

## E-Education & Learning Award

Award #1: Individuals, academic institutions, corporations, or NGOs

Award #2: Government authorities

Award Criteria: The Digital Age is requiring new sets of skills, and adoption of new models of public education that emphasize coding, programming and computer science must be adopted. Contrary to popular belief, the digital gap is widening, putting pressure on countries to catch up. Public education must adopt new approaches to lifelong learning. This award will be given to the best electronic learning project. We seek any innovative new technological tool, or any project that uses existing electronic learning tools in an innovative way. Such projects should facilitate and support learning through the use of information and communications technology.

**YOUR NOMINEES (limit three nominations per award category).** *Please specify whether the nominee(s) are for the private or public sector category.*

**Government authorities- Taipei City Government, Department of Education**

**REASONS FOR NOMINATION** (NOTE: It is important that you make a detailed description of the nominee and why you think the nomination is justified. The absence of a detailed summary of qualifications as they *relate* to the above-mentioned award description will make it difficult for the awards committee to make an appropriate assessment of the candidate):

### **Taipei Cooc Cloud 4.0 --- COOC 4.0 Creates an Interactive Social Media for Parents, Teachers, and Students**

Since 2016, Taipei Cooc-Cloud gathered course teachers in Taipei and recorded more than 11,248 online learning videos covering a total of 24 subjects from elementary school to high school. In addition, 21 electronic databases were developed. Taipei Cooc-Cloud breaks through traditional blackboard-based teaching methods by introducing such digital technologies as AR and simulation animation for teachers and students to use in and after class. The introduction of such new technologies allows students to understand the contents lectured more deeply. In 2021, an upgraded version of Taipei Cooc-Cloud was launched, and a Cooc APP was developed as a parent-teacher-student platform, effectively closing parent-teacher distance and reducing the workload of school administrative staff. In addition, it offers the functions of electronic contact books, online survey forms, campus electronic payments, activity registration, score query and more. Therefore,

apart from assisting students in their studies, Cooc-Cloud strives to satisfy their daily needs in a smarter world.

The Department of Education (DOE) of Taipei City Government launched the COOC 4.0 in the 110th school year. The COOC 4.0 provides parents, teachers, and students of all levels of schools in Taipei City with the access to the campus network, classroom information devices, personal digital devices, online learning resources, and campus administrative systems, so as to reduce the burden on the administrative team on campus and provide online interactive services among parents, teachers, and students, bringing smart transformation to the campus life. In response to the increasing administrative workload of schools in recent years, which has made it difficult to recruit new staff, as well as the epidemic that has made remote teaching and online paperless services the new norm in education

The COOC 4.0 provide reward mechanisms for individuals, classes, inter-schools, and the school board through various types of data such as click-through rates and task completion rates. It will expand the existing campus rewards service and create an incentive system for alternative classroom teams. The COOC 4.0, in addition to individual honors, peer cooperation and mutual support will not only diversify teachers' classroom operations, but also deepen the integration of life, social media, and learning for greater learning momentum.

#### **Information from on-campus to off-campus extends to the home**

The COOC 4.0 is a software system designed to promote cooperation among parents, teachers and students, and its applications include classroom and campus life. The system integrates several terminal devices on campus with students' digital student cards. Therefore, from the time students enter the campus, almost all of their campus life can be connected with COOC 4.0. In terms of connecting the classroom to the home, parents are often too busy to check on their children's school status after work.

If there are multiple children at home, it is often necessary to use different paper copies to complete school surveys, which makes it difficult to keep track of each child's school performance at the same time. The COOC 4.0 integrates the school administration systems of different school levels so that parents can keep track of each child's performance and documents due with just one finger switch, which is very convenient.

#### **Linking campus and home for better communication between teachers and students**

The COOC 4.0 provides teachers with a set of online classroom tools to assist teachers in their classes and facilitate student interaction in the classroom, allowing teachers and students to communicate more smoothly and encouraging students to

become more engaged in their learning.

The COOC 4.0 plays a vital role in providing eight smart education integration services, including online roll call/leave, grade/absence/reward/penalty inquiries, arrival and departure notifications, classroom tools, class contact book, reply slip for survey form, information dissemination center, and code registration.

**Our solutions are as follows:**

1. Online Roll Call/Leaves Request: COOC 4.0 provides online leave request and roll call functions instead of paper copies. Parents can use their cell phones to complete leave requests, and teachers can do roll call online.
2. Grade/Absence/Award/Penalty Inquiry: Parents used to wait for transcripts for a long time. COOC 4.0 allows parents to check student grades, absences and award records with one click.
3. Notification of arrival and departure: Notifications of students' arrival and departure were previously sent by SMS and Line messages. COOC 4.0 provides free arrival and departure notification function, parents can receive messages on COOC 4.0 to keep track of students' arrival and departure status.
4. Classroom tools: Teachers used to teach through blackboard and offline tools. COOC 4.0 allows teachers to have online classroom tools, which help teachers and students communicate more smoothly.
5. The Students Contact Book: Traditional paper contact books need to be transcribed by students. With COOC 4.0, teachers can publish electronic contact books so that students and parents can prepare in advance.
6. Survey return: In the past, many matters required surveys of intent, and the production of paper copies created an administrative burden. Through COOC 4.0, teachers can distribute online surveys and implement paperless administration.
7. Message Center: Communication among parents, teachers and students used to be done through phone calls, which caused confusion for all parties. The COOC 4.0 Message Center provides one-way messages to parents and students through their cell phones.
8. QR Code Registration: Waiting in long lines for signing paper copies and counting the number of absentees is a big job for the school. COOC 4.0 provides the QR Code Registration for the backend to generate the statistics automatically without any delay.

**Use COOC 4.0 to achieve AI for Adaptive Education**

In the future, the COOC 4.0 will use campus personal terminals to conduct model analysis (e.g. Convolutional Neural Network, CNN, Recurrent Neural Network, RNN) to create a digital footprint of students' learning and campus life from elementary school to high school. It can collect students' personal data across school levels to

help schools provide students with personalized learning diagnoses and personalized smart campus services (e.g. healthy meal suggestions). It can also provide municipal and bureau-level education policy suggestions, such as early warning of campus epidemics, water and energy management advice, etc.

**Single-account, all-academic-level related services with reduced requirements:**

COOC 4.0 integrates with the single identity verification account of Taipei City campus, and multiple identities can be switched quickly without being restricted by academic level or academic system. COOC 4.0 cascades with APP and WEB. After the user logs in, the web pages integrated with the external app can maintain their login status, achieving a true one-stop service.

**Highly integrated with various terminals, providing a standardized and scalable interface**

COOC 4.0 was developed as a Hybrid APP, taking into account user experience and cross-platform development advantages. The APP is directly linked to the COOC Cloud website and the large-size LCD screen in the classroom. The three underlying services in the platform: "Message Delivery", "Qrcode", and "Payment System", all provide standardized interface specifications. Information service providers can offer their existing products under the common integration standard. The existing products can be integrated efficiently through the interface, which can significantly shorten the development time of future projects.

COOC 4.0 uses technology to facilitate the establishment of a highly interactive community for parents, teachers and students, and to integrate intelligent administration, teaching and learning. Moreover, our COOC 4.0 will also expand smart campus projects such as smart health care, and open up any service that can meet the needs of parents, teachers and students. We will establish account integration and standardized specifications, and provide opportunities for various services to hit the shelves. We will also provide a platform for technology education service providers who are interested in cooperating with Taipei City to showcase and try out the functions for parents, teachers and students with a view to creating a new type of business model.

**SUPPORTING INFORMATION:** Please send any supporting information to the address above, including information from candidate (i.e. excerpt from program description, web site print-out, press release, etc.)

1. <https://youtu.be/Kh8GCmexZ74>

2. <https://www.youtube.com/watch?v=VwsKAdykqFE>
3. <https://www.youtube.com/watch?v=0hO-yYdozGA>
4. <https://www.youtube.com/watch?v=KB0UkvoOjyk>

**NOMINEE CONTACT INFORMATION** (for award follow up and coordination)

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