

Case Study

Nampyeong Middle School

Leading future-oriented education through student collaboration

Strengthening personalized, self-directed AI learning with the introduction of Lenovo Chromebooks and Google Workspace for Education, proving the effectiveness of educational technology

Founded in 1966, Nampyeong Middle School is the first secondary education institution in the region and established Nampyeong Middle School Dado Branch School in 1968. Since its founding, the school has embraced future-oriented education and community-based learning as core values, continuously implementing a variety of digital and AI-focused educational activities in preparation for a rapidly changing society. In particular, the school has laid the foundation for becoming a future-ready institution by building video conferencing systems, AI-powered digital infrastructure, and an AI science lab to help students dream about their futures and work toward achieving them.

In response to digital transformation, Nampyeong Middle School and its Dado Branch School have implemented a one-device-per-student policy aligned with the introduction of AI digital textbooks, and are promoting personalized, self-directed AI learning. They are also working toward the integrated use of AI and digital technology in the learning process.

By introducing the Lenovo 500e Chromebook Gen 3 and Google Workspace for Education, Nampyeong Middle School and its Dado Branch School have increased student engagement and provided an inclusive, accessible, and personalized learning environment. This digital infrastructure allows students to engage in differentiated and active learning experiences, while enabling teachers to deliver efficient and structured instruction using a variety of teaching tools.



Challenges

As digital transformation accelerates, understanding and utilizing digital technologies has become an essential competency in the field of education. The need to enhance both digital literacy and AI literacy is increasingly emphasized through edtech-based collaborative learning.

To respond to these changes, Nampyeong Middle School and its Dado Branch School have explored various strategies for adopting and utilizing edtech. At small schools like the Nampyeong Middle School Dado Branch School, where there are typically fewer than ten students per class, one-on-one feedback between teachers and students is effective, but interaction among students tends to be limited. To address this issue, the schools identified the need to increase the use of digital devices to strengthen students' digital and AI literacy, and to create a student-centered learning environment that fosters real-time communication and collaboration.



Lenovo Chromebooks are designed to be safely used by students both inside and outside the classroom. Their strong durability and versatility are key strengths. Integrated with various Google programs such as Classroom and Gmail notifications, they provide an optimized learning experience in real educational settings.

Google Workspace makes sharing lesson content and collaborating easy, creating a more effective and enjoyable classroom environment. It also simplifies collaboration with fellow teachers and automatically saves and stores all records, significantly reducing the limitations of time and space when managing tasks.

- Teacher A, Nampyeong Middle School



Solution

To enhance students' digital and AI literacy, promote collaboration among students, and improve teachers' productivity and instructional effectiveness, Nampyeong Middle School and its Dado Branch School introduced the Lenovo 500e Chromebook Gen 3 and Google Workspace for Education.

Chromebooks serve not only as independent learning devices but also as key platforms that support educational tools like Google Workspace for Education. With these tools, teachers can efficiently prepare and conduct lessons, while students engage in differentiated, participatory learning in an inclusive and accessible environment. Web-based AI tools supported by Chromebooks, along with the newly released features in Google Workspace for Education Plus, provide students with an expanded learning experience.

To help teachers design and deliver technology-integrated lessons, technical support and a professional development (PD) program were offered. Through one-on-one coaching sessions, teachers were paired with specialists to receive personalized guidance on using Google for Education tools and other digital technologies aligned with their instructional needs. These training programs deepened teachers' understanding of technology and actively integrate a wider range of digital tools into their teaching, ultimately delivering more effective and engaging instruction to students.



Lenovo 500e Chromebook Gen 3

The Lenovo 500e Chromebook Gen 3 is ideal for any learning environment, offering powerful performance, high durability, and a sleek design. With a battery life of up to 12.1 hours, it can be used throughout the day, helping to elevate the learning experience. As a convertible device with a 360-degree hinge and a built-in USI stylus, it enables students to express their creativity both inside and outside the classroom. It also supports a variety of AI tools provided by Google, such as Gemini. With Wi-Fi 6 support, students can participate in lessons, share documents, and collaborate with faster connectivity from anywhere.



Benefits

Nampyeong Middle School strengthened student participation and collaborative learning by building its learning environment with Lenovo Chromebooks and Google solutions. The various features within Google's platform served as effective collaboration tools for student interaction and group work, while online quizzes and peer feedback on shared outputs were actively conducted.

Chromebooks facilitated interaction between students and between students and teachers, further reinforcing edtech-based learning activities. Teachers became accustomed to the new edtech environment through PD sessions and an adaptation period, and later provided personalized instruction through rotating support and one-on-one feedback, helping establish a learner-centered classroom environment.

Following the introduction of Chromebooks and Google solutions, classroom orchestration improved, allowing more appropriate and purposeful use of edtech in lessons. The classroom setting also became more structured. Previously, it was difficult to foster student interaction due to the small size of classes, but after adopting Chromebooks and Google solutions, teachers actively led student-centered instruction and collaborative learning, resulting in positive outcomes.

The Lenovo 500e Chromebook Gen 3 helped students stay focused on their assignments through its intuitive interface and versatile features. Compared to tablets and laptops, Chromebooks received higher evaluations in terms of learning focus and outcomes. Notably, students performed better on problem-solving tasks. These results demonstrate the important role that the Chromebook's educational software and tools played in enhancing learning efficiency.

By using Chromebooks, students at Nampyeong Middle School experienced improvements not only in collaborative learning and creative tasks, but also in managing and submitting assignments more efficiently. These changes led to positive outcomes in academic performance, with students who used Chromebooks showing higher levels of achievement. In particular, students at the Nampyeong Middle School Dado Branch School, where one-to-one device deployment enabled continuous Chromebook use, showed significant improvements in both digital and AI literacy.

Teachers participating in the project also noted increased student interaction, more effective feedback and management of learning activities, and improved student concentration. Most importantly, teachers observed that the use of Chromebooks encouraged more students to participate in class, which they evaluated positively in terms of lesson planning and classroom management.

Overall, Chromebooks outperformed better results than tablets and laptops in various areas, including learning, activities, classroom management, and feedback delivery. Chromebooks showed clear advantages in collaborative work, creative tasks, and problem-solving abilities, indicating that Chromebooks have established themselves as more effective learning tools in educational settings.

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In small classes, using Chromebooks in lessons significantly improved students' digital and AI literacy. Students who used Chromebooks both in class and in their daily activities demonstrated notable progress in understanding and applying digital technology, developing digital thinking skills, grasping AI concepts and applications, and recognizing its impact. Their collaborative abilities also improved considerably.

The use of Chromebooks increased interaction between students and between teachers and students. This positively influenced student participation and teachers' ability to provide individualized feedback. A study of students' emotional responses while using digital devices and software found that their positive emotions increased significantly after using Chromebooks, and there was a clear shift from negative to positive emotional states. This further demonstrates that Chromebooks can be more effective tools than tablets and laptops in educational environments.

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Source

Study on the Effectiveness of Google for Education Products, 2024-1 Albus Project, Center for Future Education Innovation, Seoul National University

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Lenovo InnovED

Lenovo is partnering with Google to operate the InnovED program, aiming to expand access to smart education through technology for all. Through this program, Lenovo supports future-ready learning environments and helps enhance the digital education capabilities of students, teachers, and schools.

Lenovo InnovED program provides access to Lenovo Chromebook and diverse resources from Google Workspace for Education, driving creative education for students and teachers as well as establishment of digital-based learning environments.

Take your first step into the future of smart education with the Lenovo InnovED.

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