Technovation Girls 2024 Report

Introduction

We are pleased to report that Technovation Girls Japan 2024 has successfully concluded. As the official ambassador for Japan, I would like to express my sincere gratitude to all the cooperating companies and individuals who supported the program. This year, participants from all 47 prefectures gathered, with 409 applicants at the registration deadline. Eventually, 85 teams of elementary, middle, and high school students completed the five-month program, the highest number of participants to date. As a result, seven teams were selected for the world semifinals, where they competed with peers from around the globe. (The final results will be announced in early July.)

Despite managing their studies, many students found immense value in meeting peers nationwide and challenging themselves in programming and business development. This has motivated us to strive for further progress in the coming years.

About Technovation Girls

Technovation Girls is one of the world's largest technology education programs aimed at nurturing the next generation of female IT entrepreneurs. It is hosted by the US-based STEM education non-profit organization, Technovation (https://technovationchallenge.org/). Since its inception in 2010, more than 55,000 participants from over 100 countries have taken part in the program.

The program targets girls and gender minorities aged 10 to 18. Each team of 1 to 5 members develops a mobile app and business plan to solve a local problem over a four to five-month period, competing in idea pitching, technical skills, and entrepreneurial spirit. Research on past participants has shown that the program boosts confidence in computer science, business leadership, and entrepreneurship. The official language of the program is English, and all materials and submissions are in English. In Japan, Waffle serves as the official ambassador, supporting Japanese teams with the help of domestic sponsor companies.

Technovation Girls Japan 2024 Schedule

December 10, 2023: Opening Ceremony (Onboarding)

Mid-December 2023 to mid-January 2024: Business Development Course (4 sessions x 3-4 hours)

January 6, 7, February 3, 4, 10, 11, 17, 2024: App Development Course (7 days x 2 hours)

Mid-February 2024 onwards: Team Development Begins

April 25, 2024: Submission Deadline to US Headquarters

May 25, 2024: Japan Official Pitch Event by Waffle

June 3, 2024: Announcement of Technovation Girls World Semifinalists

Early July 2024: Announcement of Technovation Girls World Finalists

October 2025: World Summit hosted by Technovation Girls US Headquarters

Initiatives for 2024

One of our goals this year was to raise awareness about the program in prefectures where past participants have not been represented. With the help of many companies, educational institutions, and individuals, we launched a nationwide recruitment PR campaign. Particularly for teenagers, encouragement from parents and teachers can provide the courage to take the first step. Therefore, we provided detailed explanations not only to the students but also to adults, helping spread the information. Additionally, for the first time, the program received support from the Ministry of Education, Culture, Sports, Science and Technology.

At the beginning of the program, we offered free "App Development Courses" and "Business Development Courses," designed to equip even beginners with the necessary skills to create apps addressing social issues. This year, we also introduced a new course on the basics of AI within the app development course to make it easier for participants to incorporate AI elements into their projects.

Since the program is entirely online, having a computer and Wi-Fi environment is essential. Waffle provides free rental equipment to students who need it. This year, 54 laptops and 15 wifi devices were loaned to participants by the management for 5 months. Furthermore, nearly 150 mentors, including professionals and university students, supported the 85 teams in submitting their projects to the US headquarters.

App Development Course

Since 2022, Technovation Girls Japan has been offering a seven-day app development course using the visual block-based mobile app construction framework "Thunkable." This year, we also added a course to learn the basics of AI to enhance understanding and interest.

Students watched videos and completed assignments as pre-study and gathered for 120-minute online sessions, where they received focused lectures from instructors. Software engineers from IT companies volunteered as teaching assistants (TAs) to answer questions during the sessions.

Business Development Course

Most participants in Technovation Girls Japan experience business creation for the first time. Therefore, we held a series of workshops over four days to help participants turn their desire to solve social issues into business solutions, with the cooperation of Maiko Kojima, founder, and CEO of Crafter Co., Ltd. To emphasize the importance of team building, we also received support from Airi Horie, CEO of Women's Startup Lab, who shared insights and examples from a global perspective.

The business development course starts with exploring social issues that participants want to address, forming teams based on similar themes. Teams then delve deeper into their issues, design interviews with personas, create business models, and present their product pitch videos twice, receiving feedback to refine their projects.

Japan Official Pitch Event

In addition to submitting projects to the US, the Japan chapter holds its own annual pitch event. Participants pitched their developed mobile apps online for three minutes. Ten finalists, who passed the first round of judging, participated in an in-person pitch event held in Tokyo on May 25th (Saturday).

The participating sponsor companies awarded prizes to outstanding teams, and the Minister of Education, Culture, Sports, Science and Technology awarded the grand prize to one team.

Minister of Education, Culture, Sports, Science and Technology Award:

- **Team Name:** Spes Dojo
- **App:** OriPal (An app to prevent dementia using origami)

MetLife Award (provided by MetLife Insurance Co., Ltd.):

- **Team Name:** Spes Dojo
- **App:** OriPal (An app to prevent dementia using origami)

Lenovo Award (provided by Lenovo Japan LLC):

- **Team Name:** Majaboot
- **App:** SmooPe (An app for wheelchair users to navigate train transfers)

Sony Group Award (provided by Sony Group Corporation):

- **Team Name:** Anemone
- **App:** Evammu (A disaster support app for the hearing impaired)

Japan Research Institute Award (provided by Japan Research Institute, Limited):

- **Team Name:** Votivation Girls
- **App:** VOTE QUEST (An app for youth political participation)

Unity Award (provided by Unity Technologies Japan K.K.):

- **Team Name:** latte link
- **App:** Flag Mate (A communication app for students and foreign tourists)

Live Stream Archive: YouTube

Exchange with the Mexico Chapter

As a unique opportunity in a program involving over 100 countries, we set up an annual feedback exchange with participants from other countries to broaden perspectives. This year, we reached out to the Mexico chapter, with whom we had frequent interactions on social media, and organized an exchange meeting. Although neither country has English as its first language, we shared middle and high school cultures and divided into groups to showcase each team's apps. Knowing the progress of their international peers motivated participants to push through the final stages of their projects. After the event, participants exchanged contact information, creating a sense of global camaraderie through Technovation Girls.
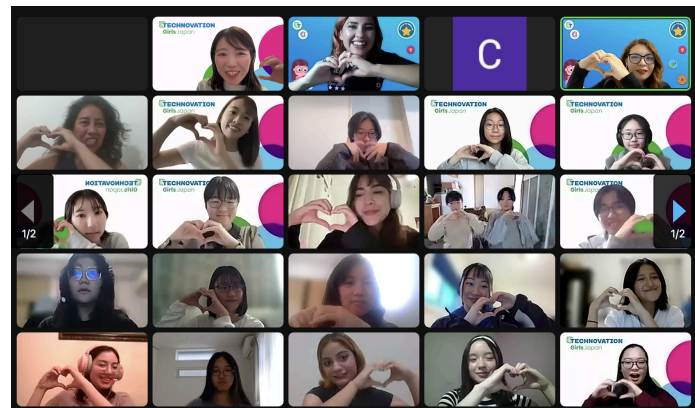
Career Counseling and Career Events

During the program, we also focused on providing opportunities to support participants' future career paths beyond app development. This year, we organized a talk session event with four university and professional mentors who shared diverse options, including university studies, extracurricular activities, employment, and career building.

Speakers:

- **Maya Ishida** (Microsoft Corporation)
- **Kenta Iwasaki** (CyberAgent, Inc.)
- **Akaho Sakamoto** (Graduate School of Ochanomizu University, Information Science Course)
- **Yuka Hirayama** (Graduate School of Literature, Senshu University, 1st year)

The number of participants increased 1.86 times compared to the previous year (2023), with 409 participants from all 47 prefectures. High school first and second-year students tend to participate more frequently as the program spans five months and involves a high level of activity.
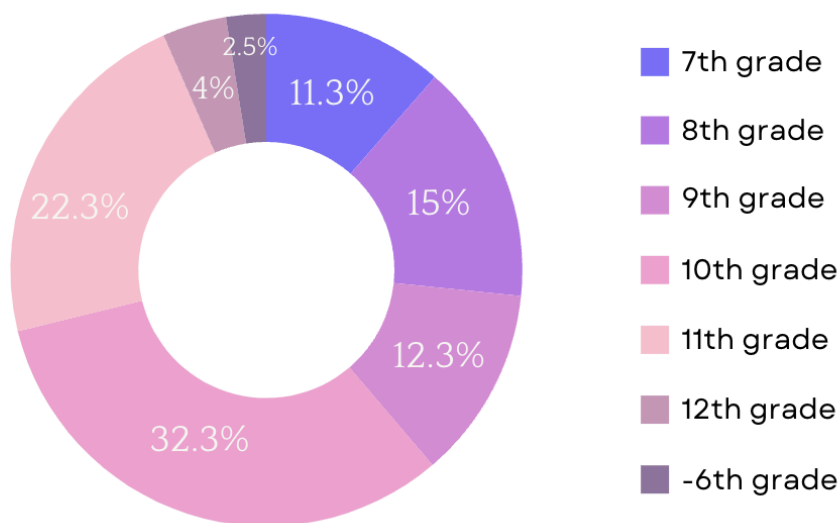
Participants' confidence in their programming skills and business building ability showed significant improvement. Before and after surveys indicated a notable increase in confidence in programming skills. Over 90% of participants expressed interest in app development and programming at the start of the program, but their confidence in their skills was initially low. The support from active engineer mentors during the app development course boosted their confidence significantly.

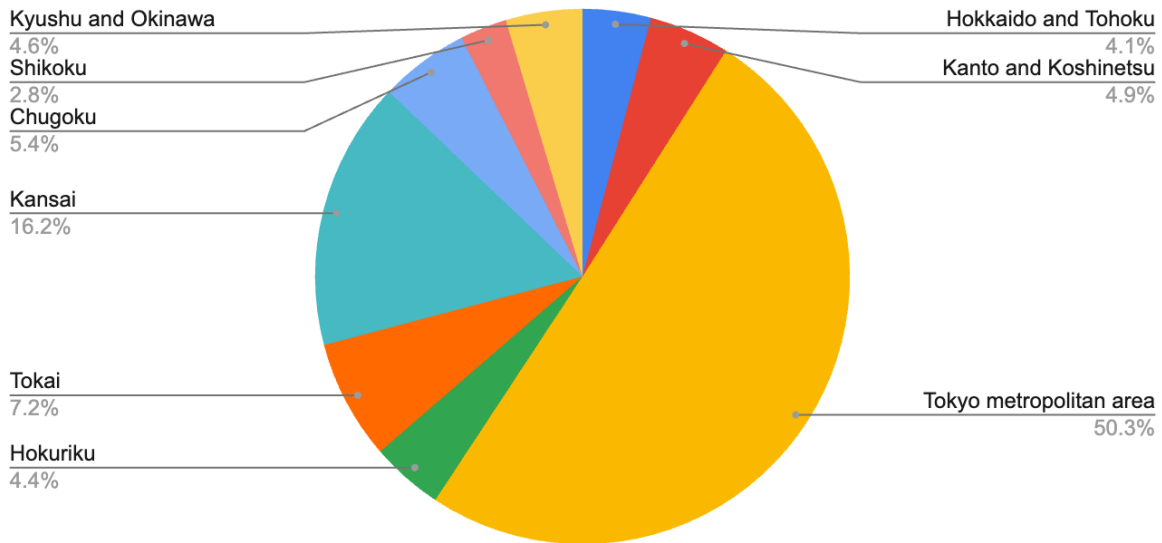## About the participants in this program

Compared to the previous year (FY2023), the number of participants increased 1.86 times to 409, the first time that participants came from all 47 prefectures.

Since the program is a long-term, five-month program with a lot of operations, the participation rate of high school 1st~2nd year students who have not yet entered the examination period tends to be high in previous years.

Percentage of Participants by Grade Level

Legend:
- 7th grade
- 8th grade
- 9th grade
- 10th grade
- 11th grade
- 12th grade
- -6th grade

Values: 11.3%, 15%, 12.3%, 32.3%, 22.3%, 4%, 2.5%

As in past years, half of the participants were from Tokyo and three other prefectures, followed by those from the Kansai region. However, this year we received applications from eight prefectures that had not seen participants in the past two years: Aomori (4), Akita (3), Yamagata (1), Toyama (3), Kagawa (2), Yamaguchi (2), Kumamoto (1), and Kagoshima (3). In the end, students from Aomori and Akita prefectures were selected as finalists to participate in the Japan Pitch Event and take the stage in Tokyo.

Kyushu and Okinawa
4.6%
Shikoku
2.8%
Chugoku
5.4%
Kansai
16.2%
Tokai
7.2%
Hokuriku
4.4%
Hokkaido and Tohoku
4.1%
Kanto and Koshinetsu
4.9%
Tokyo metropolitan area
50.3%

Changes and trends in participants over the course of the program

Significant change in confidence in programming skills, business building skills, etc.

Pre- and post-program surveys showed a significant increase in confidence in their programming skills. While more than 90% of the participants were "interested" in app development and programming at the beginning of the program, their confidence in their skills was low. The results of the survey show that the participants' confidence in their programming skills improved as a result of learning programming through the application development course and receiving support from mentors who are active engineers, in order to achieve their goals, based on the premise of what they wanted to create.

Increase in Confidence in Programming Skills
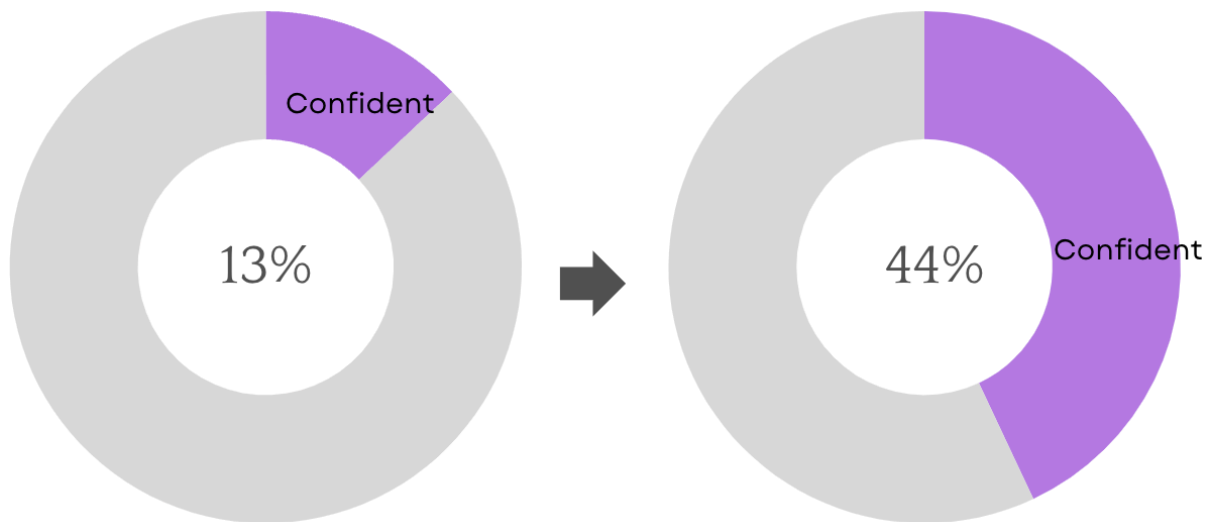
In addition, many other teams received careful mentoring from working mentors as they realized the difficulty of team building in the process of building a business by teaming up with colleagues they had never met before, even though they shared the same goals. In addition, when building a business from the ground up, the teams were busy interviewing people to compare their thoughts with the needs of the market and to find out if there really are users out there. In the process of contacting not only people close to them but also relevant companies and experts to improve the accuracy of the process, the result is that the team feels that their business-building and problem-solving skills have improved.

In general, we believe that the confidence to create technology-based products was greatly improved for more than half of the participants through this program.
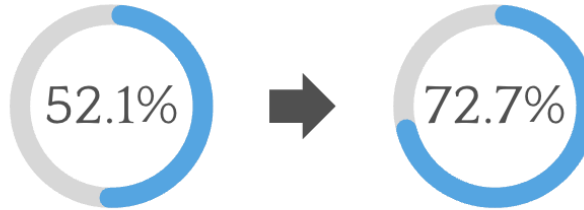
Building Business
How confident are you currently in your skills for building and managing a business?

19% ➡ 56%

Team Work
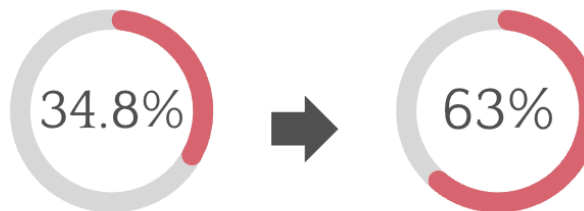How confident are you currently in your teamwork skills?

52.1% ➡ 72.7%

Problem Solving
How confident are you currently in your problem-solving skills?

44.9% ➡ 74.5%

Impact
How confident are you currently in your skills for making an impact on the community?

34.8% ➡ 63%

Presentation
How confident are you currently in your skills for making presentations and public speaking?

43.9% ➡ 68%

Marketing
How confident are you currently in your skills for selling, marketing, or persuading others?

23.3% ➡ 54.2%

Examples of changes in career aspirations

Before participation	After participation
I can't imagine.	Work that uses technology to solve social problems.
deskwork-related	Engineers
IT-related jobs	I think I'm starting an IT company overseas.
Programmers and engineers	Engineers from Sony, Nintendo, SEGA, etc.

As a result of the questions about career paths and future occupations asked in the pre and post questionnaires, it is clear that after completing the program, students are able to envision more concretely what they would like to become and do in the future, as shown above. It is clear that taking the time to experience the program in junior and senior high school will likely have a significant impact on their future careers. This is also our goal for the next fiscal year and beyond.

Testimonials from participants who participated for 5 months

"I was anxious at first, but I learned little by little through the application development course and the business course, and after that I was able to spend a very productive 5 months with the full support of the mentors, coding, and the management. I had a lot of difficulties in coding, business, and pitching, but I feel a sense of accomplishment from the growth I achieved. I now understand the meaning of the phrase "never give up until the end. I gave it my all, so I have no regrets!"

I learned the concept of sequential, iterative, and branching through the development of the Thunkable application. I started development from a state where I had no idea what

"I was doing, so I gained a lot of confidence. I would like to use the algorithms I learned this time for learning other programming languages."

"I was new to coding, so I started out not knowing anything. I couldn't even understand the explanations from the first assignment, and I thought it was impossible to develop an application as it was. Even though there were many things I didn't understand, my team members supported me and I was really happy that I managed to submit the course assignment. I also grew a lot by creating a lot of materials to submit to the U.S. competition. It was a lot of work that would normally make me feel discouraged, but I was able to keep at it and not throw it away until late at night. It was the first time for me to take things so seriously, to want to go this high, to work this hard. It was a really tough and fun six months, and it gave me a lot of confidence in myself to take on this challenge."

conclusion

We are very happy that the number of participants, teams, and mentors in FY2024 is the highest in our history, and that Technovation Girls has reached areas that we have not been able to reach in the past. We will also continue to focus on building a community in Alumni where participants can share the value of this program with their schools and networks, and increase awareness of the program to the point where "you can't help but participate" for the sake of their higher education and future. We will also aim to raise the awareness of the program to the point where students "cannot help but participate" in the program for the sake of their higher education and future.

We would like to thank all of the mentors, both university students and working professionals, for their mentoring and coding guidance for each team during the entire process of the online program, and we at Waffle will continue to provide opportunities for the mentors themselves to learn and grow, not just continue to give. We will continue to provide opportunities for mentors to learn and grow, not just continue to give.

We look forward to your continued support for the 2025 event.

Our Sponsors

The Waffle staff would like to thank the following companies for their support of this program (titles omitted, in alphabetical order).

＜**Special Sponsors**＞

MetLife Insurance Co.

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The Japan Research Institute, Limited

Unity Technologies Japan K.K.

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- Woven by Toyota K.K.
- Peatix Japan K.K.
- Microsoft Japan Co.

- Crafter Corporation

- NEC Corporation

- Accenture, Inc.

- Accenture, Inc.

＜Universities＞

- Ochanomizu University, Graduate School

- Tsuda College

- Tohoku University Graduate School

- Tohoku University Graduate School, Kyushu Sangyo University

＜Cooperating Partners＞

- Women's Startup Lab Impact Foundation Japan (https://www.amelias.jp/)

- Girl Scouts of Japan (https://www.girlscout.or.jp/)

- National High School Students My Project Award Secretariat (https://myprojects.jp/)

- Minna no Code (https://code.or.jp/)

- Shintaro Yamada D&I Foundation (https://www.shinfdn.org/)

- Life is Tech, Inc. (https://life-is-tech.com/)