

Chung Yuan Christian University Establishes World's First ViewSonic Hybrid Teaching Classroom

Technological progress has given rise to new forms of education. Innovative models have emerged that integrate online and physical classrooms, as well as synchronous and asynchronous teaching. These models ensure that education transcends the physical barriers of the classroom and that learning is never interrupted. They also give teachers the ability to effortlessly switch to a hybrid approach with a high level of interactivity made possible by the use of both online and classroom teaching.



Chung Yuan Christian University



Department

Department of Teaching Chinese as a Second Language



Students enrolled in the academic year 2019-2020

16,217



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Summary

In the wake of the COVID-19 pandemic, countries around the world have taken border control measures and implemented lockdowns, changing not only peoples' working habits and lifestyle, but also the educational ecosystem. Once the pandemic abates and people's lives return to normal, educational models that combine school and home learning will become the norm. [ViewSonic](#), the leading global provider of visual and educational solutions, has overcome major challenges to create a hybrid teaching classroom solution in response to demand from educators - a solution that takes into account the overall teaching environment, the needs of teachers, as well as the requirements for actual courses. The solution enables teachers to simultaneously teach on-site and remotely, successfully transcending the limitations of physical classrooms.

Challenge

In recent years, the internet and technology have developed rapidly, boosting global demand for digital forms of learning, such as mobile and online learning. Chung Yuan Christian University has promoted online teaching for several years by using prerecorded videos so students can learn [asynchronously](#) and remotely, and developing [massive open online courses \(MOOCs\)](#), which prompted the university to be at the forefront of technology-based education.

However, teachers still encounter many difficulties in online teaching. Asynchronous distance courses need to be produced in advance by teachers using recording software or borrowing recording classrooms. On the other hand, [synchronous](#) distance teaching models—using, for example, videoconferencing—involves cameras and desktop sharing functions. Close attention must also be paid to audio quality, while operational procedures can be quite cumbersome. In addition, dividing students into different groups for synchronous and asynchronous learning requires even more preparation work.

Following the outbreak of COVID-19 in early 2020, tremendous demand for online learning has emerged. However, in remote teaching, the face-to-face, real-time interaction amongst teachers and students is much less than that of physical courses. Due to the pandemic, students being unable to return to

Three Key Success Factors

1. ViewSonic built a demonstration classroom, enabling Chung Yuan Christian University to quickly build a hybrid teaching classroom.
2. A teaching environment with a high degree of simulation, allowing teachers to continue to use their established teaching models.
3. Simplified online teaching process, allowing teachers to effortlessly learn about and adopt technological tools.

school could not muster their interest when watching prerecorded videos caused by lack of interactivity, which leads to teachers spending a great deal of time adapting to and preparing for online lectures. Hybrid education becoming mainstream is likely, since it is unclear whether the pandemic will end or grow even more severe. Therefore, preparing for the worst-case scenario is of key importance, to ensure the quality of education is properly safeguarded.

Solution

Having considered the various challenges faced by the university and its teachers and students, ViewSonic created a hybrid teaching classroom for the Department of Teaching Chinese as a Second Language, which meets the demands of all types of education. ViewSonic's advanced technology allows for the seamless integration of different needs, offering the best possible outcomes for the overall teaching environment, teachers, and courses.

The core purpose of the ViewSonic hybrid teaching classroom is to give equal weight to classroom and online teaching. It fully integrates online teaching into the classroom and enables teachers to interact with remote students in the same way as with students who are in the classroom. The hybrid teaching classroom uses the [ViewBoard](#) interactive display, the [myViewBoard](#) digital whiteboarding solution, projectors and other hardware equipment, and software solutions. Teachers can simultaneously see students in the classroom and students participating remotely, and can synchronously conduct livestreams with the ability to talk directly to students watching the livestream. Furthermore, through a screen projected at the back of the classroom, the teacher can view the status of the class and does not have to constantly look back towards the whiteboard. The teacher can thus focus more on the course or activity and maintain a high level of interactivity with the students.



▼ Increased interactivity with the ViewBoard interactive display

Key Aspects of the ViewSonic Hybrid Teaching Classroom

- **ViewBoard interactive display:** The 86" interactive display installed at the front of the classroom is equipped with the myViewBoard digital whiteboarding solution, enabling teachers to conduct varied interactive teaching. For example, they can make notes on, edit, or create content on the display or image-based materials in real time. They can also create different types of tests, such as multiple answer tests or quizzes.
- **myViewBoard digital whiteboarding solution:** This platform provides an open environment capable of supporting different systems. Students can take part in remote learning without any restrictions associated with their location. In a virtualized classroom, teachers and students can take advantage of easy-to-use video connections for discussions and collaboration. With the help of a wide range of tools, the platform delivers a fun, interactive, and efficient virtual learning experience.
- **Pen display:** This technology allows teachers to maintain a handwriting habit and write things on a professional 13.3" screen, which can instantly be projected on the ViewBoard.
- **Two projectors:** Two images are shown at the back of the classroom. One projector displays a real-time view of the teacher doing his or her work at the front of the room, while the other projector shows students participating in the class virtually. The projectors can also simultaneously show teaching slides and the situation in the classroom. This generates even greater teaching flexibility in a multiscreen teaching environment.
- **Two cameras:** One camera is installed in the middle of the classroom and records the teacher; its panning camera follows the teacher's movements and automatically selects the best lens. The other camera, installed at the front of the classroom, records the students in the room, giving students who are participating virtually a sense of being in the classroom with the teacher and their fellow students.
- **Wireless microphone:** The microphone directly records the teacher's voice and transmits it synchronously to the sound system in the classroom, the online teaching system, and the livestream.

Outcome

To ensure the pandemic does not affect student learning, the ViewSonic hybrid teaching classroom fully simulates traditional teaching situations and covers the real classroom, remote teaching, livestream teaching, and recorded teaching. It also enables teachers to quickly implement remote teaching without any extra effort and accelerates the spread of hybrid teaching models around the world.

Students: learning will not be interrupted

Since ViewSonic created the hybrid teaching classroom for Chung Yuan Christian University's Department of Teaching Chinese as a Second Language, overseas students who have been unable to return to Taiwan because of the pandemic, can still continue to interact with teachers as if they are in the same classroom. If they are unable to attend the class, students can watch the recorded video of the class at a later time to keep up with their studies.

Teachers: an one-stop solution integrating synchronous and asynchronous functions

Teachers are able to meet online synchronous and asynchronous teaching demand by giving a class just once. Furthermore, the environment and interactive nature of the classroom can all be transported online so that teachers do not have to alter their teaching habits and can focus on what they are trained for, which is teaching. The hybrid teaching classroom embeds online teaching equipment into the classroom, eliminating the need for complex setups seen in classrooms built exclusively for online teaching. This also respects the teaching philosophy of teachers and addresses the reservations they may have about using technological tools. The easy-to-use and intuitive operating interface of the myViewBoard software offers teachers the ability to easily create even more content and immediately find supplemental content online, enlivening teaching and creating even more space for meaningful interaction with students.

Universities: no limits on the number of students

Since students can easily connect to the hybrid teaching classroom remotely and can also interact with other participants through the livestream, schools are no longer bound by the physical limitations of the classroom, which can normally only accommodate several dozens of students. For instance, during a regular class, Lien Yu-jen, Account Manager at Chung Yuan Christian University's Mandarin Learning Center, teaches 60 students who are in the classroom or take part through a synchronous teaching platform, as well as another 100 students and teachers who participate through an online, interactive livestream. The class is then watched another 1,000 times or so asynchronously,

that is, after the actual class has ended. Hybrid teaching not only increases the number of students that can be taught in a single class or course, but also eliminates all barriers toward the dissemination of knowledge.



▼ ViewSonic hybrid teaching classroom at Chung Yuan Christian University

Outlook

Technology can help move existing teaching strategies far beyond their traditional scope. Indeed, the hybrid teaching classroom developed by ViewSonic for Chung Yuan Christian University marks a new milestone in the application of technology in the field of education. Looking ahead, ViewSonic will use this highly successful experience to establish collaboration with even more partners in the global technology education industry chain, further promoting the hybrid classroom and developing even more innovative teaching models with the help of technology. The goal is to let schools in all corners of the globe enjoy the benefits of technology-based education. For example, education equality can be further enhanced if schools or private educational institutions in remote areas can make use of hybrid classrooms. This will allow students in such areas to receive the same level of education as students in urban areas.

Hybrid Teaching Classroom Setup at Chung Yuan Christian University



Item	
1	myViewBoard software
2	86-inch ViewBoard
3	Projector
4	PTZ camera
5	Wireless microphone
6	Media station for streaming

Comparison of Different Online Teaching Models

Online teaching model	Key aspects for teachers	Key aspects for students
Broadcasting of prerecorded videos	<ul style="list-style-type: none"> The teacher must use recording software or borrow a classroom with the recording function to record by themselves. 	<ul style="list-style-type: none"> This model is in asynchronous mode, so students cannot get replies immediately after asking questions. The teacher is teaching while standing in front of a camera, diminishing the experience of going to class. A video of the class can be watched asynchronously, allowing students to review the material.
Live videoconference	<ul style="list-style-type: none"> The teacher must set up a camera or a desktop sharing function and pay close attention to the sound quality; operations are cumbersome. 	<ul style="list-style-type: none"> Classes can be followed synchronously and questions can be asked immediately; however, degree of interactivity is limited. A video of the class can be watched asynchronously, allowing students to review the material.
ViewSonic Hybrid Teaching Classroom	<ul style="list-style-type: none"> The teacher does not have to adjust their way of teaching and can simultaneously transmit knowledge to people in the classroom and people participating online. 	<ul style="list-style-type: none"> Classes can be followed synchronously and questions can be asked immediately. Students can also interact with their classmates. A video of the class can be watched asynchronously, allowing students to review the material. The video created of the class fully records the teaching and interaction, giving students watching it a sense of immediacy.



Founded in California, ViewSonic is a leading global provider of visual solutions and conducts business in over 100 countries worldwide. As an innovator and visionary, ViewSonic is committed to providing comprehensive hardware and software solutions that include monitors, projectors, digital signage, ViewBoard interactive displays, and myViewBoard software ecosystem. With over 30 years of expertise in visual displays, ViewSonic has established a strong position for delivering innovative and reliable solutions for education, enterprise, consumer, and professional markets and helping customers 'See the Difference.' To find out more about ViewSonic, please visit viewsonic.com.