



Case Study



金沢大学人間社会学域附属高等学校

Kanazawa University Senior High School

Kanazawa University Senior High School gives students flexible support for application development

Avanade provides an application design and development methodology and mentorship to support learning activities as part of the school's "Time for Comprehensive Research" initiative

Do what matters

Business situation

Kanazawa University Senior High School – which is affiliated with the School of Teacher Education within the College of Human and Social Sciences at Kanazawa University – has set an educational goal to cultivate global human resources, guided by the school motto of “autonomy and independence.” According to Mr. Hiroko Muroya, a geography teacher in the school’s research planning division, Kanazawa University Senior High School’s unique feature is its emphasis on fostering students’ independence and freedom through a small group structure of 120 students per grade.

The school has been designated as a “Super Global High School” (SGH) by the Ministry of Education, Culture, Sports, Science and Technology, and has been conducting a “Time for Comprehensive Research” program for approximately 10 years. Currently, it serves as a base school for the World-Wide Learning (WWL) Consortium Support Project.

The aim of this program is to foster high-quality problem-solving skills and encourage students to reflect on their own way of life through exploratory thinking and cross-disciplinary learning. “Students at our school begin by examining local issues,” says Mr. Muroya. “In the second grade, they explore global issues and independently select a theme to work on.”

Starting in 2022, the school shifted its teaching style to a seminar format that leverages the specialized knowledge of each teacher. This new format is designed to allow for various research styles and encourages students to explore topics beyond the traditional lecture format.

“Students can become aware of an issue during a teacher’s seminar and then start researching it. However, even teachers can get confused, as they may lack experience in guiding exploratory learning, which is especially evident in the development of programs and software. There have been cases where students sought help in resolving issues with mobile apps, but their teachers were unable to assist them in app development, as they lacked the necessary resources and guidance to do so.”

- Mr. Hiroko Muroya
Teacher, Kanazawa University Senior High School

Company Name: Kanazawa University Senior High School

Country: Japan

Industry: Government & Public Services

Solution: Modern Application Development

To address this issue, Mr. Muroya was tasked with leading the “Time for Comprehensive Research” initiative in 2020. He was introduced to Avanade and we proposed a solution.

“I initially explained our issues to Avanade and discussed the support they could provide. Through repeated discussions, we determined that they would be able to assist us in developing a system that enables students to address app development challenges on their own. As a result, we decided to entrust the project to them.”

- Mr. Hiroko Muroya
Teacher, Kanazawa University Senior High School

Furthermore, Mr. Tatsuya Hotta, group manager of the business and technology integration group at Avanade, emphasizes the importance of considering support measures that can alleviate the burden on busy teachers when making a proposal. Mr. Muroya adds that the decisive factor in selecting Avanade as a partner was not only our support for app development, but also our willingness to provide assistance with any other issues. While research themes may cover a broad range of topics, Mr. Muroya believes that our ability to help resolve problems beyond system development was a key factor in the school’s decision.

Solution

In 2021, we began providing our “flexible support” service for the school, which offers tailored measures and support, including training and Q&As, to address specific business issues.

According to Mr. Muroya, it was necessary to establish a communication channel between teachers, students and Avanade prior to receiving support for app development. This was to showcase our capabilities and the support we could offer. This decision was made because the school's first-grade students, who were just beginning their high school research class, may have difficulty understanding how to collaborate with our team if they were introduced suddenly. Therefore, it was decided to introduce Avanade when the students had almost finalized the task they would be working on.

Mr. Muroya says our team communicated with students and explained the problem-solving process in an easy-to-understand way, starting with what “exploration” means in the first place. We helped resolve issues at the school using an approach that included problem finding, considering hypotheses, verification and problem-solving measures. Students favorably received the presentation describing how Avanade could develop an app with them.

“A number of students that exceeded our expectations came forward, and the approach to app development started full scale.”

- Mr. Hiroko Muroya
Teacher, Kanazawa University Senior High School

App development activities were conducted virtually between students and an Avanade mentor every Friday. “Students with an interest in technology gathered, and Avanade provided meticulous support,” says Mr. Muroya. “While the research was ongoing, I merely observed them onsite without intervening.”

Mr. Hotta emphasizes that his focus during the support process was to assist the students in designing and developing applications while searching for technology-based solutions. “I aimed to provide advice that would enable students to take initiative and find solutions to problems independently by creating a methodology to resolve them,” he says.

As an example, one of the developed apps focuses on the use of IT to mitigate the decline in fish consumption. The idea behind this app originated from a student who is passionate about fish and fishing and wanted to prevent the decreasing trend of fish consumption, particularly among young people. To address this issue, he developed a picture book app that showcases various types of fish and provides information on how to prepare them, with the aim of dispelling negative perceptions about fish and highlighting their positive effects.

In addition, we provided support for a modern art exhibition hosted by Mr. Muroya. We facilitated this event by creating an online presentation space that allowed people to access and appreciate the portfolios and works of the students. As the art had value as pieces that were based on thorough exploration, we requested that the students write a caption explaining why they created the work or what new value the work brings. These captions were made available for viewing on the online gallery, allowing the works to be effectively communicated to the world.

Results

Two presentations were held at the school in 2022 and 2023 to showcase the results of the research classes. The first presentation was a special event held in conjunction with an annual research conference, where external guests were invited to attend. Mr. Muroya says this conference was an opportunity to share research ideas and foster academic exchange.

Mr. Hotta, who participated in this presentation, says, "I visited the event and spoke with many students. I felt that they all had enthusiasm and motivation." The students who were able to effectively express their enthusiasm during the class delivered excellent presentations, and Mr. Hotta expressed his desire to continue supporting them, opening doors for their future success.

"It's great that we can now do what we couldn't do before, such as app development. Avanade has provided us with a number of options to address the teachers' aspirations and issues. Time is scarce on school premises, and teachers carry a considerable load. However, with the assistance of Avanade, we believe that our students are making progress without putting extra demands on us. Having a caring adult other than their teachers to empathize with them is highly motivating."

- Mr. Hiroko Muroya
Teacher, Kanazawa University Senior High School

Mr. Muroya says that we've established a framework for app development that involves the one-on-one supervision of students during each task. He believes that the benefits of this support and approach directly contribute to the students' learning. He also believes they have benefited greatly from our support in addressing issues raised by teachers, such as the time and effort required for guiding research, or the inability to take on challenges even though they want to.

"Avanade also participated in the second presentation, spoke to students and gave their honest opinion, which naturally paves the way for future collaborations."

- Mr. Hiroko Muroya
Teacher, Kanazawa University Senior High School

In conclusion, Mr. Muroya states that, "It is important to connect more openly with the outside world to explore new possibilities." He also expects that we will continue collaborating in nurturing students capable of creating a society that is open to free possibilities.

About Kanazawa University Senior High School

As a high school affiliated with the School of Teacher Education, College of Human and Social Sciences at Kanazawa University, Kanazawa University Senior High School conducts both theoretical and empirical research – as well as practical teaching – in addition to regular high school education. The school's motto is "Autonomy and Independence," and its aim is to cultivate individuals capable of actively participating in the global society. The school has been designated as a base school for the WWL (World-Wide Learning) Consortium Support Project, which is being promoted by the Ministry of Education, Culture, Sports, Science and Technology.

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About Avanade

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