-recording or using the second camera lens to directly perform equipment operation demonstrations or physical projections can be used in the practical course demonstration. It is recommended to proceed before the course Provide students with a preview of the operating procedures of the documents, so that students have to watch the teacher's operation after they have a preparatory concept, and strengthen the practical concept and course focus. At present, most video software that meets the functions required for teaching, most have functions such as grouping, whiteboard annotation, text recording, screen sharing, and raising hands to speak. There are also many remote software that add interactive interfaces such as game elements and social activities. For example, many arts and cultural events are held through Gather Town during the epidemic. Teachers can use similar websites to allow students to browse, or encourage students to hold online exhibitions together, understanding that online exhibitions are not just about putting their works on the Internet. It also requires different thinking and creativity.

## 4. No Longer Based on Skills Training

The demonstration of media training and techniques in the distance teaching of art courses can be supplemented by pre-recorded teaching videos in addition to online synchronization teaching, with text explanations to strengthen reminders and precautions. However, this presentation method is still different from the effectiveness of the physical curriculum. In addition to the color, angle, and implementation process, the details are not accurately presented. Students are likely to have difficulty concentrating because they are not in the physical teaching situation. Teachers may also Due to the inability to provide immediate guidance, the teaching and learning effectiveness cannot be perfected. Since the implementation of distance education in Taiwan is a top priority under the epidemic, teachers may not be able to complete the preparation of teaching software and hardware facilities and course materials. A more flexible and open design should be adopted in the main body of the curriculum, which also allows students to be more engaged in the study of the art field.

## 5. The Establishment of a Learning Network

Distance teaching is a new attempt for art teachers in many schools. Many resources are needed to support the implementation of the course. It is necessary to find professionals in different fields to build a network together, such as the use of professional software and hardware, distance teaching techniques, and distance teaching. The way of evaluation, the status of distance teaching in each school, and the exchange of knowledge, technology, and experience will help teaching innovation and guidance. In addition, the construction of an interactive platform with students and parents will also help the curriculum to have a more complete development. It can also help students to learn in the field of art through distance teaching .The art courses under the epidemic situation, encourage self-growth, and achieve the goal of "Learning Never Stop".

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