

## CASE STUDY

# Teikyo University Elementary School

Encouraging students to learn how to act independently with Logitech devices for Apple® iPad

“This has resulted in greater ease of output and students’ enhanced ability to communicate their thoughts, and has also worked to let trial-and-error with sharing and co-creation take root. Not a single cracked screen or breakage has occurred with the Rugged Combo 3 equipped”

- SHOTA KOBAYASHI, HEAD TEACHER OF ICT

## Overview



Teikyo University Elementary School, located in Tama City, Tokyo, upholds the educational philosophy of “de-equalization and development of sparkling individuality”. With small classes of 20 students or fewer, the school offers English education from the first grade, programming education, and ‘satoyama’ education that utilizes a rich natural environment. School implements problem-solving education that allows students to capitalize on their individuality in order to become the person they want to be. The school has been focusing on the use of ICT conducive to enhancing individualized and collaborative learning since early on, and has been using tablet devices in the classroom for more than 10 years prior to the launch of the GIGA School Project\*.

All classrooms are equipped with electronic blackboards that can be mirrored on tablet screens, allowing students to share what they have learned with the whole class and simultaneously make edits to it while exchanging opinions. Such a collaborative process helps students to cultivate empathy and hone their ability to respect diverse values. The iPad, plus the Rugged Combo 3 Protective Keyboard Case and Digital Pencil Crayon by Logitech, have been further enhancing those results since they were introduced in 2021.

\*The GIGA School Project is an initiative launched in 2019 by the Ministry of Education, Culture, Sports, Science and Technology, one of the Japanese government agencies, to provide every student in Japan with a computer and high-speed network access. “GIGA” stands for “Global and Innovation Gateway for All.”

-- From the Ministry of Education, Culture, Sports, Science and Technology (MEXT)

<b>SCHOOL</b>	Teikyo University Elementary School
<b>INDUSTRY</b>	Education
<b>LOCATION</b>	Tokyo, Japan
<b>SOLUTIONS</b>	Logitech Rugged Combo 3 Logitech Crayon
<b>WEBSITE</b>	<a href="http://teikyo-sho.ed.jp">teikyo-sho.ed.jp</a>



**300** The number of children who have used the Rugged Combo 3 and Crayon over the past 4 years.



**x1.8** The typing speed of 6th graders is 1.8 times faster than what a typical office job requires



## Challenge

Teikyo University Elementary School views tablet devices as stationery just like pencils and notebooks. The deciding factor in choosing the iPad in terms of a learning tool that can be used as a second nature piece of stationery was the speed it is able to boot up. Classes can be continued while maintaining a sense of speed and motivation in the students. In addition, because the iPad can be operated intuitively, students can discover easy-to-use functions on their own. Another reason the school chose the iPad is because the necessary apps can be introduced at a fast pace while gauging the students' reactions.

On the other hand, a problem with using the iPad like a piece of stationery was that it was prone to breakage when dropped in its current state. Head Teacher of ICT Shota Kobayashi says, "We use iPads not only in the classroom, but also for onsite 'satoyama' learning, plus students take them home as well. So, there is inevitably a risk of them getting dropped. A protective case was essential to boost their durability. Since typing is a skill students will also use throughout their adult life, we decided a keyboard was needed as well."

## Solution

After considering numerous products, Teikyo University Elementary School chose the Logitech Rugged Combo 3 Case with an Integrated Keyboard for iPad. Kobayashi adds, "The biggest deciding factor was its durability against scratches and vibration, which cleared the MIL-STD-810g drop test standard, a procurement standard used by the US military. Even after three-plus years since we introduced the device to our classes, there has not been a single case of damage with the Rugged Combo 3 equipped. Since we are really using them like an item of stationery, we often drop them on the floor, yet cracked screens haven't occurred at all with the case equipped."

The main focus of the keyboard during the consideration stage was whether or not it had a JIS layout (Japanese keyboard layout standard). Now, following its implementation, the durability of the keyboard has also proved helpful. Teacher Kenya Hirasawa says, "The sealed design means

that keys don't fall out or dirt gets stuck in them, and because you can just wipe it down if it gets wet or dusty, it's easy to use. It's also easier to study outdoors now, like when taking pictures of plants in season."

ICT education tends to conjure up images of learning only in cyberspace. However, the use of Rugged Combo 3 has instead had the effect of enhancing learning in a physical natural environment.

Moreover, the Crayon was also introduced at the same time as Rugged Combo 3. "We chose Crayon because it does not require pairing, the process of registering and configuring a connection between devices, and because it is ready to use right when you turn it on, while maintaining a long charge. Even if you forget to charge the battery, you can use it for roughly half an hour just by charging it for about two minutes. When storing the Crayon in the Rugged

Combo 3, because the storage location is easy to find, there is almost no chance of losing track of where the Crayon has gone or it going missing. Students use the Crayon like it's second nature because it's flat-shaped, doesn't roll around during class, and is easy to hold securely.



# Results

The positive effect of adding the tools of a protective cover, keyboard, and digital pencil to the iPad to use it as if it were stationery is apparent in many aspects.

The first of those aspects is typing. Masato Adachi, a teacher in charge of a third-grade class, says, "Initially, it took 15 to 20 minutes to input one line of text. After about six months, however, it took only three to five minutes to write a full sentence on-screen." According to a December 2022 survey held by Teikyo University Elementary School, students typed 62.7 words per minute in third grade and 145.3 words per minute in sixth grade. It is said that the typical office job requires about 80 characters to be typed per minute. Given that, it is clear that the skills of these students have been cultivated considerably.

Their enhanced ability to type has also resulted in more active communication. Kenya Hirasawa, a teacher who promotes ICT education alongside Adachi, says, "Students who are not good at speaking in front of others or whose hands stop moving when they try to write on paper can now express their opinions smoothly and have lively interactions with classmates by using a keyboard." Greater ease of output enables students to directly express their thoughts and ideas. Progress has also been made in sharing and co-creation.

Shota Kobayashi, the Head Teacher of ICT, says, "I feel that more and more students have come to enjoy communicating with others. In their efforts to communicate through videos, programming,



and other efforts, when I see students discovering functions and methods of practical use on their own and proceeding methodically while working together with their friends, I get a true sense that the abilities that prove useful in society are being cultivated in elementary school.

I also feel that by being able to write and erase things freely, students are developing the art of trial and error. The easy-to-use keyboard and digital pencils are helpful in developing the ability of students to act independently, such as trying to do or write something first before wondering whether it's possible or not."

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- KENYA HIRASAWA, TEACHER

This increased student independence is undoubtedly breathing greater life into Teikyo University Elementary School's distinctive styles of learning in the form of 'satoyama' learning, education that makes use of educational toys, and entrepreneurship education. In its pursuit of even greater ease of use, Teikyo University Elementary School has already made the decision to also implement the Rugged Combo 4, the successor to the Rugged Combo 3, and the latest version of the Crayon (Type-C), the successor to the Crayon (Lightning) currently in use. Teikyo University Elementary School spoke of how the above three teachers will spearhead the school's ongoing efforts to make use of ICT in education in the future, saying, "Going forward, we intend to keep doing our utmost to support students in discovering their own way of life."