

**A Study on the Significance of Global Leadership
Development Programs in Japanese High Schools:
Based on Interviews with Learners**

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Introduction

Introduction has laid the conceptual and contextual foundation for this research by elucidating the research aims, background, significance, and methodology. It begins by identifying the pressing need to foster global leaders in the face of rapid globalization and societal transformation. In particular, the chapter clarifies that leadership in the global context is not merely about linguistic or international experience, but involves deeper competencies such as self-awareness, situational adaptability, cross-cultural understanding, and social responsibility. The chapter also traces the policy landscape of Japan's educational reform, emphasizing the role of national initiatives like the Super Global High School (SGH) and Super Science High School (SSH) programs, which represent Japan's strategic efforts to develop global talent through structured high school education. It highlights that, despite a growing number of reports and evaluations on these programs, little attention has been paid to how learners themselves internalize and assign meaning to their experiences over time. Against this backdrop, this research takes a learner-oriented approach to investigate how participation in leadership development programs shapes students' values, self-awareness, and future pathways. By employing interview-based qualitative methods, this research aims to provide new insights into the long-term significance of leadership education from the perspective of its participants.

1 Research Aim and Objectives

This research focuses on global leader development programs, which have been attracting increasing attention in response to the globalization of society. It aims to clarify the underlying principles of these programs and to explore how young people who have participated in them make sense of their experiences. Specifically, this research focuses on how participants make sense of their experiences in leadership development programs. Investigating this personal interpretation of experiences holds academic significance because previous research has often emphasized observable outcomes such as skill acquisition or behavior changes, while relatively little attention has been paid to how individuals internally process and integrate these experiences into their personal growth and career decisions. Understanding this process can provide deeper insights into how leadership education influences identity formation, value systems, and long-term development, particularly in the context of a rapidly globalizing society. The concept of global leader development addressed in this research refers to educational efforts actively promoted in recent years not only by Japan's Ministry of Education, Culture, Sports, Science and Technology (MEXT) but also by local governments and private educational organizations. These efforts aim to cultivate individuals with leadership skills who can thrive in a global society. While such programs are being implemented at both the secondary and higher education levels, this research focuses specifically on programs conducted in high schools. By analyzing the structure of these programs and conducting interviews with young people who have experienced them, the research seeks to reveal how participation in such initiatives has influenced their personal development and future paths.

2 Research Background

In an era of increasing globalization and ever-closer connections among countries, more and more nations are turning their attention to the development of global talent. Global education has

gradually become a widely discussed and highly regarded topic. At the same time, countries have implemented various high school education reform policies to help achieve the goal of cultivating globally competent individuals. As stated in the OECD's *2020 report Student Agency for 2030*, the aim is to explore how fostering student agency can address the educational challenges of the post-2030 era. In particular, the OECD (2019) emphasizes that "upper secondary education should provide diverse learning opportunities to help students develop self-directed learning skills and socio-emotional competencies, preparing them for future learning and careers (p.7)." Furthermore, "higher education should strengthen students' leadership and innovation capacities so that they can take leading roles in both academic and professional settings (p.9)." Although the report does not directly address the relationship between secondary and higher education, it clearly states that "education systems should ensure smooth transitions between different stages of education and provide the necessary support to help students achieve their personal and professional goals (p.10)." This research focuses on the impact that high school leadership programs have on students' university life and future trajectories. As globalization continues to deepen, leadership has become one of the core competencies for global talent. High school, being a critical period for the development of leadership skills, provides formative experiences whose long-term impact on participants' lives is especially significant.

So, what exactly does "global leader" mean? In today's increasingly globalized society, nations emphasize the cultivation of individuals who can communicate, collaborate, and solve complex problems effectively within the international community. Although there is not yet a universally accepted definition of a global leader, the term does not simply refer to individuals with overseas experience or foreign language proficiency. Rather, it refers to those who possess cross-cultural understanding, critical thinking, accurate self-awareness, and a sense of social responsibility—individuals who can work with diverse teams to achieve shared goals. For instance, in *The OECD PISA Global Competence Framework Handbook* published in 2018, global competence is described as encompassing not only knowledge and skills but also attitudes and values. The definition is as follows:

"Global competence is the capacity to examine local, global and intercultural issues, to understand and appreciate the perspectives and world views of others, to engage in open, appropriate and effective interactions with people from different cultures, and to act for collective well-being and sustainable development. (p.7)"

It is clear from this definition that significant emphasis is placed on the existence and perspectives of others, as well as on intercultural understanding. It highlights an individual's cognitive ability to make sense of a complex world. Additionally, according to the Japanese Ministry of Education's *2011 report Interim Summary of the Global Human Resource Development Promotion Council*, global human resources should possess the following three core competencies:

1. Language and communication skills;
2. Independence and proactiveness, willingness to take on challenges, cooperativeness and flexibility, sense of responsibility and mission;
3. Understanding of other cultures and a clear sense of identity as Japanese.(p.7)

This definition makes it clear that a "global leader" is not simply someone with language skills or international experience, but rather someone who builds on these foundations to demonstrate autonomy, collaboration, problem-solving abilities, and the capacity to make decisions and work with others in uncertain environments—ultimately facilitating intercultural collaboration.

Why is leadership development required now? Based on the argument of Tateno(2018), who specializes in leadership development research at Rikkyo University, the reasons for leadership education stems from several key factors. Firstly, in a globalized society, individuals must work collaboratively with people of different cultures, languages, and values to solve complex global issues. As the environment changes at a dizzying pace, the need to respond to these changes and bring about new innovations is increasing. In this process of globalization, individuals who are able to overcome cultural and language barriers and take the initiative to coordinate and lead have become increasingly valuable and scarce resources. This issue was also addressed in the 2022 report of *Japan's Central Council for Education*. The document specifically highlights the current challenges in cultivating global talent:

“As globalization advances, it is essential to foster true global human resources—Japanese students who venture out into the world, are exposed to diverse cultures and values, and acquire the ability to collaborate with people from around the world, as well as with those in Japan who come from culturally and linguistically diverse backgrounds. These students must also be capable of independently taking on challenges with a broad perspective.(p.2)”

Amid the development of globalization, Japanese education not only encourages students to engage on the international stage, but also places importance on fostering cultural diversity within the country. At the same time, the education system has been given a new mission: to nurture leadership-oriented individuals who possess adaptability and the ability to work collaboratively. In addition, in the competitive global market, employers increasingly expect employees to demonstrate leadership competence from the beginning of their careers. These societal and economic shifts underscore the importance of integrating leadership education into both higher education and secondary education systems.

In response to these demands, universities are now required to provide students with "experiences related to leadership education". This is the reason why in recent years, educational approaches such as Project-Based Learning (PBL) and internships have been incorporated into university curriculum. Following the reform of university education, high schools are now using the similar approaches to educate children to engage in learning proactively and to foster an attitude of cooperative learning. The attitudes of "initiative" and "collaboration" required here are closely related to leadership. At the same time, in order to build upon the achievements of the “Tobitate! (Leap for Tomorrow) Study Abroad JAPAN” initiative and to link overseas experiences at a younger age to future study abroad opportunities, efforts have been strengthened to promote and support studying abroad not only at the university level but also from high school. Additionally, the Super Global High School (SGH) project, implemented by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) from fiscal year 2014, had its objectives outlined in the 2014 implementation guidelines as follows:

“Through education that contributes to the development of global leaders in high schools... students will acquire international competencies such as a deep awareness and knowledge of social issues, communication skills, and problem-solving abilities, thereby fostering individuals who can play active roles in the global arena in the future.”

Based on this objective, it is clear that the purpose of the SGH initiative was not merely to promote global education in high schools, but to place particular emphasis on cultivating leaders who can thrive in a global society. Regarding this point, Ishimori (2019) states:

“Global human resource development programs are designed to ‘nurture young Japanese individuals who can be active globally.’ The SGH project was launched to embody this goal... In the background lies the expansion of Japanese companies’ overseas operations due to declining domestic demand and shrinking markets caused by a low birthrate and an aging population, as well as the need to respond to Japan’s delayed globalization and to enhance Japan’s presence on the world stage.(p.78)”

The latter part of this quotation, which mentions the intention to “enhance Japan’s presence on the world stage,” can be interpreted as the rationale behind the project’s strong focus on leadership development. Although the SGH project can be seen as a response to Japan’s declining status in the international community through human resource development, it undeniably had an impact on the improvement of high school education. It is significant that Japanese high schools, which tend to deliver standardized education based on the national curriculum guidelines, collectively undertook the development of high-quality curricula adapted to a globalized society.

However, leadership education has only just begun at the high school level, and it is difficult to say that all students are expected to acquire leadership as one of the qualities they should acquire. This gap highlights the potential of leadership development programs at the secondary education level, particularly those aimed at cultivating global leaders. Furthermore, a key research question is how such programs transform students and what long-term impacts they have on their personal and professional lives. Addressing this question will significantly advance the field of global leadership education.

3 Research Significance and Characteristics

This research holds both academic and social significance. Its contributions can be summarized in the following four aspects.

(1) To elucidate the underlying educational principles shared across diverse leadership development programs implemented in Japan.

(2) To examine how learners personally interpret their experiences in such programs and assign meaning to them over time.

(3) To provide a framework for evaluating the long-term outcomes of leadership education in relation to the national policy initiatives led by MEXT.

(4) To offer learner-centered insights that can inform the improvement of program design and implementation in schools.

First, in recent years, with the advancement of leadership development programs, research related to leadership education has been gradually increasing. For example, Izumitani and Yasuno (2015), in their paper “*Study on the development of college leadership program: Implications from college student leadership programs in the United States*,” explored the background of leadership program development in American universities, shifts in the concept of leadership, and new challenges faced in higher education. Their research also analyzed leadership models and guidelines developed by American educators, aiming to offer suggestions for leadership education in Japan. This research directly focuses on current global leadership development programs in Japan and aims to uncover the common educational principles underlying these initiatives.

Second, this research centers on leadership development programs at the high school level and explores learners’ personal interpretation of experiences. Currently, most research at the high

school stage takes the form of program implementation reports. Designated schools for various global leadership programs compile reports after the conclusion of the projects to showcase their outcomes. Some studies also begin by examining the curricula of SSH (Super Science High School) and SGH (Super Global High School) programs, analyzing these outcome reports to identify key features and focal points of different projects. For instance, Tanaka (2024), in the study “A Study on the Curriculum of Inquiry-Based Learning in SSH and SGH: Analysis of Documents Related to Research Development,” examined 69 SSH and 56 SGH designated schools, highlighting both commonalities and differences among the programs. This provided analytical perspectives for high schools developing new leadership programs. However, these reports and literature analyses tend to focus on surface-level descriptions of program outcomes and have yet to deeply explore the underlying educational principles. Furthermore, there remains a lack of research into how participants understand these programs and the actual significance of these experiences in their personal development.

Third, this research adopts interview-based research methods and evaluates long-term impact of policy through learners’ narratives. The leadership development programs in question are part of Japan’s national education reform policy. Most official evaluations focus on institutional success indicators or short-term effects. For example, Ishimori (2019) introduced the SGH program at Sendai Nika Junior and Senior High School in Miyagi Prefecture. Ishimori conducted a survey targeting only students who had participated in overseas learning experiences, immediately after the program concluded. The study noted that the SGH program fostered in learners a mindset of collaboration and coexistence with others, as well as a willingness to tackle social issues. Ishimori’s research is notable for clarifying the impact of overseas experiences on learners. However, as the survey was conducted immediately after the program, it did not investigate the long-term influence on participants’ future lives. This research introduces a long-term perspective that can contribute to a more holistic evaluation of these policy-driven initiatives, such as how they shape students’ academic transitions and personal growth.

Lastly, this research aims to contribute to program improvement through learner feedback. Sano et al. (2022) examined the educational effects of a university-high school collaborative class between the Department of Public Sociology at Fukuoka Prefectural University and Kurate High School’s SGH program. Drawing on post-program survey results conducted at Kurate High School, they also conducted interviews with two students who participated in SGH and later enrolled in the university’s Department of Public Sociology. As outcomes of the SGH collaboration, the study identified four key points: “smooth transition between high school and university education, improvement in university faculty’s knowledge and teaching skills, enhancement of civic and social studies teacher training content, and effective outreach to motivated students through university and departmental public relations.” Sano et al.’s research is noteworthy in that it surveyed SGH participants after graduation, allowing for reflection over time. However, as the primary focus of the study was on the overall impact of the collaborative class on the educational program, it did not sufficiently address the students’ individual development or the influence of their SGH experiences on their later lives. By contrast, this research centers on how students personally interpret their leadership experiences after graduation and how those reflections may inform program improvement. Through this learner-centered approach, the study seeks to provide insights into what aspects of SGH and SSH programs are perceived as meaningful and transformative from the participants’ perspectives—offering practical feedback

that can be used by educators, administrators, and policymakers in refining program goals, content, and pedagogical strategies.

4 Methodology

Introduction: This chapter outlines the objectives and significance of the research. It also provides a detailed explanation of the overall research structure and the interrelationship between chapters, thereby laying the foundation for the subsequent analysis. Specifically, this research explores how “global leadership” is defined within the context of Japanese education and why its development is necessary. In response to the rapid changes in the global community, Japan is also in urgent need of cultivating a new generation of “global leaders” who can adapt to global transformations and collaborate effectively in diverse cultural settings. Against this backdrop, the significance of this research lies in several aspects: first, revealing the design principles underlying global leadership education programs in Japan; second, focusing on leadership development programs at the high school level to uncover the educational philosophies and deeper meanings behind these initiatives; third, employing interview-based empirical research methods to examine the long-term value and implications of these programs; and finally, analyzing how these initiatives impact learners’ future academic paths and career development.

Chapter 1: The Social Background of Global Talent Development. This chapter aims to examine the societal context behind Japan’s strong emphasis on global talent development. It begins by analyzing a series of policy documents and reports issued by the Ministry of Education, Culture, Sports, Science and Technology (MEXT), which outline Japan’s strategic vision for responding to globalization and promoting the internationalization of education. These documents provide insight into the core ideas and policy directions driving the cultivation of global talents in Japan. The chapter then focuses on prominent initiatives currently being implemented in Japanese high schools—particularly the Super Global High School (SGH) and Super Science High School (SSH) programs—to explore how institutional frameworks support the systematic development of global talent. Based on case studies of several representative schools, this research proposes a typology of global talent development initiatives according to their educational philosophies, goals, and implementation methods. Specifically, these initiatives can be categorized into three types: the “Overseas Fieldwork Experience Learning Type,” which emphasizes international fieldwork and cross-cultural exchange; the “Community Development Learning Type,” which focuses on local problem-solving and community engagement; and the “Science and Technology Learning Type,” which is oriented toward scientific literacy and research skills. By examining the practices of each type through concrete examples, the chapter highlights the characteristics and challenges of Japan’s approach to global talent development.

Chapter 2: The Social Background of Leadership Development. This chapter focuses on the social background and practical efforts surrounding the development of “global leadership” in Japan. In today’s increasingly complex and diverse global society, leadership is being redefined as a universal competence that transcends formal authority and position. It is now seen as a learnable and accessible ability for all individuals. Accordingly, this chapter approaches leadership development from several perspectives. First, it outlines the shift in how leadership is conceptualized—not merely as a privilege tied to a position, but as a comprehensive capacity rooted in self-awareness, personal growth, a sense of responsibility, and mission. Leadership in this sense refers to the ability to actively engage in society, foster collaboration and transformation,

and make sound judgments and decisions in uncertain environments. Second, the chapter explores how this conceptual shift has influenced educational practices in Japan. Within national initiatives such as SGH and SSH, leadership development has been integrated into daily curricula and project-based learning activities. Through interdisciplinary courses, project-based learning (PBL), inquiry-based research projects, and international exchange programs, students are encouraged to take leadership of their learning, engage with real-world issues, and discover their own pathways to personal development and contribution. Through this analysis, the chapter aims to uncover Japan's current efforts in leadership development at the secondary education level and to identify the practical and conceptual challenges that remain in cultivating global leaders for the future.

Chapter 3: Literature Review. This chapter aims to trace the theoretical evolution of leadership development since the latter half of the 20th century, with particular focus on the perspectives of situation-awareness and self-awareness. These two perspectives serve not only as core theoretical foundations for 21st-century leadership development but also as important conceptual tools for understanding the educational principles behind current global leadership cultivation programs. By comparing and analyzing relevant theories, this chapter explores how the concept of leadership has been interpreted and redefined in different socio-cultural contexts, thereby clarifying both the characteristics and challenges of contemporary leadership education. Furthermore, this chapter systematically reviews both Japanese and international studies on global leadership development, highlighting how the theoretical discourse has been formed, how it has evolved, and what issues have emerged during its development. Through this literature review, the chapter provides a solid theoretical framework for the qualitative research that follows and lays the foundation for analyzing the interview data.

Chapter 4: The Structure and Principles of Global leadership Development Programs in Japanese High Schools. This chapter focuses on two government-led programs: the Super Global High School (SGH) program and the Super Science High School (SSH) program. It examines the policy backgrounds, objectives, and structural features of these programs. It then categorizes the diverse practices emerging from them into three primary types: Overseas Fieldwork Experience Learning Type, Community Development Learning Type, and Science and Technology Learning Type. Through three case studies to provide a clearer understanding of how Japan is nurturing global leader at the secondary education level.

Chapter 5: Research Plan. This chapter presents a detailed explanation of the research design. Building on the theoretical framework established in the previous chapter, it first clarifies the research stance and analytical perspectives adopted in this study. It then introduces the qualitative research methodology employed—primarily empirical investigation using semi-structured interviews. The research focuses on graduates who participated in SGH (Super Global High School) and SSH (Super Science High School) programs in Japan, with the aim of exploring the concrete effects of leadership education on individual development through their firsthand experiences. This chapter also provides a systematic explanation of the data collection procedures, interview processes, and the logic behind the textual analysis. In addition, it explains why these methods are most appropriate for investigating the long-term impacts of leadership cultivation programs.

Chapter 6: Research on the Significance of Global Leadership Development in Japan. This chapter presents the findings of interview research conducted on leadership development education programs in Japan. The research targeted 11 graduates, including 7 from SGH high schools and 4 from SSH high schools. Using semi-structured interviews, it explored their

experiences participating in leadership development programs during high school, and examined how these experiences have had lasting impacts on their academic paths, career development, and personal values. The analysis revealed that most respondents believed the programs helped them develop stronger self-awareness, problem-solving abilities, and cross-cultural communication skills. Several participants also mentioned that the experiences of independent inquiry, social engagement, and international exchange shaped their understanding and practice of leadership in subtle yet meaningful ways. By focusing on the participants' growth trajectories, this chapter highlights the educational value and potential long-term significance of leadership cultivation programs at the high school level in Japan.

Chapter 7: Implications and Future Perspectives. This chapter briefly analyzes the current state and challenges of leadership development education in China, drawing lessons and potential strategies that Japan's leadership programs may offer for Chinese educational initiatives.

Chapter 8: Research Conclusion and Future Challenge. The final chapter provides a comprehensive comparison of the various leadership development programs examined throughout the research. It highlights the key contributions of the study as follows:

- 1) This research defines global leadership as a dynamic and cultivable process that requires individuals to possess both situation-awareness and self-awareness. Effective leaders are able to influence others, facilitate collaboration, and drive shared goals within multicultural or organizational settings.
- 2) This research examines two major programs based on MEXT's educational policies—the Super Global High School (SGH) and Super Science High School (SSH) initiatives—it clarifies the distinct characteristics and educational focuses of each program.
- 3) This research reveals how experiences in these different programs impacted learners' self-leadership, collaboration skills, and adaptability.
- 4) This research demonstrates the connection between students' program experiences and their subsequent academic and career development, highlighting the long-term influence of leadership education.
- 5) Drawing on learners' interpretations of their program experiences, this research offers new insights for improving future leadership development programs and related educational policies.

Chapter 1 The Social Background of Global Talent Development

This chapter reveals that Japan's global talent development is strategically shaped through national initiatives such as the Super Global University (SGU) and Super Global High School (SGH) programs. These initiatives can be categorized into three types of learning: Overseas Fieldwork Experience, Community Development Learning, and Science and Technology Learning. Each responding to distinct aspects of globalization and domestic challenges.

1.1 Global talent development policies in Japan

The development of global leaders in Japan has been promoted through educational reforms aligned with national strategies, in response to contemporary domestic and international social and economic challenges.

In the context of contemporary economic globalization, the structure of international competition is undergoing a profound transformation. Nations are increasingly engaged in fierce competition across economic, technological, and cultural domains. In response, the Japanese government has identified the cultivation of "global talents" (*kokusai jinzai*) as a central national strategy and has actively developed an education policy framework to support this initiative. This strategic shift is driven by two pressing realities. On the one hand, Japan faces a rapidly aging population and declining birthrate, leading to a continuous shrinkage of its labor force. On the other hand, Japanese enterprises, striving to remain competitive in the global arena, require a new generation of highly versatile talent with international perspectives to support industrial transformation and upgrading. This section focuses on the policy concept of *kokusai jinzai* (global talents), deconstructing its multidimensional meaning. It systematically reviews Japan's Global Talents Development Strategy, initiated in 2012, and analyzes key initiatives such as the Super Global University project. Through an in-depth analysis of these measures, this section not only sheds light on recent trends in Japan's education reform but also offers valuable policy insights for other countries seeking to enhance their international competitiveness.

The definition of *kokusai jinzai* in Japan has been under discussion among industry, academia, and government since 2010. In 2011's report on global talents development, the term was clearly defined as follows:

"In a globalizing world, individuals who can think independently, communicate their ideas clearly to colleagues, business partners, and customers from diverse backgrounds, overcome differences in values and characteristics stemming from cultural and historical backgrounds by understanding others' perspectives, and furthermore, draw on these differences to bring out each other's strengths, create synergy, and generate new value. (p.2)"

In the following year, during a strategic meeting on global talents development, the definition was revised and expanded while maintaining the core competencies. The updated definition is as follows:

"In a modern society where global competition and coexistence are accelerating, individuals who, while possessing a clear Japanese identity, have broad perspectives, general education, and specialized knowledge; communication and cooperation skills to build relationships across differences in language, culture, and values; the ability to create new value; and a sense of social responsibility that includes consideration for future

generations.(p.2)"

A comparison of the two definitions reveals that the 2010 version emphasizes intercultural communication and value creation in a globalized context, highlighting collaboration across cultures. The 2011 revision, meanwhile, introduces the idea of cultural subjectivity by explicitly incorporating “Japanese identity” and adds elements such as a “future-oriented perspective” and “awareness of social contribution,” closely aligning talent development with the goals of Education for Sustainable Development (ESD).

Based on these definitions, the 2012 Global Talents Development Strategy Report offered a more comprehensive classification of the core competencies required of global talent, summarized into three key elements:

Element I: Foreign language proficiency and communication skills;

Element II: Independence, initiative, willingness to take on challenges, cooperativeness, flexibility, sense of responsibility, and sense of mission;

Element III: Intercultural understanding and identity as a Japanese citizen.(p.8)

These definitions demonstrate that the concept of “global talents” in Japan goes far beyond mere foreign language proficiency. The emphasis is on developing students’ intercultural understanding, cross-cultural communication abilities, and problem-solving skills within a global context, ensuring they can play an active role in the international community.

Meanwhile, Japan's policies for cultivating global talents are characterized by a multi-layered approach. The Ministry of Education, Culture, Sports, Science and Technology(2014)'s "Support Program for the Formation of Super Global Universities" is an example, encouraging universities to enhance their international education and research environments(p.5). This policy aims to provide universities with the resources and networks necessary to foster global talents. As a result, it promotes international understanding and self-development among students.

The "Support Program for the Formation of Super Global Universities" was launched by Japan's Ministry of Education, Culture, Sports, Science and Technology in 2014. This program has two main objectives:

- (1) This program rigorously pursues "university reform" and "internationalization," aiming to enhance the global competitiveness and recognition of higher education in Japan, thereby fostering an environment conducive to developing highly skilled individuals.
- (2) Through the initiatives undertaken in this project to date, it strategically disseminates outstanding achievements and efforts domestically and internationally, enhancing the global evaluation of Japan's higher education and promoting overall globalization across Japanese universities(MEXT, 2023, p.15).

Based on the above objectives, the objectives of the program can be summarized into the following three points:

- (1) Enhancement of global competitiveness. To achieve top rankings for Japanese universities in global rankings and increase global recognition.
- (2) Development of global talents. To equip students and faculty with global perspectives, enabling them to thrive in the global community.
- (3) Promotion of global collaboration. To strengthen partnerships with overseas universities and research institutions, fostering global collaborative research and educational programs(MEXT, 2014, p.2).

Since the start of the SGU program, many universities have improved their global reputation:

according to the MEXT(2023)'s report, the University of Tokyo (39th) and Kyoto University (68th) have moved up in the QS World University Rankings and function as the core of an global academic network(p.16). In terms of SGU outcomes, participating universities are expanding classes taught in English and increasing the number of global students, and the globalization of campuses is progressing. Global communications and research networks are being built and expanded, and industry-academia regional cooperation is also being increasingly strengthened.

With the gradual establishment of global talent cultivation programs at the university level, corresponding policies have been implemented in high school education to better bridge secondary and higher education. This strategic alignment has led to the development of global talents development initiatives specifically tailored for the high school stage, ensuring continuity in cultivating globally competent individuals across educational phases.

The Period of Integrated Study is designed by each school to set themes and content, aiming to cultivate skills in interdisciplinary and comprehensive problem-solving, as well as attitudes towards tackling interdisciplinary and comprehensive challenges in real-world contexts(MEXT, 2016). It was mandated to be implemented from April of the year 2010 based on the High School Courses of Study promulgated in March of the year 2009. According to the documentation, the objectives of the Period of Integrated Study are as follows.

Through interdisciplinary and comprehensive learning, as well as inquiry-based learning, the aim is to foster qualities and abilities that enable students to identify their own challenges, learn independently, think critically, make decisions autonomously, and effectively solve problems. Additionally, it aims to equip students with ways of learning and thinking, nurturing attitudes that encourage proactive, creative, and collaborative engagement in problem-solving and inquiry activities. Ultimately, this approach encourages students to contemplate their own ways of living(p.7).

Based on these objectives, the content consists of learning tasks that each school deems appropriate to achieve the aforementioned goals. In this context, plenty of new programs are integrated into the Period of Integrated Study as specific initiatives to foster global talents, reflecting one of the policy features.

In conclusion, Japan's global talent development policy reflects a coherent and multi-tiered approach, aligning higher and secondary education reforms with national strategic priorities. Through initiatives such as the Super Global University program and the integration of global competencies into the Period of Integrated Study at the high school level, the Japanese government seeks to foster individuals equipped with both international outlooks and strong cultural identities. These efforts not only address domestic socio-economic challenges but also position Japan to remain competitive in an increasingly interconnected world. The next section will explore how these policies are translated into practice through concrete institutional programs, shedding light on how educational institutions interpret and implement the concept of "global talent" in diverse contexts.

1.2 The Characteristics and Challenges of Global Talent Development in Japan

In the context of accelerating globalization, countries around the world are placing increasing emphasis on the cultivation of global talent. As a major economic power in Asia, Japan has been actively formulating policies and developing educational models aimed at nurturing individuals with a global perspective, cross-cultural communication skills, and international competitiveness.

However, due to differences in educational systems, societal needs, and cultural backgrounds, the focus and characteristics of global talent development vary across countries. This subsection aims to provide a systematic overview of Japan's global talent development by examining four key dimensions: policy orientation, implementation mechanisms and institutional frameworks, curriculum and instructional models, and the challenges faced. This analysis also lays the groundwork for the comparative discussion in the following chapter.

(1) Policy Orientation

In Japan's global talent development policy, the concept of "global talent" (*kokusai jinzai*) is defined with considerable specificity. According to the Ministry of Education, Culture, Sports, Science and Technology (MEXT), such individuals are expected to possess "language communication skills, intercultural understanding, problem-solving abilities, and leadership qualities." In particular, the improvement of English communication skills and the cultivation of individuals with autonomous judgment and social responsibility are regarded as core policy goals. Thus, the policy emphasizes not only language acquisition but also the awakening of personal agency and the fostering of self-growth.

Since the beginning of the 21st century, Japan has launched two major national-level initiatives: the Super Global High School (SGH) program and the Super Science High School (SSH) program. The SGH initiative focuses on cultivating global perspectives, intercultural understanding, and leadership capabilities, placing strong emphasis on overseas learning experiences and in-depth inquiry into international issues. By contrast, the SSH program aims to nurture future science-oriented global talents by enhancing students' innovative and research skills through scientific research projects. While these two programs differ in focus, they both reflect the increasing importance that Japan places on "internationalized education" at the policy level. Moreover, the government promotes values such as "individualization," "social engagement," and "value co-creation" as essential dimensions, signaling a policy shift from examination-driven education toward a more competency-based approach.

(2) Implementation Methods and Institutional Framework

Japan's approach to global talent development adopts a dual structure of "national policy guidance + local school autonomy." Under this institutional arrangement, the central government provides overarching goals and financial support, while designated schools develop their own curriculum content and activity plans based on local characteristics and institutional contexts. This structure maintains strategic consistency while allowing schools significant flexibility.

In response, many SGH and SSH schools collaborate with universities, private enterprises, and non-profit organizations to co-design their curricula and research projects. This "industry-academia collaboration" model not only enhances the real-world relevance of the curriculum but also provides students with rich opportunities for hands-on experience. At the same time, the policy encourages schools to develop unique courses that leverage local resources, reflecting the education system's strong emphasis on local diversity and educational innovation. In addition, the programs place special importance on overseas learning experiences. Many schools organize overseas visits during school vacations, international conference simulations, or cross-border joint research projects, thereby offering students immersive global learning opportunities that transcend the traditional boundaries of school-based education.

(3) Curriculum and Teaching Models

In terms of pedagogy, Japan's global talent development programs emphasize student-oriented approaches. They frequently incorporate Problem-Based Learning (PBL), inquiry-based learning, and interdisciplinary instruction to foster student engagement and real-world problem-solving skills. For example, the "research project" component of SGH programs typically requires students to select global issues such as climate change, refugee crises, or economic disparity as their research focus. Students conduct fieldwork or expert interviews, then compile English-language reports and present their findings on international platforms. This process not only strengthens students' skills in information synthesis, communication, and logical reasoning, but also fosters their awareness as global citizens. Furthermore, many of these programs include structured "reflection" activities, enabling students to examine the differences between themselves and others and deepen their intercultural understanding. In SSH programs, curricula are more geared toward the training of scientific thinking and research literacy, often involving long-term research projects in collaboration with university laboratories to develop students' practical and analytical abilities.

(4) Challenges

Despite the progress made by Japan's global talent development initiatives, several challenges persist in practice.

First, students' English proficiency remains a significant issue. According to MEXT's report "On the Development of Global Talents" (2012, pp. 4-8), Japanese students rank relatively low in global assessments of English ability, particularly in speaking and listening. Many students possess basic grammar knowledge but lack confidence and experience using the language in authentic contexts.

Second, student mobility remains limited. In recent years, the percentage of Japanese high school students studying abroad has shown no significant increase. Factors such as weak motivation, financial burdens on families, and limited access to international programs hinder broader participation. While SGH and SSH programs do offer overseas opportunities, these are concentrated in a limited number of designated schools, resulting in what can be described as a "project gap."

Third, teachers' capacity to deliver internationally oriented instruction remains a bottleneck. Although the curriculum emphasizes cross-cultural learning and inquiry-based methods, some educators have yet to transition away from traditional teaching styles. Limited training resources and time constraints further inhibit effective classroom implementation.

Finally, as Japanese society becomes increasingly diverse, students are encountering more peers with foreign roots or from multicultural backgrounds. However, understanding and embracing cultural differences has yet to become a mainstream educational theme. Developing "locally rooted global talent" with intercultural perspectives within Japan's domestic context will be a key policy direction moving forward.

Chapter 2 The Social Background of Leadership Development

With the deepening of globalization and the accelerating pace of technological innovation, societal expectations for individual competencies are undergoing significant transformation. As discussed in Chapter 2, current education policies reflect the national-level strategic framework for cultivating “global talent.” Behind this policy orientation lies a growing and tangible demand from the economic and industrial sectors.

Amidst the combined pressures of population decline, industrial transformation, and intensified international competition, Japanese society has begun to reexamine its definitions and methods of talent development. In particular, the importance placed on “leadership” is no longer confined to managerial positions or elite individuals. Instead, leadership is increasingly seen as a fundamental ability that all members of society should possess.

Correspondingly, there has been a shift in the academic trends surrounding leadership research. Before the 1980s, both theoretical and practical research on leadership—regardless of the underlying theory, whether trait theory or transformational leadership—primarily focused on identifying the ideal type of leader. In contrast, with societal changes, research since the 1980s has shifted toward exploring the process through which individuals grow into leaders.

In terms of theoretical approaches to the development of leadership, research generally falls into two main categories: those that emphasize experiential learning, and those that focus on leadership awareness. These two approaches will be examined in detail later in this chapter.

Therefore, understanding the social background of leadership development helps to clarify the value systems and real-world forces that underpin educational practices. This chapter will examine how Japan’s current emphasis on leadership education is intertwined with changes in talent requirements, shifts in corporate views on human resources, and the evolution of organizational learning models. It will also highlight how this trend is driving continuous innovation in educational philosophies, curriculum design, and school-industry collaboration models.

2.1 Leadership Development in Japanese Society

In response to profound demographic, economic, and social shifts—ranging from population decline and technological advancement to intensifying globalization—Japan has undergone a significant transformation in how leadership is defined, valued, and cultivated. Once regarded as a trait reserved for high-ranking professionals, leadership is now increasingly recognized as a core competency that all individuals should possess, including students. This subsection explores how changing societal demands, evolving corporate expectations, and educational reforms have collectively reshaped Japan’s approach to leadership development. It examines the emerging consensus that leadership must be fostered not only through the acquisition of knowledge and skills but also through experiential learning rooted in real-world contexts. These evolving paradigms have driven the coexistence of two complementary models—knowledge-skills-based and experiential learning-based leadership education—both of which are now being actively implemented at various levels of the Japanese education system.

(1) Changing Demands for Human Talent in the Context of Globalization

Since the beginning of the 21st century, Japanese society has been facing multiple challenges, including population decline, an aging labor force, and intensified global competition. Against this

backdrop, the definition of “talent” within the corporate and industrial sectors has undergone a fundamental transformation. Traditionally, Japanese companies valued “lifetime employment-type” personnel who prioritized obedience to the organization and upheld collectivist ideals.

However, as globalization deepens and transnational business operations become the norm, talent suited to a stable, monocultural environment is no longer sufficient to navigate the complexities of the global market. Simultaneously, Japan’s industrial structure is shifting from being manufacturing-centered to a knowledge-intensive and service-oriented economy. In emerging fields such as IT, fintech, sustainable energy, and the creative industries, companies increasingly seek individuals who can make sound decisions amid uncertainty and who possess self-motivation as well as the ability to collaborate with others.

In this context, “leadership” is no longer viewed solely as a skill required by upper management. It has gradually evolved into one of the essential competencies that every member of society—including students—should possess.

Amid these social changes, Japanese society’s concept of leadership has also shifted significantly. In his book *An Introduction to Leadership for High School Students*, Professor Higano (2018) highlights that Japan’s perception of leadership is gradually transitioning from the traditional model of “authority-based leadership” to a newer concept of “Non-hierarchical leadership” (p.20). He emphasizes that while “goal achievement” and “influence on others” remain core elements of leadership, the question of who can exercise leadership has become increasingly important in today’s society. As he writes :

“The condition of a group changes significantly depending on who among its members exercises leadership. In the traditional model, this role was reserved for a select few with formal authority. In contrast, the new model assumes that every participant, regardless of their authority, can exercise leadership.(p.21)”

In other words, leadership is no longer a privilege reserved for a few individuals in positions of power. It is a capacity that should and can be cultivated in anyone participating in society, organizations, or teams—whether they are high school students, university students, new employees, or seasoned managers.

This shift from a model of “elite leadership” to one of “collaborative leadership” is a proactive response to contemporary societal changes. Particularly in a context marked by a declining birthrate, rapid development of AI technologies, and the increasing collision of diverse cultures due to globalization, the social understanding and expectations of leadership have evolved.

This perspective also aligns with the concepts discussed in the previous chapter on global human resource development—specifically the emphasis on “cooperativeness” and “understanding of different cultures and identity as a Japanese individual.” In line with this shift, Japanese initiatives such as the Super Global High School (SGH) and Super Science High School (SSH) programs have positioned the early development of leaders capable of independent decision-making and value pluralism as one of their central objectives.

Moreover, traditional centralized leadership models have proven insufficient in responding swiftly to rapidly changing social conditions. For example, even if a team member is aware of external changes, the absence of decision-making authority can result in missed opportunities, ultimately affecting the entire organization. In response to this limitation, Professor Higano (2018) proposes a new model in which “every participant has the opportunity to exercise leadership” (p.30). He further explains:

“To achieve the goals set by the group, each person must be aware of what they can do and take action accordingly. Instead of merely following orders, individuals are encouraged to engage proactively with the group, think independently and autonomously about what is necessary to achieve the goal, and act on it” (p.30).

Within this renewed understanding of leadership, Japan’s education sector has increasingly emphasized the universal cultivation of leadership skills. Through diverse educational methods and curriculum designs, efforts are being made to explore practical mechanisms for fostering leadership. This shift is not only reflected in policy initiatives but has also deeply influenced how educators conceptualize both the nature of talent and the means of cultivating it.

(2) The Transformation of Corporate Perspectives on Talent

In a highly globalized society marked by accelerating technological advancements, corporations’ expectations of talent have undergone significant changes. While traditional companies once prioritized individuals who were obedient to organizational norms and operated in a step-by-step manner, today, amidst increasing uncertainty and rapid change, more and more companies seek individuals with independent thinking, strong initiative, and the ability to solve complex problems.

This shift in the corporate perception of talent is also reflected in evolving hiring standards and recruitment practices. According to multiple corporate hiring surveys, companies no longer focus solely on academic performance or technical skills. Instead, they emphasize so-called non-cognitive abilities, such as "independence," "communication skills," "teamwork," and "adaptability to diversity and change." These qualities are closely tied to leadership capabilities, particularly the expectation that employees should proactively identify problems, set goals, and take initiative—even in the absence of clear instructions.

In their book *The Future of Leadership* (*Korekara no Leadership*), Horio and Tateno (2020) clearly state that the awareness and practice of leadership development within the corporate environment are undergoing a transformation. This shift can be summed up in the phrase: "as early as possible, and for everyone" (p.181). Two notable trends exemplify this change.

The first is the earlier timing of leadership development. As competition among companies intensifies, many now incorporate leadership training into early recruitment and training processes. The prevailing mindset has shifted from “learning leadership after being promoted to a management position” to “developing leadership skills before assuming managerial roles. (p.180)”

The second trend is the expansion of leadership development programs to a broader range of employees. Whereas leadership training used to be limited to certain management positions or selected candidates, recent initiatives are no longer tied to job titles and are instead implemented organization-wide. This “leadership for all” approach reflects a growing recognition that every member of an organization can and should be a leader. It echoes the concept of “non-hierarchical leadership” discussed in the previous section.

Behind this transformation lies a structural shift in how organizations pursue flexibility and continuous innovation. Rather than relying solely on a top-down command system, companies now expect every individual within the organization to take on some form of leadership responsibility. This aligns perfectly with the previously mentioned shift toward a more inclusive understanding of leadership that is not defined by hierarchical authority.

At the same time, the corporate world has begun placing new expectations on the education

sector. Companies now look to schools not merely as places for teaching knowledge and technical skills, but as platforms that nurture self-awareness and the ability to collaboratively solve problems among the younger generation. As a result, educational approaches centered on fostering “autonomy” have gained greater emphasis.

The education sector has gradually responded to this shift in the qualities companies seek in talent. Leadership development practices are now being implemented across educational institutions. Although the scale and target groups vary among universities and high schools, two common characteristics can be observed. As described by Tateno (2020), existing leadership education programs can generally be categorized into two main components: “knowledge and skills-based” and “experiential learning-based” approaches.

The knowledge and skills-based approach focuses on acquiring theoretical knowledge related to leadership, as well as developing logical thinking and communication skills. This method does not necessarily require direct field experience and can be effectively taught through classroom-based training.

The experiential learning-based approach, on the other hand, emphasizes learning leadership through practical experience. Instead of learning in isolation from real-world contexts, this approach involves engaging in actual leadership activities and then reflecting on those actions to gain insights and improve. (pp. 65-67)

In the knowledge and skills-based learning process, students develop self-awareness through theoretical learning and skill training in the classroom. This process emphasizes personal development, helping students to systematically reflect and repeatedly practice to deepen their understanding of themselves. Over time, they form a clear awareness of their strengths and weaknesses. This self-awareness not only assists students in understanding and applying leadership skills in simulated classroom scenarios but also lays a solid foundation for applying these skills in real-world situations. Conversely, in the experiential learning-based process, students cultivate situation-awareness through leadership activities in real-world settings. These activities require students to keenly observe and assess their surroundings and make timely, effective decisions. Following each leadership experience, students engage in reflection and summary, gradually enhancing their practical understanding of leadership capabilities and refining their skills. This mode of learning not only strengthens students' ability to handle complex real-life situations but also fosters their capacity to make optimal decisions in dynamic environments.

In summary, there has been a structural shift in corporate expectations regarding talent, which in turn has driven the entire education system to redefine leadership skills—particularly autonomy as a core competency. This transformation is not coincidental but rather a necessary response closely tied to the broader context of globalization and industrial restructuring.

(3) The Coexistence and Practical Development of Two Leadership Development Models—Knowledge-Skills-Based and Experiential Learning-Based

Based on the analysis above, two main models for leadership development have gradually emerged and coexisted within the Japanese educational landscape, particularly at the high school and university levels:

1. the knowledge and skills-based model, which is centered on classroom learning,
2. the experiential learning-based model, which promotes internal growth through direct participation in real-world activities.

The parallel development of these two models is not solely the result of pedagogical innovation within education itself. Rather, it reflects deeper societal and corporate shifts in the desired capabilities of talent. Since the 1970s, alongside the globalization of the market economy and changes in industrial structure, companies have increasingly valued competencies such as self-discipline, problem-solving ability, and collaborative skills. This growing emphasis on job-ready, self-driven talent has, in turn, prompted higher education institutions to rethink their goals for student development. In response to these societal demands, the education sector has started focusing on how to nurture students who can act autonomously and flexibly in uncertain situations—not just those who excel academically as "repositories of knowledge." Against this backdrop, the two leadership development pathways—knowledge-skills-based and experiential learning-based—have gradually taken shape and been incorporated into educational practice.

The knowledge and skills-based model typically involves lectures, discussions, and writing exercises. Through case analysis, conceptual learning, and theoretical modeling, students build a foundational understanding of leadership. This process also helps gradually awaken students' self-awareness. Repeated practice exercises, skill application, and peer feedback allow students to better understand their strengths, weaknesses, values, and behavioral tendencies. This cognitive development not only enhances their classroom engagement but also lays a solid foundation for future leadership roles in society.

In contrast, the experiential learning-based model emphasizes learning through action. Students are guided into diverse, open-ended practical settings where they take responsibility, solve problems, and manage team dynamics—developing their situation awareness in the process. For example, many schools organize regional community collaboration projects, international exchange programs, and environmental research activities. In these projects, students must not only grasp the goals of a task but also make quick, context-specific decisions and guide their teams toward success. After the completion of a project, reflective sessions—such as group reports, personal summaries, and instructor feedback—are often built into the curriculum to help students internalize their experiences.

These two models are not mutually exclusive, but rather complementary and mutually reinforcing. In many educational practices, instructors seek to combine both approaches. For instance, before a project begins, students may first receive theoretical input and skill training to build a foundational understanding of leadership. During the project, they apply these concepts in dynamic, real-life contexts, leading to self-discovery. Afterward, a structured reflection phase helps consolidate learning outcomes and deepen self-awareness and situational understanding. This three-stage framework—preparation, action, and reflection—allows students to develop both self-awareness and situational awareness in tandem.

As mentioned earlier, in today's fast-changing and value-diverse global society, future leaders must not only function within stable systems but also make sound judgments and collaborate effectively in uncertain and complex environments. This is precisely why the coexistence and continual integration of knowledge-skills-based and experiential learning-based leadership development models is essential in practice.

2.2 The Characteristics and Challenges of Leadership Development in Japan

Leadership development initiatives in Japan have expanded significantly since the 2000s, responding to globalization and changes in industrial structure. Particularly in higher education,

leadership education has been incorporated into curricula under keywords such as "knowledge-based society," "problem-solving abilities," and "teamwork," with various programs being developed by enterprises, universities, and local governments. However, in primary and secondary education, especially at the high school level, there remains a strong focus on academic achievement, and institutional and cultural establishment of leadership development still faces challenges.

One of the key characteristics of leadership development in Japan is a cautious approach to cultivating individuals who "stand out," reflecting the cultural emphasis on cooperation and harmony with others. Leadership is often seen not as a "quality of leading others," but as the ability to "function as a member of a group" or "work together with others." There is a tendency to underappreciate personal decision-making and challenging actions, and a culture that actively evaluates these traits has not yet fully developed. As a result, in school settings, opportunities for students to express their initiative or opinions are limited, and tendencies such as "not speaking up due to too much concern for others" or "avoiding challenges out of fear of making mistakes" are observed.

Institutionally, the centralized curriculum structure based on uniform learning guidelines restricts the expansion of creative educational practices at the high school level. Particularly in relation to the entrance examination system, where "solving problems with a known answer quickly and accurately" is emphasized, the development of foundational leadership skills such as "dealing with questions without clear answers" or "creating value with others" tends to be treated as peripheral.

In this context, attention has been drawn to educational reforms focusing on students' "autonomy" and "dialogical learning." Since the 2010s, the introduction of "active learning" and "inquiry-based learning" has advanced, gradually expanding frameworks where students ask their own questions, collaborate in teams, and engage with society while learning. The Ministry of Education, Culture, Sports, Science and Technology (MEXT) has also included the realization of "active, dialogical, and deep learning" in its revised curriculum guidelines, with the expectation that this will cultivate the foundational qualities necessary for leadership.

However, several challenges have emerged in the process of these educational reforms becoming ingrained in schools. The first challenge is the variation in teaching abilities and experience among teachers. Designing and facilitating active learning-based lessons requires a high level of expertise, yet training systems are not always sufficient. The second challenge is the disparity between schools and regions. Advanced initiatives are more common in urban areas and prestigious schools, whereas implementation is slower in rural areas and smaller schools. The third challenge is the lack of a well-established evaluation system. There is still no unified standard for measuring and grading non-cognitive abilities like autonomous learning and leadership.

Thus, while leadership development in Japan has made steady progress in recent years, several factors—such as cultural background, institutional constraints, and practical capabilities in schools—are intertwined, leaving challenges in its establishment and further development. Moving forward, there will be a need to go beyond traditional educational views focused on "academic achievement" and "correct answers," and create a more flexible educational environment that recognizes students' intrinsic motivations and various forms of leadership.

Chapter 3 Literature Review

Chapter 3 of this research provides a comprehensive literature review on three interrelated theoretical domains: global talent development, leadership development, and global leadership theory. In order to clarify the conceptual underpinnings and evolving discourse surrounding global leadership education. In light of Japan's policy initiatives such as SGH, SSH, and SGU, and in response to growing international interest in nurturing global talent, this chapter explores how foundational concepts like "global talent" and "leadership" have been defined, developed, and problematized in both policy and academic contexts. This chapter aims to establish a theoretical foundation for the empirical analyses that follow and to propose a more context-sensitive and ethically grounded approach to global leadership education in Japan.

3.1 Global Talent Development Theory

3.1.1 Definition of Global Talent

This section aims to examine how the notion of global talent has been conceptualized in major policy documents and empirical research, with particular attention to the Japanese context. By comparing definitions from Japan's Ministry of Education, the OECD's international framework, and scholarly research, this section highlights the convergences and divergences in how global talent is understood — and how these interpretations shape educational goals and leadership development strategies.

In the context of accelerating globalization, the concept of “global talent” (also referred to as “global human resources”) has become increasingly central to discussions surrounding education, labor markets, and national development strategies. However, the definition of global talent is not fixed; rather, it varies across time periods, institutions, and policy contexts.

In Japan, one of the most influential definitions is presented by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) in its 2012 report titled *On the Development of Global Talent* (gurobaru jinzai ikusei nitsuite). The document identifies three essential qualities for global talent:

1. Language and communication skills;
2. Independence and proactiveness, willingness to take on challenges, cooperativeness and flexibility, sense of responsibility and mission;
3. Understanding of other cultures and a clear sense of identity as Japanese.(p.2)

In addition to these three core qualities, the report also emphasizes broader capabilities necessary for contributing to society, such as expertise in a specific field, the ability to identify and solve problems, group collaboration and leadership skills across cultural boundaries, a strong sense of public ethics, and competence in media and digital communication.

This definition reflects Japan's dual priorities: addressing domestic policy needs and enhancing international competitiveness. It underlines the importance of nurturing individuals who are capable of acting responsibly and effectively across cultural and linguistic boundaries while maintaining a strong personal and national identity.

On a broader international scale, the Organisation for Economic Co-operation and Development (OECD) has also offered influential perspectives on global competence. In the PISA 2018 Global Competence Framework, the OECD (2018) defines global competence as:

"the capacity to examine local, global and intercultural issues, to understand and

appreciate the perspectives and world views of others, to engage in open, appropriate and effective interactions with people from different cultures, and to act for collective well-being and sustainable development." (p.7)

The framework further outlines four target dimensions necessary for applying global competence in everyday life:

1. The capacity to examine issues of local, global, and cultural significance (e.g., poverty, migration, inequality, environmental risk, stereotypes);
2. The ability to understand and appreciate diverse perspectives and worldviews;
3. The ability to establish positive and effective relationships with people from different cultural, national, ethnic, religious, or social backgrounds;
4. The disposition to take constructive action towards sustainable development and the common good. (pp. 7-8)

This framework highlights the integrated application of knowledge, skills, attitudes, and values in diverse cultural and social contexts—aligning closely with educational goals aimed at preparing globally competent citizens.

In addition to policy-based definitions, empirical research has also contributed to a more nuanced understanding of global talent. For instance, Ichimura (2019), in his study titled *The Real Requirements of Global Talent Active Overseas: Based on Interviews with Japanese Expatriates*, emphasizes that language proficiency alone is insufficient. He argues that individuals must also learn to recognize and adapt to cultural differences at an early stage. Effective global talent, according to his findings, are those who can engage in intercultural communication while respecting others' ways of thinking and behaving, and who demonstrate a cooperative mindset that enables them to work harmoniously in unfamiliar environments (p.11).

While the definitions provided by MEXT, OECD, and Ichimura emerge from different contexts—namely domestic policy, international assessment, and empirical research—they share several commonalities. All three emphasize the importance of intercultural understanding, effective communication, and the capacity to take action in complex, diverse environments. However, notable differences also exist. MEXT's definition is framed by national identity and emphasizes qualities such as a "sense of mission as a Japanese," reflecting Japan's interest in cultivating globally competitive individuals without compromising cultural roots. In contrast, the OECD offers a broader, value-oriented perspective, focusing on global well-being, sustainable development, and pluralistic dialogue—core components aligned with global citizenship education. Ichimura's study adds a practical dimension by highlighting real-world intercultural adaptability, emphasizing the need for cognitive flexibility and awareness in cross-cultural work settings.

In summarize, these definitions suggest that "global talent" is a multifaceted concept involving not only language proficiency and technical knowledge, but also self-awareness, adaptability, and a capacity for value-based collaboration across cultures. This evolving understanding reflects a shift from seeing global talent as a fixed set of skills to viewing it as a dynamic set of competences that are context-dependent and socially situated. This research reflects the increasing recognition within Japan that global talent must not only possess the technical skills to operate internationally but also the intercultural awareness and reflexivity to work effectively in diverse contexts.

3.1.2 Development of Global Talent Theory

Building on the foundational definitions of global talent discussed in the previous section, this

part explores the theoretical development of global talent discourse in Japan. While the term “global talent” has been widely adopted in national policy and educational initiatives since the early 21st century, its actual implementation has taken diverse forms, shaped by shifting economic, political, and cultural contexts. This section traces how the theory of global talent development has evolved—not only through government policies such as SGH and SSH programs, but also through international educational frameworks and critical scholarly perspectives. By examining both mainstream and critical approaches, it aims to clarify the multidimensional nature of global talent development and its emerging direction in Japanese education. In response to the rapid globalization of economic, technological, informational, and cultural domains, the development of global talent has become a central issue in Japanese education. As discussed in the previous section, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) has promoted various policy directions, including SGH and SSH initiatives. In addition to these major initiatives, a range of other educational programs have been introduced and developed under the broad goal of fostering global talent. For example, the International Baccalaureate (IB) program, the Top Global University Project (SGU), and various SGH school projects have all aimed to reflect contemporary social demands in their goals, processes, and evaluation mechanisms.

However, as Kobayashi (2019) critically points out in his article *A UNESCO-Based Attempt to Foster Symbiotic Global Talent through Global Citizenship Education*, there are increasing concerns about the competitive nature of global education in the 21st century. He notes that most modern international education programs have been shaped by the logic of international competition. As a result, such programs often promote competitive individuals who aim to stand out in the global arena. This competitiveness, however, comes with unintended social consequences—including growing disparities between winners and losers, the expansion of economic and social inequality, and deepening divisions between nations, ethnicities, and religions (pp.36-37).

In response to these concerns, UNESCO has advocated for a new vision of global talent development that supports a symbiotic society and sustainable development. According to Kobayashi (2019), this approach emphasizes the following two educational goals:

- (1) Cultivating a sense of personal responsibility for global issues—not only as national but also as global citizens;
- (2) Fostering an inclusive worldview that does not divide people into “us vs. them,” but instead encourages the perception of all humanity as “we” (p.38).

Based on these principles, Kobayashi identifies three key elements of what he calls “symbiotic global talent”:

- (1) A strong sense of ownership toward global issues: Individuals must be able to view global problems—such as climate change, conflict, or inequality—not as distant issues but as matters of personal concern. In Japanese schools, global issues are often perceived by students as the domain of elites or unrelated others. Thus, transforming these perceptions from “someone else’s problem” to “my problem” is essential.
- (2) Proactive engagement in problem-solving: Beyond awareness, students must be motivated and capable of taking constructive action. Whether addressing environmental problems or social injustices, what matters is not only their understanding of the issues but also their willingness to act.
- (3) Shared universal values: UNESCO’s value-based education emphasizes the need for

students to internalize universal values (such as peace, equity, and sustainability) and to take action based on these values. A minimal common understanding of such universal principles is essential for global cooperation. (pp.39-40)

This framework aligns with broader global education goals that seek not only to enhance students' skills and knowledge but also to develop moral awareness, intercultural understanding, and civic responsibility. Compared with MEXT's relatively national-centered framework and OECD's emphasis on global competence, Kobayashi's theory emphasizes the ethical and civic dimensions of global talent. It also highlights the importance of nurturing empathy, responsibility, and action rooted in shared values.

As seen in the diverse trajectories of global talent development in Japan, the concept has gradually evolved from a narrow focus on linguistic and intercultural skills toward a broader, more human-centered vision. On one hand, MEXT-led initiatives like SGH and SSH highlight global competitiveness and international adaptability as key policy goals. These programs emphasize communication skills, leadership, and problem-solving abilities within a global context, reflecting Japan's strategic effort to reposition itself amid international labor market competition. On the other hand, critiques such as those proposed by Kobayashi (2019) raise important questions about the ethical foundations and social consequences of such policies. By shifting the focus from economic utility to civic engagement, Kobayashi's framework—grounded in UNESCO's vision of global citizenship—redefines global talent as individuals who act from a sense of moral responsibility, engage in sustainable development, and internalize universal values like coexistence, empathy, and peace. His perspective urges educators and policymakers to reimagine global talent not merely as globally mobile professionals, but as active participants in building inclusive and equitable societies.

This contrast reveals a tension at the heart of global talent development theory in Japan: between instrumental and transformative approaches. The former aligns with national strategic needs and global market demands, while the latter emphasizes social justice, intercultural understanding, and long-term planetary sustainability. The coexistence of these two paradigms suggests that Japan's global talent discourse is still in flux—seeking to balance competitiveness with compassion, and national interest with global responsibility.

As such, the development of global talent theory in Japan must be understood as a layered and evolving process. It integrates both top-down policy imperatives and bottom-up educational insights, navigating between the demands of globalization and the imperatives of coexistence. This ongoing negotiation forms the theoretical backbone for Japan's future directions in global talent development.

3.1.3 Challenges in Global Talent Theory

While the theory of global talent development in Japan has made notable strides in defining desirable competencies and implementing policy-driven programs, several critical challenges remain. These challenges stem not only from theoretical ambiguities and ideological tensions but also from gaps between policy and practice. This section aims to examine the key limitations in current global talent theory by focusing on three major issues: conceptual ambiguity, the tension between economic utility and educational values, and practical implementation challenges.

(1) Ambiguity in the Conceptual Framework

One of the fundamental challenges lies in the lack of a consistent and operational definition of “global talent.” Although official policy documents such as MEXT’s 2012 report *On the Development of Global Talent* outline specific competencies — language proficiency, cultural understanding, and initiative—the integration of these qualities into a unified educational vision remains underdeveloped. The concept is often employed in an overly broad manner, leading to inconsistencies across policy discourse, academic research, and program implementation. As Kawaguchi (2014) has pointed out, “despite the frequent appearance of the term “global talent” in policy texts, the conceptual foundation is still fluid and lacks sufficient operational clarity. (p.26).” Ichimura (2019) also highlights the gap between theoretical expectations and real-world requirements, noting that even individuals labeled as “global talent” often struggle with the complexities of intercultural adaptation and communication in practice.

(2) Tension Between Economic Utility and Educational Values

Another key issue is the underlying rationale for global talent development, which tends to be framed primarily in economic and competitive terms. Many educational policies emphasize enhancing Japan’s global competitiveness and securing human capital for economic growth. While such aims are important, they risk reducing education to a utilitarian tool for labor market optimization. Kobayashi (2019) critiques this trend by arguing that talent development guided solely by global competitiveness may lead to unintended social consequences, including increased inequality, widening gaps between winners and losers, and intensified intergroup conflict (pp.36-37). In contrast, UNESCO’s educational philosophy calls for cultivating individuals who can contribute to a symbiotic global society by internalizing universal values and engaging with global issues as shared human concerns. This tension between competition-oriented education and values-based education remains a central challenge in current theoretical discourse.

(3) Disconnection Between Theory and Practice

Even when global talent theory is well-articulated at the policy level, significant barriers hinder its practical implementation. One such issue is the uneven distribution of program resources. Flagship initiatives such as SGH and SSH are limited to designated schools, leaving many other schools without sufficient funding, curriculum support, or teacher training. As Tanaka (2024) points out, the difference in institutional priorities and capabilities across schools results in unequal opportunities for students to engage in global learning. Furthermore, despite the emphasis on “non-cognitive” skills such as critical thinking, communication, and intercultural sensitivity, Japan’s education system remains heavily oriented toward standardized testing and rote learning, making it difficult to assess or prioritize these competencies. Teacher preparedness is also a concern, as many educators lack the training or pedagogical tools needed to foster the complex, value-based dimensions of global competence.

In summary, the theory of global talent development in Japan faces several persistent challenges. Conceptually, the term “global talent” remains ambiguous, resulting in inconsistencies between policy goals and educational practices. Ideologically, there exists a tension between economic utility and the broader humanistic values that global education aspires to foster. Practically, gaps between policy design and school-level implementation further limit the accessibility and

effectiveness of global talent programs. Addressing these challenges will require a more integrated framework that balances competitiveness with inclusivity and equips educators with the tools to support value-driven global learning.

3.2 Leadership Development Theory

This section traces the evolution of leadership development theories in the second half of the 20th century and attempts to clarify the characteristics and challenges of current leadership development. Fiedler's contingency approach identified the conditions under which a leader can be effective. Then came Burns' transformational leadership theory. Furthermore, Walumbwa's authentic leadership theory emphasizes the importance of leaders building trusting relationships with those who follow them. In this section, this transition is analyzed using the concepts of situation-awareness and self-awareness. Finally, in light of the above discussion, concluding remarks are made regarding implications for global leadership development programs.

3.2.1 Definition of Leadership

In this research, leadership is defined as “a dynamic process that involves effectively utilizing situation-awareness and self-awareness to foster self-understanding, facilitate team collaboration and create outcomes in specific contexts”.

Burns(1978) noted that leadership is one of the most observed but least understood phenomena in the world. It is said that at least 350 definitions of leadership have been given by theorists. For example, the following definitions have been given.

- Actions that direct the group's activities toward shared goals. (Hemphill, J. K., & Coons, A. E. ,1957)
- Increased influence beyond the organization's normal directives and mandates. (Katz,D., & Kahn, R. L. ,1978)
- The process of influencing group activities to achieve goals. (Rauch, C. F., & Behling, O. ,1984)
- An individual's ability to influence and motivate others to contribute to the effectiveness and success of the organization. (House, R. J., Hanges, P. J., Ruiz-Quintanilla, S. A., Dorfman, P. W., Javidan, M., Dickson, M., & Associates. ,1999)
- Influence relationships between leaders and followers who seek results that reflect changes in reality and shared goals. (Daft, R. L. ,2005)(underlining added by the author)

In light of these definitions, Northhouse(2016) stated that the four elements of " influence", "group", " shared goals", and "process" are common through generations and societies(pp.6-7).

Ishikawa(2018) also noted that there are two streams of definitions of leadership, one that sees it as a role or action and another as a process. He stated, "the former focuses on leadership as a function to be fulfilled by the individual leader and focuses on the leader's role and actions, while the latter attempts to view the leader's influence in the interaction with followers and other factors"(pp.26-27). In the former definition, leadership is personal and is often considered based on the leader's characteristics and behaviors. With a clear understanding of one's own identity, personality, strengths, and weaknesses, it is believed that one can find a leadership style that fits him or her and maximize one's leadership potential in a given role. In the latter definition, leadership is collective and is often viewed as based on influence and relationships within a group. Leadership can be influenced by changes in organizational membership, the environment, and

other factors. In this case, leadership is strongly influenced by environmental and situational factors. When considering leadership development, it is necessary to take into account this two-sided nature of leadership.

In recent years, there has been an increasing demand for the development of global leaders against the backdrop of a multicultural society. The qualities expected of global leaders were said to be "influencing individuals, groups, and organizations with different cultural, political, and institutional backgrounds" (Javidan, M., 2012). In a global society, the quality of the group that leadership influences becomes an issue. That is, in a group composed of heterogeneous members, it is expected to influence others who have different cultures, ways of thinking, and values.

As described above, although the definitions of leadership are diverse, it can be said that some focus on a person's internal nature, while others focus on the relationship with the surrounding environment.

3.2.2 Development of Leadership Theory

Since the 20th century, leadership theory has diversified. This is because leadership theory has been applied in many areas of the real world as a theory to explain human relationships in schools and workplaces. Without fear of misunderstanding, the broadest way to describe this trend is that leadership has gradually shifted from being viewed as a talent possessed by a few specific individuals to being viewed as an ability that can be acquired by all people, regardless of their position or role. In this section, the research is based on the premise that leadership is not an innate quality possessed by specific individuals, but rather a skill that can be developed in anyone through education.

Since the 21st century, leadership theory has received even more attention as an important topic in the field of education and in the world of business. In light of this, universities and other institutions of higher education have begun to offer leadership education programs as part of their educational activities. In Japan, some universities are also taking initiatives in this area. In 2011, the Japan Student Services Organization (JASSO, 2010) conducted a survey on the status of student support initiatives at universities, junior colleges, and colleges of technology with the aim of identifying needs related to student support. One of the items in the survey was set as "student leaders," and the "status of efforts to develop student leadership" was surveyed. The survey asked about the status of student leadership development efforts. 37.1% of the universities as a whole responded that they were "implementing" such efforts (1136 universities responded in total). Regarding the "actual contents of efforts," 51.1% of the universities as a whole selected "providing leadership development for leaders of extracurricular activities (residential type)," the most common answer. However, only 53 (7.3%) of the universities and other institutions offering student leadership development responded that they "have a systematic program". Thus, as of the early 2010s, although some universities had begun to engage in leadership development, very few had systematic programs for all students. Subsequently, some universities began to offer programs for all students. For example, the Graduate School of Education at Okayama University reorganized its graduate school and established two selections in the graduate school, the Department of Teaching Practice and the Department of Educational Science, starting in 2018. Of these, the educational science major (Okayama University Graduate School of Education, 2000) is designed to "pioneer and broadly view various phenomena related to education as educational science, empirically and systematically teach and research the issues found therein, contribute to

the development of educational science, and foster human resources with an enriched academic and professional career and advanced problem-solving skills". The concept is featured on the university's website. Furthermore, the curriculum is structured around Project-Based Learning (PBL), in which students work in teams to solve social issues, and through the "power of education" seeks to cultivate "practitioners," human resources who will contribute toward the realization of a symbiotic society. As the ideal human resources to be cultivated is discussed, leadership is highlighted as one of the important qualities. In addition, Rikkyo University's College of Business Administration has started the BLP (Business Leadership Program) in 2018, in which all students of the college of economics participate. The leadership education, which is a cornerstone of the undergraduate curriculum(Nakahara, J., Tateno, T., & Takahashi, T., 2018), aims to nurture individuals who can demonstrate their abilities and collaborate with people of diverse values anywhere in the world(p.20). In 2016, Waseda University established the Leadership Development Program (LDP) at the Global Education Center (GEC), which oversees the common curriculum for all faculties. The LDP(Tateno, T., et al., 2018) aims to contribute to the team by leveraging one's strengths(p.28). Thus, in the late 2010s, leadership development has become one of the perspectives of university curriculum reform.

In the 21st century, academic research on leadership development has shifted to consider leadership from the perspective of individuals and their surrounding environments. In "Leadership for the Twenty-first Century", Joseph C. Rost(1993) offered "a critique of 20th century leadership scholars and practitioners who sought to understand leadership based on the values and cultural norms of the industrial paradigm. A Critique of the 20th Century Leadership Paradigm "(pp.3-28). In his book, Joseph divided 20th century leadership theory into three eras: the period up to the 1970s, the 1980s, and the 1990s, and organized the definition of leadership in each era. According to him, to find a way out of the problems of a deindustrialized society, many theorists emphasized the importance of values such as cooperation, concern for globalization, diversity and pluralism in social participation, citizenship, freedom of expression in all organizations, critical dialogue, and consensus-based policy-making processes. The importance of understanding one's own feelings, values, and behavior patterns and clearly positioning one's role within a group or organization in order to solve problems was noted. Furthermore, it is said that individuals must be equipped with the ability to understand and analyze changes in the environment(pp.179-187). In this way, they can respond quickly to sudden risks and make adjustments.

Gary A. Yukl(2019)'s "Leadership in Organization (9th edition)" defined self-awareness as "understanding one's own strengths and limitations (including both skills and emotions)"(p.557). He further stated that "self-awareness enables us to understand our own needs and possible reactions to certain events as they occur, and facilitates the evaluation of alternatives "(pp.153-156). Thus, he presented the idea that leadership is not something that only those with some special ability can demonstrate, but something that anyone can learn by understanding their own strengths and limitations. Yukl(2019) further stated that "recent research and theories on how organizations evolve and adapt to changes in the environment indicate that the combination of skills needed for effective leadership may change as circumstances change"(pp.543-544). He pointed out that leadership is not fixed, but dynamic and changes with the environment around the individual.

Goffee and Jones(2006) applied a sociological approach to leadership. They then noted that leadership is situation-based. According to the two, a good leader is able to capture the important

signs in a situation and create a favorable environment for those who follow the leader(pp.11-15). As described above, the framework of leadership theory has changed significantly between the 20th and 21st centuries. By considering the changes in leadership theories in the second half of the 20th century and identifying its characteristics and challenges, this research aims to identify perspectives for analyzing and evaluating leadership development programs in the twenty-first century.

It is not until the 1950s that leadership has become a focus of attention in the realm of education. Leadership development is discussed in the context of connecting theory and practice and setting up an educational environment in which learners have leadership experiences.

Stogdill studied the traits possessed by leaders. Subsequently, there were two seminal studies connected leadership to human behavior. Fiedler focused on factors other than the innate abilities of leaders. He developed leadership theories that sought the factors enabling leadership in the environment. Additionally, Bass, Conger, and Kanungo focused on the relationship between leaders and members and the values held by leaders. Furthermore, Walumbwa proposed authentic leadership, which emphasizes the importance of self-awareness and self-growth of leaders. This section has discussed the evolution of leadership theories since the latter half of the 20th century.

(1) Ralph M Stogdill's Trait Theory Approach

Leadership was initially viewed as an innate ability, with emphasis on the leader's personality, motivations, values, and skills. One of the leading researchers on this theory was Stogdill(1958), who collected and organized studies on leadership from 1904 to 1947, arguing that leaders differed from other members in the following eight traits and abilities: intelligence, prudence, insight, responsibility, initiative, persistence, self-confidence, and sociability(pp.35-71). Stogdill's study also attempted to answer the question of what qualities and abilities are common to good leaders. Stogdill(1958) also categorized the influences on leadership into five general items: competence, team performance, responsibility, participation, and status. These five items are described as follows.

Leadership is demonstrated primarily through participation in group activities and by demonstrating the ability to promote group outcomes. Leadership implies the creation of activities, actions, and outcomes. A leader is someone in a position of responsibility for coordinating the activities of group members to achieve shared goals(p.64).

Stogdill(1958) sees leadership as the ability of both the leader and those who follow him or her. He sees leadership as the process of influencing the activities of an organized group in its efforts to set and achieve its goals(p.35).

(2) Behavioral Approaches of the Ohio State University Study and the University of Michigan Study

Leadership research also focuses on the behavior of individuals who demonstrate exceptional leadership. It focuses on how outstanding leaders behave. Through observation, researchers identify types of leader behavior, and then relate these behaviors to the groups or members the leader interacts with. Two of the leading studies in behavioral theory are those conducted at Ohio State University in the U.S., which began in the 1940s, and at the University of Michigan, which began in the 1950s. Leadership researchers at Ohio State University have conducted an extensive quantitative study of leadership, the Leader Behavior Description Questionnaire (LBDQ), since

1945. They found that leadership behavior can be explained by two concepts: consideration and initiating structure. Consideration is the degree of respect and mutual understanding that leaders show to their members. Initiating structure refers to the degree to which rules and procedures are established for members' positions, procedures for roles, tasks and work processes(Stogdall, 1974). The Ohio State University research explained patterns of leader behavior using these two concepts. In the University of Michigan study, the analysis of leader behavior yielded results similar to those of the Ohio State University study.

In the University of Michigan study, a survey of life insurance company managers revealed that factor-oriented leadership is more successful than results-oriented leadership. In other words, factor-oriented leadership is employee-oriented, that is, leadership with behavioral patterns such as spending more time in contact with members, striving to understand them, and involving them in decision-making related to their work (GLOBIS Graduate School of Management. (n.d.), 2023). These studies clearly described leadership in terms of two behavioral patterns, which had a significant impact on the later development of leadership theory.

(3) F. E. Fiedler's Contingency Approach

The research focusing on situational factors influencing leadership is referred to as the contingency approach. The representative figure of this theory is F.E. Fiedler, who advocated the contingency theory. According to the contingency theory, the situational variables that facilitate the exercise of leadership are organized into three concepts: the relationship between the leader and members, the strength of the leader's authority, and the clarity of the task. Fiedler demonstrated that the effectiveness of leadership varies depending on the situation. Specifically, Fiedler developed a unique scale called LPC (Least Preferred Coworker) and classified individual leadership styles into "task-oriented" and "relationship-oriented." He revealed that in difficult situations, task-oriented leadership is effective, while in calm situations, relationship-oriented leadership is effective.

This theory emphasizes the critical role of context in leadership. Leaders should not adapt their style to fit the situation but rather select an appropriate leader based on the demands of the changing situation. It also helps leaders understand their leadership style and learn how to leverage their strengths in specific contexts. The emergence of this theory suggested that the effectiveness of a leader depends not only on personal traits and behaviors but also on a comprehensive consideration of situational factors.

(4) James McGregor Burns' Transformational Leadership Theory

American political sociologist James McGregor Burns argued for a theory of transactional leadership in the 1980s. In this theory, a leader and those who follow him or her always work within a certain institutional framework, with the reward given by the leader and the obedience of those who follow him or her to the leader as the exchange conditions, completing a process that benefits both parties. Leadership is a contract for this purpose. This is the transactional leadership advocated by Burns(1978). Transactional leadership is a theory that affirms and motivates those who follow leaders to appeal to self-interest.

In his book "Leadership," Burns(1985) also advocates another new leadership theory, Transformational Leadership. Transformational leadership theory links the roles of the leader and those who follow him or her to create a process that raises the level of motivation and character of

both. Leaders who demonstrate transformational leadership model their own behavior, understand the values and needs of those who follow them, and optimize the interaction of members within the organization. By co-creating and promoting organizational goals, he creates a climate of change within the organization and encourage situational change to effectively achieve the organization's goals. In light of Burns(1985)'s leadership theory, Bass defines "transactional leadership" and "transformational leadership" as follows:

Transactional leadership is a type of leadership based on a relationship of exchange, where the leader provides rewards to followers, and in return, the followers take actions that contribute to the leader or the organization. On the other hand, transformational leadership goes beyond the rational exchange relationship and seeks to inspire followers to contribute through a sense of commitment and motivation.(pp.22-33)

Furthermore, Bass and Avolio(1985) argued that while both types of leadership are necessary, transformational leadership is more effective in improving the efficiency of the work of those who follow the leader. They then stated that transformational leadership requires the following four transformational leadership behaviors.

- Idealized influence, refers to actions that demonstrate courage and dedication, thereby evoking trust, respect, and admiration from followers.
- Intellectual stimulation, involves influencing followers to view problems from new perspectives and seek more creative solutions.
- Individualized consideration, includes providing support, encouragement, and coaching to followers.
- Inspirational motivation, is the action of presenting a compelling vision of the future that inspires the organization, encouraging followers to empathize with the vision and strive towards the goals (pp.24-44)

Thus, transformational leadership focuses on motivating those who follow, promoting innovation and change within the team, and contributing to the achievement of long-term goals and visions within the group.

(5) F.O. Walumbwa's Authentic Leadership Theory

The theory that emerged at the end of the 20th century is Authentic Leadership Theory. One of the leading researchers is F.O. Walumbwa. Authentic leadership theory emphasizes leaders building trustworthy relationships with followers who follow them for their sincerity, candor, and self-consistency. Walumbwa(2008) defined Authentic Leadership as follow.

Authentic leadership is a pattern of leader behavior that leverages and promotes both positive psychological capacities and positive ethical values to enhance self-awareness, internalized moral perspective, balanced processing of information, and relational transparency with followers, thereby fostering positive self-development.(p.94)

In other words, Authentic leadership is a form of leadership where leaders influence followers by objectively understanding themselves, demonstrating high ethical standards, making all processes transparent, and earning the trust of those who follow them.

(6) Situation-awareness and Self-awareness in Leadership Theory

In the previous section, the main leadership theories of the second half of the 20th century were discussed and their transition was examined. In organizing this transition, this section uses the

concepts of situation-awareness and self-awareness. Situation-awareness is the leader's attempt to understand, analyze, and coordinate with changes in the environment. Self-awareness is the leader's attempt to influence his or her own understanding of behavior, values, and feelings.

Endsley(1995) defined situation-awareness in 1995 as "the ability of an individual to understand the environment around him or her and to identify changes and trends in it"(p.36). Stodgill(1974), who advocated the leadership trait theory, questioned theories based solely on individual traits in 1974. He proposed that leadership should not only be seen as a result of individual traits but also closely related to the needs and situations of groups or collectives(p.7). Stodgill's focus on individual traits was also associated with the surrounding circumstances.

Contingency theory and transformational leadership theory, introduced after the 1980s, laid the foundation for situation-awareness. Since this period, situation-awareness has become especially important. Leaders must be able to analyze and understand changes in the environment while identifying critical factors and adapting their leadership types to these factors. The "contingency theory" posed by Fiedler(1967) advocated that a leader's effectiveness is determined by how well his or her style of leadership matches the situation(pp.100-105). Those theories emphasize the importance of situational factors in determining the success of leadership. In addition, Bass(1985)'s "Transformational Leadership Theory" stated the following regarding the importance of situation-awareness.

Transformational leadership theory emphasizes leadership that adapts to changing environments and inspires followers to transcend their own interests for the sake of the organization. This approach highlights the critical role of situational awareness in transformational leadership (pp.26-30).

Thus, situation-awareness includes the elements of environmental awareness and information processing. Situation-awareness is the ability to clearly understand the current situation and environment. Information processing involves the ability to create a better environment and produce results based on a comprehensive understanding of data obtained from multiple sources of information. In other words, a leader with good situation-awareness is able to respond appropriately to changes in the environment and effectively lead the organization. They are also able to create an environment in which those who follow them are more likely to cooperate, thereby promoting sustainable growth and improvement of the organization.

In addition, Walumbwa et al. proposed authentic leadership theory in 2008, which sought to improve transformational leadership theory with respect to the truthfulness and ethics of leaders. The theory proposes four main key elements, one of which is self-awareness(Walumbwa, F. O., Avolio, B. J., Gardner, W. L., Wernsing, T. S., & Peterson, S. J. ,2008). This was the first time that self-awareness was formally incorporated as a concept with inherent meaning in definitions of leadership. And in Yukl(2019)'s "Leadership in Organizations (9th ed.)", self-awareness was defined as "understanding one's own values, beliefs, feelings, self-identity, abilities, and attitudes "(pp.684-685). In other words, such leaders know who they are, what they believe, and have a positive acceptance of their own characteristics. Regarding self-awareness, Yukl(2019) stated as follow.

Self-awareness includes having a thorough understanding of one's own needs, emotions, abilities, and behaviors. By being aware of one's emotional reactions to events, it is possible to process information and make decisions in stressful situations, and to maintain a positive attitude and enthusiasm for projects or tasks even in the face of obstacles and

setbacks. Additionally, being conscious of one's actions and their impact on others allows for learning from experience and assessing one's strengths and weaknesses. Observing one's actions and their outcomes provides valuable insights. Furthermore, it is important to accept feedback from others regarding the positive and negative aspects of one's behavior(p.563).

Thus, self-awareness includes three components. The first is emotional awareness, which is the ability to understand how individual's emotions are connected to his or her actions and their impact on others. The second is behavioral awareness, which is the ability to understand individual's behavioral style and how it affects goal achievement and relationships. The third is self-reflection, the ability to objectively evaluate individual's own qualities, abilities, and values, and to accept feedback. In other words, leaders with strong self-awareness are able to understand their own feelings and actions and make better decisions. They are also aware of their own limitations and are able to receive support from others when needed. Self-awareness is one of the key components of leadership development.

These two concepts are important in capturing the transition of leadership theory in the second half of the 20th century. In other words, the development of leadership theories in the latter half of the 20th century shifted from focusing on the traits of leaders to emphasizing the individuals and environments surrounding the leaders, or the situation. Eventually, this transition leads to theories that placing importance on how leaders perceive themselves in relation to these situations.

In the 20th century, with economic development and the expansion of formal education, leadership have begun to be studied academically. By the latter half of the 20th century, the focus of leadership studies shifted from discussions aimed at identifying the superior qualities of individuals in leadership positions—essentially research aimed at cultivating elite leaders—to discussions based on the premise that anyone had the potential to become a leader and that leadership qualities were inherent in everyone.

Stogdill traced the transition of leadership theory based on such assumptions from the trait approach to the behavioral approach, which in turn shifted to the contingency approach, then to the transformational leadership theory, and finally to the authentic leadership theory. Stogdill focused on the different qualities and abilities of leaders, but he did not simply attribute all factors to the qualities and abilities of the person who leads; he also considered the influence of the group or team members surrounding the leaders on leadership. Ohio State University and the University of Michigan focused on leader behavior. By focusing on behavior, it became clear that effective leadership emphasizes the factors influencing behavior rather than the results of the behavior itself. Fiedler's contingency approach identified the conditions under which a leader can be effective, and furthermore, depending on the leadership style, the Burns's transformational leadership theory was that leaders and followers do not build a relationship by merely exchanging rewards and obedience, but that beyond this highly rational exchange relationship, followers create a sense of commitment to contribute to the leader.

Furthermore, Walumbwa's authentic leadership theory was a theory that emphasizes the importance of leaders building trusting relationships with followers.

In this section, the concepts of situation-awareness and self-awareness are established as perspectives from which to view the transition of these leadership theories. Broadly speaking, leadership theory has shifted from focusing solely on individual's internal traits to emphasizing the recognition of situations, and then to focusing on the recognition of the self that perceives those

situations.

In light of the above, the following three points are summarized suggestions that can be obtained for constructing a framework for global leader development.

- Global leaders are expected to understand and accept the different cultures, perspectives, and values of each team member, and to create situations in which they can be effective.
- Global leaders should understand what they can accept and what they cannot, what's more, to what extent they can embrace the differences among team members, and how to work effectively with them.
- In order to acquire the skills and experiences described above, it is necessary to actually have such experiences, as well as to reflect on those experiences and engage in self-reflection.

Based on these insights, it is expected to analyze and evaluate global leadership education programs by using specific perspectives and criteria, as well as to develop a framework for further developing such programs.

As mentioned above, to make the definition of situation-awareness and self-awareness more clearly in leadership theories. The summarize are as below.

Situation-awareness: environmental awareness (the ability to clearly understand the current situation and environment) and information processing (the ability to create a better environment and produce results based on a comprehensive understanding of data obtained from multiple sources of information).

Self-awareness: emotional awareness (the ability to understand how individual's emotions are connected to his or her actions and their impact on others), behavioral awareness (the ability to understand individual's behavioral style and how it affects goal achievement and relationships) and self-reflection (the ability to objectively evaluate individual's own qualities, abilities, and values, and to accept feedback).

As mentioned above, in this research, leadership is defined as “a dynamic process that involves effectively utilizing situation-awareness and self-awareness to foster self-understanding, facilitate team collaboration and create outcomes in specific contexts”. In the following section, specific examples are selected to illustrate in detail how this definition is practically applied within leadership development programs.

3.2.3 Challenges in Leadership Theory

Despite the growing emphasis on leadership development in educational and organizational contexts, several theoretical and practical challenges remain unresolved. These challenges can be broadly categorized into four areas: the ambiguity of the concept of leadership, difficulties in evaluation, institutional and cultural constraints, and variability in interpretation and implementation among schools.

(1) Conceptual Ambiguity and the Lack of a Unified Definition

One of the most fundamental issues in leadership theory is the absence of a universally accepted definition. As Yukl (2019) points out, leadership has been defined in various ways depending on theoretical perspectives, ranging from trait-based and behavior-based models to transformational

and authentic leadership paradigms. This diversity reflects the context-sensitive nature of leadership but also creates confusion for researchers and educators who aim to construct consistent educational models.

While many Western leadership development programs use well-established theories as their foundation (Snook et al., 2011), the transferability of these models to non-Western contexts remains questionable. For example, in collectivist societies such as Japan and China, cultural values emphasizing harmony and hierarchical relationships may not align with leadership models rooted in individualism and assertiveness (Hofstede, 1980; House et al., 2004). Thus, it remains unclear how universally applicable such theories are, raising the need for localized frameworks that reflect regional educational values and social structures.

(2) Difficulties in Evaluation

Another challenge lies in assessing the effectiveness of leadership development. Unlike subjects with measurable outputs, leadership involves abstract qualities such as empathy, critical thinking, initiative, and adaptability. Avolio and Hannah (2008) note that assessing these “soft” skills poses significant methodological limitations. While some institutions adopt self-assessments or 360-degree feedback tools, these rely heavily on subjective perceptions and often lack long-term follow-up.

Furthermore, due to the absence of standardized metrics, comparisons between programs or the evaluation of longitudinal effectiveness remain inconsistent. The lack of clear benchmarks for what constitutes “effective” global leadership further exacerbates this problem.

(3) Institutional and Cultural Constraints

Institutional frameworks and cultural factors also pose considerable barriers. In Japan, the highly centralized and examination-driven education system restricts the integration of leadership education into core curricula. Higano (2019) argues that while leadership development is increasingly emphasized, its implementation tends to be peripheral—often confined to special programs like SGH/SSH or treated as an extracurricular component rather than part of the mainstream curriculum.

Culturally, Japanese education has traditionally emphasized conformity, group harmony, and seniority. These values can conflict with leadership traits like proactiveness, assertive communication, and autonomous decision-making, which are typically emphasized in Western leadership theories.

(4) Diversity in Interpretation and Practice across Schools

Even within government-promoted initiatives such as SGH or SSH, there is considerable diversity in how leadership is interpreted and practiced. Some schools focus on practical skills such as public speaking or teamwork, while others emphasize broader qualities like intercultural sensitivity and social responsibility. This inconsistency makes it difficult to compare program outcomes or to generalize findings.

Moreover, disparities in teacher training, institutional resources, and regional partnerships result in uneven program quality. As a result, while the label of “global leadership education” may be shared, its actual content and impact vary significantly across institutions.

In summary, the development of global leadership theory still faces a number of theoretical and

practical limitations. These include the ambiguity of the leadership concept, the absence of valid and reliable assessment methods, contextual challenges in different cultural and institutional settings, and variation in program design and implementation. Addressing these issues requires: further theorization of leadership that incorporates non-Western perspectives; the creation of flexible, culturally adaptive educational frameworks; and the development of more sophisticated and context-sensitive evaluation models.

3.3 Formation and Development of Global Leadership Theory

This chapter explores the formation and development of global leadership theory, as well as the challenges faced during this process. Against the backdrop of accelerating globalization, global leadership has become a key issue in national education systems and societal development. As internationalization and cultural exchange deepen, global leadership is no longer the exclusive domain of a select few elites but is now a common expectation for all citizens, particularly the younger generation. This chapter begins by reviewing the formation of global leadership theory and examining the practical application of the theory through multiple case studies. It then discusses the major challenges encountered during the development of the theory and concludes with insights for future research.

3.3.1 Formation of Global Leadership Theory

In the early 21st century, as globalization accelerated and societies grew increasingly interconnected, the cultivation of global talent and leadership emerged as a key objective of national education strategies. In Japan, this shift was closely tied to structural changes in both domestic education policy and international discourse on leadership development. Notably, the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT) began to emphasize not only the importance of cultivating “global talents” but also the need for individuals who could exert leadership in diverse cultural and institutional environments. The term “global leadership” started gaining traction in Japan through policy initiatives such as the Super Global High School (SGH) and the Super Science High School (SSH) programs. These initiatives were not only aimed at fostering global perspectives and scientific inquiry, but also sought to nurture students’ leadership among students, such as self-directed learning, collaboration, and cross-cultural communication. In this context, the concept of “global leadership” gradually emerged as a composite of global competence and leadership ability—rooted in international engagement, ethical responsibility, and social innovation.

In recent years, as societies become increasingly globalized and complex, the traditional notion of leadership has undergone a significant transformation. This shift is especially evident in the evolving educational discourse in Japan, where leadership development is no longer seen as an elite pursuit reserved for a few, but as a competency expected of all citizens in a diverse and interconnected world.

The revised Courses of Study (MEXT, 2018) characterize the current era as one of uncertainty and rapid societal transformation, driven by advances in artificial intelligence, digital technology, and globalization. In such an era, school education must prepare students not simply to follow instructions, but to act autonomously, collaborate with others, and generate new value in complex social contexts. As the official guideline states (MEXT, 2018):

In such an era, school education is required to enable children to actively face various

changes, collaborate with others to solve problems, critically evaluate various information, achieve conceptual understanding of knowledge, and reorganize information to create new value. Additionally, it is essential to equip them with the ability to reconstruct their goals amidst complex and changing circumstances.

This policy clearly indicates a pedagogical turn toward developing the foundational competencies of leadership in all students, independent judgment, value creation, and collaborative problem-solving. Leadership in this sense is redefined not as hierarchical command, but as a distributed and situational capacity to act meaningfully in relation to others.

Furthermore, recent MEXT policy documents explicitly link global talent development with the broader objective of cultivating inclusive and sustainable societies. In its 2023 statement on post-COVID recovery and innovation-driven growth, MEXT(2023) noted:

To realize a new form of capitalism centered on the concepts of a 'virtuous cycle of growth and distribution' and 'pioneering a new post-COVID society,' it is crucial to further invest in people. This includes developing and securing highly specialized personnel who can thrive in the world's most advanced fields, as well as individuals with diverse perspectives. Additionally, building a sustainable society characterized by diversity and inclusivity is essential for promoting further growth in our country.

This underscores a crucial point: the global leader envisioned today is not merely a technically competent individual, but one who possesses deep self-awareness, the ability to communicate across differences, and the moral orientation to act for collective well-being. The goal is to foster individuals who can take initiative across cultural and regional boundaries, both online and offline, while constructing and communicating new visions and values.

At the same time, this expanded notion of leadership aligns closely with the global competencies framework advocated by international bodies such as the OECD. As discussed in earlier sections, the PISA 2018 Global Competence Framework emphasizes intercultural understanding, value-based decision-making, and collective responsibility. This synergy between domestic policy and global frameworks has helped formalize the emergence of "global leadership development" as a distinct and integrated domain within Japanese educational reform.

In summary, the formation of global leadership theory in Japan has been shaped by three interlocking forces:

- (1) the redefinition of leadership as a universal and dynamic competence for all learners;
- (2) educational reforms that prioritize independent judgment, collaboration, and social responsibility;
- (3) the convergence of national and global visions for human development in a global age.

This theoretical foundation provides the basis for evaluating and designing leadership development programs that respond not only to global market demands, but also to the ethical and civic dimensions of human coexistence.

The definition of "leadership" varies somewhat among scholars. Even today, a unified definition of leadership has not been established. The study of leadership has shifted from focusing solely on internal traits of individuals to emphasizing the recognition of situational contexts, and further, to focusing on the self-awareness of individuals in understanding those situations. The Thunderbird School of Global Management defines global leadership in its program designed to develop a Global Mindset as follows.

This chapter defines global leadership as a process of influencing individuals, groups, and organizations whose cultural, political, and institutional backgrounds are different from the leader's (Snook, S., Nohria, N., & Khurana, R. (Eds.)., 2011, p.63).

Based on this definition, this research refers to Burns' transformational leadership and Walumbwa's authentic leadership among the numerous definitions of leadership to define global leadership as "a dynamic process of effectively utilizing situation-awareness and self-awareness to influence individuals, groups, and organizations with diverse cultural, political, and institutional backgrounds. It enables leaders to foster self-understanding, facilitate team collaboration, and create outcomes in specific contexts". Furthermore, following Tateno's assertion, global leadership education is defined as "aiming to enhance individuals' abilities, qualities, and behaviors to effectively exert global leadership."

3.3.2 Development of Global Leadership Theory

Building upon the theoretical foundation laid out in the previous section, this section explores the practical development of global leadership theories based on secondary sources. Specifically, the following analysis is grounded in *The Handbook for Teaching Leadership: Knowing, Doing, and Being* edited by Snook, Nohria, and Khurana (2011), which documents representative leadership development programs in leading institutions such as London Business School, University of Chicago Booth School of Business, and Harvard Business School. While not based on original fieldwork, these cases provide rich insights into how theoretical concepts such as "situation-awareness" and "self-awareness" have been integrated into structured leadership development practices.

(1) The Approach to Teach Leadership at London Business School

The leadership program at London Business School was shaped by their sociological background and several decades working with executives in business schools. Some of the professors involved in the design project were European sociologists educated in the 1970s (Snook, S., Nohria, N., & Khurana, R. (Eds.)., 2011, p.151). As mentioned in the previous section summarizing the development of leadership theory, the 1970s was the time when the contingency theory began to flourish. "Which aspects of the external situation can you turn to your advantages?" A program on leadership development has been initiated with this question in mind. The leadership emphasized in their program is situational, relational, and non-hierarchical. The conceptual approach framework is organized in the Table 1 below (Snook et al., 2011, p.153-160).

From the information above, conclusions can be drawn as follows. Firstly, this program focuses on the accumulation of experience. Inside the continuous accumulation of experience, students are allowed to observe the changes in the situation and develop themselves in the process. Secondly, the program focuses on personal growth (self-knowledge, self-awareness, self-disclosure) as one of the keys to develop personal leadership. It is important to emphasize that "relationships are viewed as contingent" in the program. What's more, it can be similarly clarified the focus of this program by those two factors of measuring the effectiveness of the program: authenticity and skill. As mentioned above, authentic refers to individuals both know and selectively show their true self; and skill refers to individuals deploy themselves in situational appropriate ways.

[Table 1] The conceptual approach framework

Key points	What does Effective leader mean?	Elements of the definition of leadership	Methods to develop leadership
Situational	<p>Picking up important situational signals.</p> <p>Being able to adjust appropriately, self-consciously deploying their personal capabilities.</p> <p>Reframing a situation to the benefit of those who are led.</p> <p>Recognizing the limitations of context as well as the potential opportunities.</p>	<p>Observational and cognitive skills.</p> <p>Behavioral and adaptive skills.</p> <p>Using their own behavior to change the situation.</p>	<p>Keeping a brief diary of their observations.(15 minutes a day; when they start a assignment, work with a new team, change location etc.)</p> <p>Drawing a network diagram that places themselves at the center and maps the people who have the biggest impact on their performance.(lasting 6 months)</p>
Relational	<p>Being not simply amalgams of desirable traits.</p> <p>Being actively and reciprocally engaged in a complex series of relationships that require cultivation and nurture.</p>	<p>The management of good social distance is a more important skill for contemporary leaders.</p> <p>1)enable the leader to know and understand their followers</p> <p>2)enable the leader to build solidarity with followers based on a shared view of this over-arching goal</p>	<p>Asking individuals to identify their “default mode”.</p> <p>Being asked to practice the opposite of their default mode.</p> <p>Using social distance involves understanding the concepts of “bandwidth”.</p>
Non-hierarchical	<p>Seeking to build leadership capability widely and to give people the opportunity to exercise it.</p> <p>Knowing their differences and use them to their own and crucially their followers’ advantage.</p> <p>Being aware of their weakness and do not seek to hide them all.</p>	<p>Knowing yourself.</p> <p>Expressing(or showing) yourself.</p>	<p>Leadership learning.</p> <p>Experience.</p> <p>Feedback.</p> <p>Reflection.</p>

(2) Leadership Effectiveness and Development(LEAD) at University of Chicago Booth School of Business

Leadership Effectiveness and Development(LEAD) was the only mandatory curriculum created

for full-time MBA curriculum from 1989. The LEAD aimed at building self-awareness and teaching students how to extract the “right” lessons from experience during the two-year MBA experience. The expectation of this course was to provide students with an accurate view of their strengths and developmental needs, and guiding them to accurately process feedback from various sources. The course was based on experience in laboratory classes. The processes associated with the project were reorganized into the Table 2 below(Snook, S., Nohria, N., & Khurana, R. (Eds.). ,2011, p.184-188).

[Table 2] The conceptual approach framework of LEAD

Purpose: to give students an accurate sense of their strengths and developmental needs, and they learned how to gain actionable insights from their experiences in an unbiased, replicable way.			
Methods	Period	Content	
Summer pre-work	About three weeks (before orientation)	Complete a series of assignments. (As a reflection process to let students explore their leadership style, motivations and actions.)	
Immersion retreat	A three day, two night retreat (the Leadership Outdoor Experience)	Remove students from the familiar and place them all in a new setting with minimal outside distraction. (As an opportunity to build new relationship and feel more comfortable with a highly-participatory learning environment.)	
LEAD coursework	Six weeks (including seven three-hour class sessions)	Foundations of Leadership	Introductory discussion about leadership, first impression, and career derailment risks
		Personality and Work Style	Understand how they gather information, make decisions and interact with others.
		Group Process	Team work and need to be videotaped (like the number of times they speak and the nature of their contributions), then the date allow student to “see”the role they played in group settings in a more objective way.
		Interpersonal Communications	Assess their communication skills and executive presence.
		Conflict Management	Use the Thomas Kilmann Instrument(TKI) to understand their preference in dealing with conflict and its impacts, and how to recognize and work with other styles to resolve conflict more effectively.
		Audience Captivation	Given three times to deliver a speech, to view the performance and to receive feedback from others(including facilitators and other team members).
		Decisions and Integrity	Case studies and discussion to realize the potential biased and tendencies in decision making.

The novelty of the program is that two preparatory activities are set up in advance before the official course begins, one for self-assessment and the other to create a new environment for building good interpersonal relationships. This reaffirms the program's focus on the development of self-awareness and the ability to learn from experience, two key factors in developing effective leadership skills. At the same time, it can be seen that student-oriented experiential learning in small groups is emphasized in the formal curriculum. The second-year students play a unique role as facilitators within the program, mostly acting as an observer to support and guide first-year students from the side. This is also worth pondering. The setup of second-year students as experienced individuals who would provide one-on-one mentoring to fresh first-year students allowed everyone involved in the program to get a more elder vested in their learning and development.

(3) Authentic Leadership Development(ALD) Course at Harvard Business School

As the title of the program indicates, the program was a leadership development program built on the theory of AUTHENTIC LEADERSHIP. As authentic leadership resulted from knowing yourself including your strengths and weakness through the unique life story and the crucibles you had experienced. The ALD believed that effective leaders are those who follow their True North(their beliefs, values and principles). This course was twelve weeks long, created as second-year elective course from 2005. As mentioned in the program, it has three elements:

- (1) readings from True North and introspective exercises drawn from Finding Your True North: A Personal Guide;
- (2) small group discussions with six-person Leadership Development Groups(LDGs);
- (3) classroom case discussions of various leaders' life stories.

What's more, the key elements to leadership development mentioned in ALD are:

- (1) self-awareness;
- (2) values;
- (3) motivated capabilities;
- (4) support teams;
- (5) integrated life(Snook, S., Nohria, N., & Khurana, R. (Eds.). ,2011, p.313-315)

The specific and detailed organization of the course was organized in the table 3 below.

[Table 3] The specific and detailed organization of the course of ALD

	Week 1 Discover your authentic leadership				
Part 1 Examine your leadership journey	Week 2 Your journey to authentic leadership	Week 3 Why leaders lose their way	Week 4 Crucibles of leadership		
Part 2 Discover your authentic leadership	Week 5 Discover your authentic self	Week 6 Values, principles, and ethical boundaries	Week 7 Motivated capabilities	Week 8 Building your support team	Week 9 Integrated leadership

Part 3 Put your authentic leadership into action	Week 10 Leadership purpose	Week 11 Empowering others to lead	Week 12 Optimizing leadership effectiveness		
Final paper and personal leadership development plan					

It can be said that the development of this program is based on reviewing one's past life, while in the process of learning from other people's life stories, drawing on experience and being able to have a clearer direction for one's future life. The organization LDGs, mentioned above, is also one of the novelties of the project. That is, it creates a new environment (Snook, S., Nohria, N., & Khurana, R. (Eds.), 2011, p.319-322.). It provides a vital link between the individual assignments and the classroom discussion, providing students a small group with whom they can share intimate details of their lives in a safe, secure environment, and receive reinforcement and feedback from group members.

These three case studies collectively exemplify the practical evolution of global leadership theory. Each program, while distinct in its methodologies and educational context, shares common theoretical underpinnings, primarily the emphasis on situation-awareness and self-awareness as foundational leadership competencies.

Situation-awareness is addressed through deliberate experiential learning, exposure to diverse leadership scenarios, and structured observational and cognitive training. Leaders are cultivated not as passive recipients of knowledge but as active participants, continually adapting and responding to complex environments.

Self-awareness, identified consistently as critical across all programs, is fostered through structured reflection, personalized feedback, and introspective assignments. Programs uniformly recognize that effective leadership requires deep personal insight into one's behaviors, emotional responses, and values.

Furthermore, these programs highlight two additional important dimensions. One is authenticity and relational capability. Programs encourage leaders to be true to their values and to actively manage social relationships within teams, confirming Yukl's (2019) notion of effective leadership encompassing personal authenticity and relational skill. The other is, non-hierarchical leadership. Reflecting contemporary theories, leadership is increasingly seen as a capacity available and essential to all individuals, irrespective of their formal authority or organizational position.

Thus, the integration of these theoretical concepts within structured, practical learning environments not only confirms their validity but also enriches the theoretical landscape by providing empirical and pedagogical evidence of their effectiveness in global leadership development.

3.3.3 Challenges in Global Leadership Theory

Like the development of other leadership theories, the development of global leadership theory faces several challenges. In this section, three key issues will be highlighted: (1) cultural differences, (2) the need to leverage individual strengths, and 3) the creation of environments that foster long-term leadership development.

Firstly, the implementation of global leadership education is deeply influenced not only by

theoretical frameworks but also by the educational systems and cultural contexts of different countries. As noted in Thom Wolf's 2006 study *Culture, Leadership, and Organizations: The GLOBE Study of 62 Societies* (review) .

Negatively, think of the violation of societal cultural norms. Culturally implicit leadership theories are shaped by societal and organizational cultures. Leaders grow up in their cultures "and build their worldview on the basis of their own learning and development." In the workplace, they have to motivate and energize employees who are also culturally conditioned. (p.15)

According to the study, leaders grow up in their cultures and build their worldview on the basis of their own learning and development, and they must motivate employees who are also culturally conditioned. This observation underscores the challenge of overcoming cultural barriers when aiming to cultivate effective leadership across diverse cultural contexts. For example, the leadership programs at institutions like London Business School emphasize situational leadership, which works effectively in Western cultural settings. However, the question arises: will the same approach yield similar results in a different cultural context, such as Japan's? This is an issue that needs further investigation in future studies. Unfortunately, most leadership research in Japan is still largely based on Western models, which often overlook the importance of local cultural perspectives in shaping leadership development.

Secondly, another challenge is the need to cultivate individual leadership strengths within a team. Even when a leadership program is based on a shared leadership theory such as authentic leadership, the broader goal of the program is often to develop leadership qualities that are distinct to each individual. In practice, how can leadership programs be designed to ensure that each team member can realize their leadership potential? This challenge requires a deeper exploration of how leadership can be personalized and adapted to each participant's unique characteristics, strengths, and experiences. It's not enough to focus solely on the collective leadership of a group, the development of individual leadership capacity is crucial for the long-term success of the program and the people involved.

Thirdly, creating an environment that fosters long-term leadership development is essential. As demonstrated in the aforementioned leadership programs, many focus on mid- to long-term development. They create diverse situations in which students can solve problems and gradually grow into leadership roles. This process of gradual development allows students to practice leadership in real-world contexts, facing challenges that require adaptive thinking and resilience. However, the challenge lies in creating environments that not only promote short-term learning but also establish the foundation for continuous leadership growth. Without such an environment, the impact of leadership development programs may be limited, and participants may not achieve sustainable growth in their leadership abilities.

In conclusion, while global leadership theory has made significant strides in educational and organizational settings, several key challenges remain. The cultural diversity across different regions poses difficulties in applying universal leadership models, and the need to develop personalized leadership skills requires a shift in how leadership is taught. Additionally, the creation of long-term environments conducive to leadership development is a crucial factor in ensuring the effectiveness of leadership education. Addressing these challenges requires a comprehensive approach that takes into account cultural nuances, individual characteristics, and the long-term nature of leadership growth.

3.4 Challenges in Previous Research

Many previous studies on global leadership development programs have been conducted, particularly in Europe and the United States, as described above. These studies have made important contributions by focusing on the design and implementation of specific leadership development models and programs based on the development of leadership theory. However, several key challenges remain that limit the applicability and effectiveness of these programs.

Firstly, leadership theories developed mainly in the West are often rooted in Western culture and values, which do not adequately account for the unique cultural contexts and social environments of Asian countries. As Hofstede (Hofstede, 1980, p. 45) suggests, cultural differences in values can significantly influence leadership styles. Thus, it is crucial to examine how Western leadership theories may be modified or adapted to better fit the cultural realities of Asian societies, such as Japan's emphasis on group dynamics.

Secondly, many leadership development programs have been implemented primarily in corporations and business schools and lack an approach from an educational institution, especially from a public policy perspective (Day, 2000, p. 583). This results in leadership development efforts that tend to be short-term and business-centric, focusing on immediate leadership for organizational success, rather than fostering long-term, sustainable leadership development for broader societal impact. Consequently, the lack of a long-term vision for leadership education in the public sector limits its potential to address the deeper societal challenges that global leadership demands in today's world.

In addition, this research found that models and frameworks designed for global leadership development could be used in both the long and short term, but most of the previous research has focused on short-term outcomes. There is a lack of consideration of long-term leadership development and sustainable leadership development (Avolio, 2005, p. 134). This has resulted in a lack of a systematic framework for long-term capacity building for leadership development programs and a lack of research to assess program effectiveness through long-term follow-up.

Finally, and somewhat overlapping with the first point, the development of leadership theory has been primarily from a U.S. perspective, and there is a lack of research on leadership traits and development approaches in Asian countries (House, 2004, p. 61). As a result, the design of global leadership development programs in countries like Japan faces significant challenges, as Western-centric theories may not align with the societal structures, values, and educational norms of these countries. This cultural mismatch can hinder the effectiveness of leadership programs and requires a rethinking of global leadership frameworks that better address the cultural diversity of the world.

In response to these challenges, this research seeks to refine the focus of previous studies and highlight areas for improvement.

Firstly, the research finds that while leadership development programs in Europe and the United States are largely based on existing leadership theories, there is a need to adapt these frameworks for a more diverse, global audience. The use of transformational leadership and authentic leadership theories, for instance, is widespread, and these theories provide valuable lenses for understanding global leadership development. However, it is essential to explore how these models can be applied within different cultural contexts, especially in Asia.

Secondly, by analyzing the shortcomings in previous studies, this research aims to draw connections between leadership development programs in Asia, such as Japan, and their Western

counterparts. The novelty of this research lies in its recognition that leadership programs should not simply be copied from Western models but should be uniquely designed to fit the cultural and social contexts of each country. Developing context-specific leadership development programs will ensure that leadership education is more effective and aligned with local needs and values.

Chapter 4 The Structure and Principles of Global leadership Development Programs in Japanese High Schools

Global leadership development efforts in Japanese high schools have diversified significantly, reflecting both internationalization trends and domestic educational reforms. Central to these initiatives are two government-led programs: the Super Global High School (SGH) program and the Super Science High School (SSH) program. This subsection first examines the policy backgrounds, objectives, and structural features of these programs. It then categorizes the diverse practices emerging from them into three primary types: Overseas Fieldwork Experience Learning Type, Community Development Learning Type, and Science and Technology Learning Type. Through three case studies to provide a clearer understanding of how Japan is nurturing global leader at the secondary education level.

4.1 Institutional Framework for Global Leadership Development in Japanese High Schools

At the high school level in Japan, the SGH program has been introduced, offering students education with an global perspective. Through this initiative, efforts are aimed at fostering international understanding and leadership development among young people(MEXT, 2016). Since the fiscal year 2014, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) initiated the SGH program. SGH aims national, public, and private high schools, as well as integrated junior and senior high schools. The program provides support over a five-year period aimed at developing and implementing high-quality curricula to cultivate future global leaders capable of international engagement. This includes collaboration with domestic and international universities, corporations, and international organizations to advance internationalization efforts. The SGH program, outlines its purpose as follows, as stated in the implementation guidelines introduced in 2014.

The purpose of the SGH project at the high school level is to foster the development of global leaders who can contribute to society through education. This involves cultivating students' interest and deep understanding of social issues, as well as enhancing their communication skills, problem-solving abilities, and global competencies. The goal is to equip students with the qualities necessary to succeed on an global scale in the future(pp.1-2).

Considering this purpose, the objective of the project is not merely to implement global education at the high school level, but rather to emphasize the development of leaders who can thrive in a global society.

Additionally, in 2002, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) launched the SSH program to promote advanced science and technology education for high school students. This program aims to cultivate future scientists and engineers, with a particular emphasis on science and mathematics education. The objectives and characteristics of the SSH program are as follows.

The purpose and objectives of the SSH program are to nurture future science and technology talent capable of thriving on an international stage. However, as previously mentioned, this program goes beyond the individual development of students. By designating specific high schools, it aims to develop a system for cultivating science and technology talent. A key feature of the program is the establishment of a framework where

designated SSH schools collaborate with administrative institutions to promote advanced science and mathematics education.(p.11)

Unlike the SGH program, which aims to cultivate comprehensive global leaders among all students, the SSH program focuses more specifically on nurturing globally oriented science and technology talent. By designating high schools with strong educational resources and faculty, the program seeks to "broaden the pool of exceptional individuals with advanced scientific inquiry abilities across diverse fields, without being constrained by traditional divisions between the humanities and sciences, thereby strengthening the cultivation of science and technology talent in a reliable manner" (p.12). Rather than simply dividing students into humanities or science tracks, the SSH program encourages breaking down these traditional barriers, integrating disciplines, and engaging students in deep, cross-disciplinary research projects. Additionally, it actively promotes the presentation and exchange of students' research findings in international academic journals and through global exchange activities. This approach not only aims to expand students' perspectives and communication skills but also aspires to nurture globally minded talents equipped for the challenges of the future.

Among these, the SGH and SSH programs mentioned above represent two flagship initiatives. Launched in 2014 by MEXT, the SGH program specifically targets the development of students capable of active global engagement through international perspectives. In contrast, the SSH program, implemented since 2002, focuses on nurturing advanced scientific research capabilities in science and technology fields. Although these programs differ in their specific objectives and curricular focus, both serve critical roles in fostering global awareness among Japanese high school students and enhancing their adaptability in international contexts.

Although both programs aim to cultivate globally competent individuals, their policy frameworks emphasize different educational priorities. By analyzing the official objectives, curriculum structures, and institutional characteristics of the SGH and SSH programs, three major developmental types can be logically inferred. This categorization is further supported by the global competence framework introduced in the OECD's PISA 2018 assessment. The framework defines global competence across four key dimensions:

- (1) Examining local, global, and intercultural issues
- (2) Understanding and appreciating the perspectives and worldviews of others
- (3) Taking action for collective well-being and sustainable development
- (4) Engaging in open, appropriate, and effective interactions across cultures(p.6)

These dimensions emphasize the integrated application of knowledge, skills, attitudes, and values required for individuals to lead and collaborate effectively in a diverse and globalized world.

4.2 Aims of Three Types of Global Leadership Development Programs

Based on these core elements mentioned on the last section, three types of global talent development initiatives can be deduced.

The first is the Overseas Fieldwork Experience Learning Type, which focuses on cultivating international adaptability and cross-cultural communication skills. This type is closely aligned with the SGH program's founding vision to develop "global leaders capable of acting in international society." To this end, MEXT explicitly encourages initiatives such as overseas experiential learning, cross-cultural exchange, and English-based presentations.

The second type is the Community Development Learning Type, found in both SGH and SSH

programs. In addition to international engagement, these initiatives emphasize collaboration with local communities and the exploration of regional social and environmental issues. This approach fosters students' sense of social responsibility, public engagement, and the ability to connect local issues with global perspectives.

The third is the Science and Technology Learning Type, primarily promoted under the SSH framework. These projects focus on cultivating scientific literacy, research skills, and interdisciplinary integration to develop students capable of responding to technological transformation and contributing as internationally oriented science and technology professionals.

This theoretical categorization is also empirically reflected in the findings of Tanaka (2024), who analyzed research and development documents from 69 SSH-designated schools and 56 SGH-designated schools. His study revealed clear distinctions aligned with the above categories. SSH programs frequently emphasized keywords such as “science,” “mathematics,” and “technology,” while SGH programs highlighted terms like “global,” “community,” and “international exchange.” While SSH schools focused on scientific inquiry and innovation, SGH schools prioritized exploration of social issues and cross-cultural collaboration. Thus, although these three categories emerged inductively from observed practices, they can also be logically derived from the essential competencies expected of future global leaders.

As mentioned above, Japanese global talent development programs can be categorized based on their objectives. The first category, "Overseas Fieldwork Experience Learning Type," focuses on fostering cross-cultural understanding and competencies through international experiential learning. The second category, "Community Development Learning Type," emphasizes developing community leadership and social responsibility in local contexts. The third category, "Science and Technology Learning Type," highlights the cultivation of skills to tackle global challenges centered on science and technology. Programs such as SGH and SSH can almost be classified along these lines. SSH programs, for example, often align closely with the second and the third category due to their emphasis on the science and technology domain. SGH programs, by contrast, tend to be broader, commonly integrating activities related to the first and second categories. The following Table 4 will elaborate on these three types of efforts, providing specific examples of schools to illustrate their details.

(1) Overseas Fieldwork Experience Learning Type

In the 2011 *Global human resource development* report, two key issues related to secondary education were highlighted: first, the need to enhance students' communication skills, particularly in English, while expanding opportunities for intercultural experiences; and second, the promotion of overseas study experiences at the high school level. (p.9)

These priorities align with findings from Braskamp et al.'s research, which examines the impact of overseas fieldwork and experiential learning on students' global competencies. Their research demonstrates that such programs significantly enhance self-awareness, global perspectives, and cross-cultural understanding, fostering not only cognitive growth but also the development of practical communication skills. As Braskamp et al. emphasize, “Education abroad has considerable potential in providing an environment that results in value added to student global learning and development” (pp. 101-102). They further argue that “to be an optimally functioning communicator in a pluralistic society, individuals need to demonstrate intercultural competence and sensitivity as they live in increasingly pluralistic and diverse environments” (p. 103).

[Table 4] 3 Types of Efforts in Japanese high schools for global leadership development

	Type of Effort	Main Program(s)	Core Objectives	Representative Case School	Program Features
1	Overseas Fieldwork Experience Learning Type	Primarily SGH	Enhancing cross-cultural understanding, global mindset, communication skills	Okayama Gakugeikan High School (SGH)	International collaboration, overseas learning, English presentations
2	Community Development Learning Type	Both SGH and SSH	Developing self-awareness, social responsibility, local-global linkage	Okayama Sozan High School (SGH)	Community-based learning, problem-solving in local contexts, leadership projects
3	Science and Technology Learning Type	Primarily SSH	Fostering scientific inquiry, interdisciplinary thinking, innovation skills	Okayama Amaki High School (SSH)	STEM/STEAM focus, advanced research, interdisciplinary and intergenerational collaboration

For example, Okayama Gakugeikan High School, which has been designated as a SGH school. Since its establishment, Okayama Gakugeikan High School has actively involved students in social contribution activities, such as volunteering and providing educational support to developing countries in Southeast Asia, in order to give them a sense of real-world social participation. After being recognized as an SGH-designated school, the school has further expanded its efforts in supporting education in developing countries. This is because the school believes that, in the rapidly developing international society, global leaders need to possess rich human qualities and values along with high intellect based on learning and activities, and they should be able to apply these qualities to actively engage with the world. In today's international society, it is not only necessary to have leadership skills and the ability to create new value, but also to comprehensively grasp the current problems of society and actively seek solutions. Moreover, these individuals must possess professional expertise and practical abilities to solve problems. In order to cultivate such talents, the school focuses on the issue of "gaps," which is prevalent worldwide, especially the "discriminatory treatment" caused by poverty and inequality. The school hopes to nurture students to be leaders who are responsible for collaborating with teams and creating results, and to develop their leadership awareness to solve social injustices and contribute to creating a fairer society. The school identifies the following five abilities as essential for a leader:

- (1) Global Mindset: Developing a global mindset that enables an understanding of the background of global issues.

- (2) Problem-Solving Skills: Acquiring the ability to learn methods for solving problems.
- (3) Negotiation Communication Skills: Acquiring negotiation communication skills that enable effective communication through various tools.
- (4) Collaborative Ability: Developing the ability to collaborate and experience the synergistic effects of teamwork.
- (5) Practical Ability: Cultivating practical skills to achieve a sense of accomplishment through proactive problem-solving.

The school selected these five abilities as the ideal qualities of a leader based on in-depth reflection and analysis of its past activities and teaching practices. These abilities directly address the shortcomings identified in previous educational efforts, and reflect the core needs for cultivating students to cope with complex social challenges. Specifically, the school found that, in the past, students had only a superficial understanding of international events and global issues, lacked critical awareness of existing problems, and struggled to propose effective solutions. Additionally, students had difficulty using English as a medium for communication, especially in situations requiring a second language. Furthermore, due to insufficient experience in setting goals and working with others to achieve them, students could not actively collaborate to solve problems. Finally, students were often hesitant to take proactive action due to fears of failure and lack of experience in implementing solutions for unfamiliar issues. To address these issues, the school has developed an educational framework focused on the five abilities mentioned above, hoping to compensate for past weaknesses and provide more targeted and effective leadership education.

These insights underscore the essential role of overseas fieldwork experience learning in nurturing global citizens and equipping students with the skills necessary to navigate diverse cultural contexts. Reflecting this perspective, the Ministry of Education's global talent development initiatives have increasingly encouraged Japanese schools to engage in international exchange and collaboration programs. In particular, SGH projects integrate such initiatives as a core component of international understanding education, providing students with opportunities to cultivate cross-cultural communication skills, broaden their global outlook, and develop leadership capabilities that contribute to global society.

(2) Community Development Learning Type

While actively promoting overseas study and encouraging more students to step onto the global stage is certainly an effective way to foster global talents, Japan's Ministry of Education is also turning its attention inward, focusing on the internationalization of domestic education. The goal is to cultivate the competencies and qualities expected of global talents even without requiring students to study abroad. Since 2000, Japan has incorporated the concept of "multicultural coexistence" into its educational development. In the 2012 Strategic Meeting for the Promotion of Global Talent Development, strong emphasis was placed on the importance of fostering exchange between Japanese students and outstanding international students. Furthermore, the Ministry of Internal Affairs and Communications revised the "Plan for the Promotion of Multicultural Coexistence in Local Communities" in 2020 for the first time in 17 years. As Japanese society becomes increasingly internationalized, opportunities to interact with people of foreign roots are rapidly expanding. In this context, how Japanese students respond to the new challenges brought

by diverse ethnicities, religions, and social values has become an urgent issue.

Community Development Learning Type plays a pivotal role in global talent development programs by fostering self-awareness and situational awareness among participants. This learning type emphasizes collaboration, individual empowerment, and a shared purpose, which are essential for effective leadership. By engaging in community-focused projects, participants enhance their self-awareness, understanding their strengths and limitations, which allows them to contribute meaningfully to group efforts. Additionally, they develop situational awareness as they learn to navigate complex social dynamics and recognize the needs of their communities. This approach aligns with the principles of the Social Change Model of Leadership Development, which highlights the importance of both individual and collective growth. The leadership development model proposed in this book is built around seven core elements, which collectively promote the development of leadership abilities for individuals and groups in social transformation. The specific elements are as follows:

Consciousness of self means being aware of the beliefs, values, attitudes, and emotions that motivate one to take action. (p.22)

Congruence refers to thinking, feeling, and behaving with consistency, genuineness, authenticity, and honesty toward others. (p.22)

Commitment is the psychic energy that motivates the individual to serve and that drives the collective effort. (p.22)

Collaboration is to work with others in a common effort. (p.23)

Common Purpose means to work with shared aims and values. It facilitates the group's ability to engage in collective analysis of the issues at hand and the task to be undertaken. (p.23)

Citizenship is the process whereby the individual and the collaborative group become responsibly connected to the community and the society through the leadership development activity. (p.23)

Controversy with Civility recognizes two fundamental realities of any creative group effort: that differences in viewpoint are inevitable, and that such differences must be aired openly but with civility. (p.23)

In the development of leadership abilities within this model, the focus is not only on individual growth but also emphasizes the importance of collective wisdom and collaboration. It provides comprehensive guidance for cultivating a new generation with social responsibility and leadership capabilities. As noted in the model, "the essence of beautiful music is that it simultaneously combines uniquely different sounds (p.4)," illustrating how diversity within a group can enhance collaborative outcomes. Participants are encouraged to reflect on their experiences, fostering a deeper understanding of their roles and the impact of their actions on the community. This reflective practice not only cultivates empathy and effective communication but also equips future leaders with the skills needed to drive meaningful social change.

For example, Okayama Souzan High School, which has been designated as a SGH school. Okayama Sozan High School's SGH program aims to cultivate a global leader model based on the spirit of "Wa-shite Nagarezu" (harmonizing without being swayed), which has been passed down since the school's founding. The spirit of "Wa-shite Nagarezu" emphasizes the importance of acquiring broad knowledge, collaborating with people of different cultures and perspectives, maintaining one's own identity, and proactively engaging in problem-solving. This spirit aligns

with the school's educational goal of fostering global leaders who focus on collaboration and initiative. It is in line with the Ministry of Education's vision of a "global leader" who possesses not only language skills but also a strong awareness of social issues, general knowledge, communication skills, and problem-solving abilities.

The core of global leader development at the school is the research and development unit called "SOZAN International School," where students are encouraged to think critically about social issues and develop a sense of social contribution through project-based learning. The SGH program at Sozan High School focuses on cultivating five core competencies:

Broad and Deep Knowledge (Global Literacy): This competency aims to cultivate students' broad perspective and deep understanding of the world, particularly translating this knowledge into their own cognition and actions. Many students tend to stop at organizing and consolidating information in their research projects, lacking deep understanding and practical application of knowledge. Expanding one's worldview starts with correctly recognizing Japan's role and position in the global context. Students are encouraged not only to engage in input (learning basic knowledge) but also to think about how to turn this knowledge into output in future real-life situations.

Problem-Solving Ability: This is a highly comprehensive ability that requires students to calmly analyze the current situation and discover problems from a broader perspective. Once the issue is identified, students must collect, categorize, and organize information to find theoretical support, better understanding and proving the existence of the problem and possible solutions. The process also emphasizes collaboration, where students work together using creative thinking to explore potential solutions.

Communication Ability: This is an essential skill for teamwork. It requires students to clearly and logically express their views while respecting and understanding the opinions of others. Students need to learn how to accommodate diverse personal backgrounds and perspectives, and engage in deep interactions through various forms of communication, including utilizing ICT tools to accurately record and comprehend others' viewpoints.

Leadership Ability: This competency is specifically highlighted as a key area in the program and has clear direction. It draws on professional leadership research and the full leadership process. First, students must identify a problem that needs to be solved and propose a clear vision. Even though there may be diverse visions within the group, through communication and discussion, a common goal needs to be formed. Once the shared vision is set, students collaborate with team members to design and implement solutions, taking into consideration each member's personality and abilities to divide the work and achieve the team's objectives.

Social Contribution Awareness: This competency requires students to understand the importance of social and international contributions and to treat societal issues as personal issues, thereby stimulating their willingness to take action in solving these problems. In this program, "contribution awareness" starts from Okayama and extends to Japan and the world, encouraging students to give back to society through action.

Through the SGH program, Okayama Sozan High School lays the foundation for students to become global leaders by cultivating broad knowledge, problem-solving abilities, communication skills, leadership qualities, and social contribution awareness. These competencies are interrelated and collectively build the core competitiveness of students, reflecting the educational philosophy

of the SGH program. It combines solid foundational learning with practical application, allowing students to be locally grounded while facing the global challenges of the 21st century.

Thus, Community Development Learning Type serves as a powerful framework for nurturing leadership capabilities that are responsive to both individual and community needs. The goal of this type of leadership development program is often to enhance students' communication and coordination skills in a multicultural society, as well as to deepen their understanding of both local and international societal issues. Many SGH programs are designed with community involvement, while some SSH programs also incorporate locally specific scientific innovations into their curricula. In this section, the SGH program at Sozan High School will be analyzed as one of the case studies.

(3) Science and Technology Learning Type

With the advent of Society 5.0, society is undergoing an unprecedented transformation. The rapid development of technologies such as artificial intelligence (AI), the Internet of Things (IoT), and big data is profoundly reshaping human life, work, and education. Against this backdrop, the demand for scientific talent with innovative technological capabilities is becoming increasingly urgent. This demand extends beyond proficiency in technology development to encompass interdisciplinary collaboration, complex problem-solving, and comprehensive abilities for sustainable societal development. As an interdisciplinary approach to education, STEM education serves as a core pathway for cultivating such innovative talent. By integrating Science, Technology, Engineering, and Mathematics, STEM education(2010) aims to “nurture students' systematic thinking and practical skills. STEM education aims to equip students not only with scientific knowledge but also with the capacity for innovation and problem-solving, which are essential for addressing real-world challenges in a rapidly advancing technological society.” In a rapidly advancing technological society, STEM education equips students to adapt to the technological environment of the future. It enables them not only to acquire theoretical knowledge but also to apply it in practice, fostering innovation and solving real-world problems. Through STEM education, students enhance their practical skills and innovation capabilities, preparing them to navigate the complexities of the Society 5.0 technological landscape. Additionally, STEM education emphasizes addressing and resolving societal issues, nurturing not only technical talent but also future citizens with a strong sense of social responsibility. According to the January 2021 report by the Central Council for Education in Japan, “In response to rapid technological advancements and societal changes, schools are required to cultivate competencies that enable students to utilize information effectively, integrate diverse challenges, identify and solve problems, and create social value” (p.56). In line with this, Japan’s STEM education incorporates the liberal arts, represented by the addition of “A” to create STEAM education. As highlighted in the 11th proposal of the Education Rebuilding Implementation Council, STEAM education is defined as “interdisciplinary education that applies learning from various subjects to solve real-world problems”. In the Sixth Basic Plan for Science, Technology, and Innovation (FY 2021–2025), the importance of fostering inquiry skills, a focus of the Super Science High School (SSH) program, is emphasized. The plan identifies the SSH initiative as a key effort in education and human resource development, aimed at achieving diverse well-being and addressing challenges. Furthermore, the report on the future direction of SSH programs underscores their contribution to promoting STEAM education (2021, p.8). This educational model not only trains

technical professionals but also fosters well-rounded individuals capable of contributing to a future society. It supports technological progress and sustainable development.

For example, Okayama Amaki High School, which has been designated as a SSH school. At Okayama Amaki High School, the core research and development theme of the SSH project is "Cultivating resilient, innovative, and collaborative next-generation scientific leaders (Science Eminent-ers)." The school places particular emphasis on nurturing leadership skills in the field of science and has outlined the following three core competencies as its primary goals:

- (1) Problem-Pursuing Ability: The capacity to overcome various obstacles and persistently delve into research topics.
- (2) Interdisciplinary Integration Ability: The ability to bridge and synthesize knowledge from different fields and cultures to solve problems with flexible and innovative thinking.
- (3) Intergenerational Coordination Ability: The skill to collaborate with people from different generations, demonstrating both leadership and followership.

To systematically develop these abilities, the school focuses on its science and mathematics track, designing in-depth courses and research activities that facilitate students' growth through scientific practice. For example, building on previous research themes, the school launched a comprehensive research project on "Environmental Sustainability and Energy Innovation". In this project, students first cultivate their problem-pursuing ability by independently identifying their chosen topics, gathering data, and proposing preliminary hypotheses. During the research process, they integrate knowledge from chemistry, geography, sociology, and other disciplines, transcending the limitations of a single field and leveraging their interdisciplinary integration ability. Additionally, through collaboration with local communities, businesses, and university research teams, students develop their intergenerational coordination ability, learning how to effectively communicate and cooperate with individuals from various generations. Through teamwork and division of labor, they achieve tangible research outcomes.

This process not only strengthens students' academic skills but also enhances their situational awareness by helping them understand the societal impact of scientific research. By implementing such initiatives, Okayama Amaki High School effectively integrates the principles of the SSH program into its curriculum. While fostering students' self-awareness and scientific leadership skills, the school encourages them to apply their potential in broader contexts, contributing meaningfully to societal sustainability and progress.

In summary, the efforts to develop global talent in Japanese high schools have become increasingly diversified in recent years and can be broadly categorized into three types: Overseas Fieldwork Experience Learning Type, Community Development Learning Type, and Science and Technology Learning Type. As core initiatives within this framework, the SGH and SSH programs have played a significant role in fostering global perspectives and enhancing students' competencies at different levels. The Overseas Fieldwork Experience Learning Type emphasizes cross-cultural experiential learning, focusing on students' adaptability and communication skills in international environments. The Community Development Learning Type highlights social responsibility and leadership development, encouraging students to take active roles in both local and global communities. Meanwhile, the Science and Technology Learning Type, closely aligned with the Society 5.0 vision, is grounded in STEM/STEAM education and aims to nurture future talent with innovative thinking and technological competencies. Regardless of the type, Japan's

global talent development reflects key trends such as interdisciplinary integration, inquiry-based learning, and the cultivation of social responsibility. These initiatives not only enhance students' international competitiveness but also drive the Japanese education system toward a more open and practice-oriented approach. As globalization and technological advancements continue to evolve, high school-level global talent development models will further adapt to better meet societal needs and global challenges.

4.3 Overview of Curriculum of Representative Schools

The aim of this section is to clarify the specific qualities and competencies each program seeks to cultivate, along with the concrete methods of implementation. Particular focus is placed on how each school develops key abilities such as problem-solving, collaboration, intercultural understanding, and scientific thinking. The analysis examines the curriculum design and assessment methods adopted to foster global leaders.

(1) Okayama Gakugeikan High School (Overseas Fieldwork Type)

As for Gakugeikan High School, in order to cultivate "leaders who can contribute to society," the high school has set the following four core objectives:

- (1) Increase the number of students equipped with the five qualities and abilities required of global leaders.
- (2) Increase the number of students who are motivated to continuously participate in domestic and international social contribution activities after graduation.
- (3) Increase the number of students advancing to universities that focus on research on global issues.
- (4) Increase the number of teachers who engage in developing curricula aimed at cultivating global human resources, such as implementing new teaching methods and developing educational environments.

To achieve the educational goal of fostering global leadership, the school has systematically designed the SGH program and named it "International Issue Research." The overarching research theme of the program is "How high school students can provide solutions to the vicious cycle of poverty in developing countries." The entire project is divided into three stages, progressing sequentially according to the students' grade levels. Each stage not only focuses on the poverty issue itself but also emphasizes analyzing the cause-and-effect relationships within the poverty problems of developing countries, guiding students to think deeply about the mechanisms behind these issues. The core goal of the project is to help students discover and harness their potential, gradually enhancing and applying these abilities through practice. To this end, the course adopts the PDCA cycle (Plan-Do-Check-Act) model, emphasizing students' initiative and practical abilities. In the project, students need to independently develop action plans (Plan), execute the plans through actual activities (Do), reflect and evaluate the results (Check), and then adjust and improve the plans based on the reflections (Act), thus completing a full cycle. This method not only cultivates students' autonomous learning abilities but also helps them achieve real skill improvement through the ongoing process of refining their practices. In addition, the course adopts active learning methods, moving away from the traditional classroom model of passively receiving textbook knowledge. After observing students' learning states, teachers provide timely guidance to encourage students to think independently and explore, thereby stimulating their

creativity and problem-solving awareness. This design aims to combine practice and reflection, helping students find their positioning in real-world social issues and develop into leaders with a global perspective and action.

In the first phase, the high school focuses on the theme of "the vicious cycle of poverty in developing countries," organizing all students involved in the project to conduct research on the poverty issues of developing countries. The research primarily focuses on "education" and "environment" as two key angles, exploring related topics and attempting to propose solutions. For example, students choose topics such as "the causal relationship between education and poverty" and "factors hindering the realization of a non-cyclic society" as research directions, deepening their understanding through group inquiry learning. In the specific courses, guest lectures by university professors are organized to teach students how to overcome cultural, language, and value differences while collaborating around shared goals. For instance, in the discussion of "necessary conditions for solving poverty," students compare the poverty issues of Cambodia and Japan, exploring common solutions through collaborative learning. Additionally, the course includes case-based thematic discussions, such as "Do schools need toilets?" where students discuss the state of infrastructure and support models in developing countries, using the example of Niger. Through these activities, students learn the importance of understanding diversity and respecting cultural differences. To help students better summarize their learning outcomes, the course introduces the "Learning Notes" portfolio(see Table 5), where students record "what they learned," "points for reflection," "future goals," and "personal thoughts," systematically organizing their learning experiences. In course feedback, one student mentioned, "I used to think Cambodia's poverty issues had nothing to do with Japan, but now I realize poverty is actually very close to us." Another student said, "After learning, I regret my past indifference to poverty issues and hope to think about these issues from more angles in the future." These feedbacks reflect that students not only deepened their understanding of global poverty issues but also enhanced their ability to think critically and from multiple perspectives. Through this phase of the course, students have acquired foundational information while gradually forming their own values and thinking frameworks, laying the groundwork for future inquiry-based learning. The core of these courses lies not only in the transmission of knowledge but also in guiding students to recognize the complexity of global issues and inspiring them with a sense of responsibility to promote social improvement through practical action.

In the second phase, the scope of the project's research narrows from the macro issues of developing countries to a specific focus on Cambodia, with the goal of developing targeted contribution activity plans for addressing Cambodia's poverty and education issues. In this phase, students practice the entire process from planning to implementation, transforming theoretical learning into practical action. For example, students worked on group projects centered around topics such as "expanding educational opportunities in Cambodia" or "solving the urban waste problem in Cambodia." In the implementation process, students were selected through voluntary applications and interviews to participate in an eight-day, seven-night fieldwork program to Cambodia. At the same time, domestic activities were carried out with the theme "providing resource assistance for short-term study abroad for Cambodian students." During the fieldwork in Cambodia, students not only researched the current state of education and the environment but also developed corresponding solutions based on their research results. These activities aimed to provide students with a deep understanding of the local situation, allowing them to identify

problems and design feasible support strategies. From the project reports and student feedback, it is clear that many students gained a deeper understanding of the effectiveness and sustainability of their support through the fieldwork. For example, one student wrote in their summary: "As a supporter, we cannot turn assistance into one-sided charity; instead, we must fully consider the needs of others and design sustainable support models." Another student mentioned: "In order to ensure that locals can continue to maintain a clean environment after we leave, we made awareness improvement the goal. Through waste collection activities, we encouraged both children and adults to actively participate, which made me feel the power of cooperation." Furthermore, the project deepened students' understanding through lectures and discussions. For instance, after listening to a local social activist's lecture, students reflected on their preconceived notions of poverty. One student wrote in their report: "Initially, I thought Cambodia was extremely poor and inconvenient, but through communication and field research, I discovered that these preconceived ideas are gradually being broken. Although preconceived notions sometimes cause misunderstandings, they also prompted me to explore more deeply, helping me better understand the facts."

[Table 5] "Global Issues Research" Class Portfolio (Created by the author based on the report of Okayama Gakugeikan High School SGH)

"Global Issues Research I" First Semester, Unit 1, Session 1		Learned	
Final Goal	Fostering a Global Mindset		
Today's Theme	"What is poverty? Why does poverty arise?"	Reflection	
Date	Saturday, October 17, 2015		
Place	Gymnasium		
Lecturer	Professor Toshinori Kuwabara, Graduate School of Education, Okayama University	Next Goal	
MEMO (Keywords • Points • Conclusions)		Others (Thoughts) Note	

In the final phase, students revisited and refined their research outcomes, and presented their

results. In this phase, students were actively encouraged to participate in workshops and forums with overseas high school students. Through ongoing presentation practices and exchange activities, students could reflect on their plans in the SGH project through the collision of ideas. Continuous presentations and discussions allowed students to identify deficiencies in their current plans and make more effective improvements. Additionally, this phase contributed positively to students' personal growth. Through interaction and feedback from others, students were able to more clearly recognize their strengths and weaknesses, further driving their self-improvement. Therefore, the final phase was not only a time for showcasing results but also an important opportunity for students to deepen their understanding, reflect, and grow.

The detailed annual plan is presented in Table 6.

[Table 6] Annual Plan (Created by the author based on the report of Okayama

Gakugeikan High School SGH)

Plan Content		Global Issues Research I	Global Issues Research II	Global Issues Research III
Schedule	April	"What is SGH?" Specialized lectures on "Globalization Close to Home" and "Reaffirming the Meaning of SGH"	Specialized Lectures on "Globalization Close to Home" and "Reaffirming the Meaning of SGH"	Based on the research outcomes from the first and second years, each project will revise its Action Plan.
	May	Global Mind Living in a Global Society: "Global and Glocal Perspectives" Fostering a Global Mindset	Critical Thinking for Problem-Solving & Addressing Local Issues	
	June	Cause&Result (Developing systematic thinking about events)	Create an Action Plan: Students engage in pre-fieldwork learning and planning, divided into domestic and overseas fieldwork activities. They	
	July			
	August			
	September	Global Perspective To develop		

	October	<p>problem-solving skills, collaborative classes were conducted with the Graduate School of Education and the Graduate School of Environmental and Life Science at Okayama University. During the classes, students were presented with issues based on the lecturers' research themes. By engaging in discussions on "questions without clear answers," they actively worked to enhance their problem-solving abilities.</p> <p>The classes also emphasized student output through active learning methods, including presentations and other interactive activities.</p>	<p>are provided with numerous opportunities to develop "cooperation" and "practical skills" on their own.</p>	
	November	Cause&Result	<p>Review and Preparation of the Action Plan</p> <p>Overseas Fieldwork (On-site Investigation in Cambodia)</p>	
	December	Education and Poverty/Inequality		

		(High School-University Collaborative Class)	Verification of Each Plan Research Presentation Session: Students present their year-long learning and research in a research report format.	An exchange event will be held among high schools within SGH-designated schools that are conducting training in Cambodia. Presentation Up-skilling Workshop Future Global Leadership Camp
	January	Research Presentation Session: Students summarized and presented their year-long learning and research in a presentation format.		
	February			
	March			

To better facilitate overseas fieldwork activities, the course has carefully arranged comprehensive preparatory and follow-up sessions both before and after the event. The eight-day trip was organized as follows: First, experts from the Environmental Bureau and the Education Bureau were invited to give lectures on the current situation, future issues, and policies in areas such as economy, industry, education, and the environment. They specifically discussed how, during the Khmer Rouge regime, many intellectuals, educators, and technical personnel were persecuted, but today, society is gradually recovering. However, there is still a severe shortage of talent in all sectors, and talent development has become an urgent task. Afterward, students were divided into two groups—an Environmental Group and an Education Group—and each group conducted independent activities. On the second day, the Environmental Group visited Tonle Sap Lake to focus on environmental issues. At the Water Bureau, they explored the causes and solutions of problems like water pollution, declining fish stocks, and waste management, and interviewed local residents who depend on fishing for their livelihood. The students then engaged in in-depth discussions with researchers on environmental issues caused by urbanization, such as water treatment problems in Siem Reap. Meanwhile, the Education Group visited the New Child Care Center (NCCC) orphanage, where they had in-depth exchanges with local students. They then visited Chey Village, explored the actual conditions of the village, and discussed the future direction of its development. Notably, they visited Chey Elementary School, which receives aid from multiple countries, to understand the school's operations and educational environment. Additionally, the Education Group visited local activists, participated in a series of research and exchange activities, such as visiting the Landmine Museum, interviewing residents of the Garbage Mountain area, and touring neighborhood activities in Teaseng Village, Siem Reap. Through these experiences, students directly realized the limitations of the preconceived notion that "Cambodia

is pitiable because of poverty," and learned that aid is not just about "giving," but about thinking deeply about appropriate forms of support. During the activities, students were deeply shocked by the realities of the local situation and enriched their understanding through conversations with local people. In the latter half of the trip, by attending a lecture by Sachiko Kojima, students learned that while it is important to "do something for others," it is even more important to "think about what we can do for others," which sparked deeper reflections. Later, students exchanged views with students from Somdey High School about campus life, particularly focusing on English learning. This was a valuable opportunity for both groups of students to engage in cross-cultural communication using a second language. Through this series of carefully designed activities, students not only deepened their understanding and action ability in addressing social issues but also gained a more multidimensional international perspective and humanitarian care, laying a solid foundation for their future personal growth. This overseas fieldwork experience allowed students to confront social issues and understand cultural differences in a real international context, while also learning how to analyze and solve problems from multiple perspectives. The knowledge gained through this hands-on learning process enhanced their ability to communicate across cultures and their sense of global responsibility. This experience not only laid the foundation for their personal development and expanded global outlook but also inspired them to explore practice-oriented learning models in their future academic and professional endeavors, contributing wisdom and strength to the sustainable development of the international community.

(2) Okayama Sozan High School (Community Collaboration Type)

Okayama Prefectural Okayama Sozan Junior High and High School was designated as an SGH school in the second year of SGH implementation. It is one of the region's prestigious traditional schools, with its origins in the Okayama Prefectural High School for Girls, founded in 1900, and the Okayama Prefectural Second Okayama Junior High School, founded in 1921. Since the time of the "Okayama Prefectural High School for Girls," the school has carried on the educational spirit of "Wa-shite Nagarezu" (harmonizing without being swayed), which emphasizes working collaboratively with people from different cultures and perspectives while maintaining one's own identity and actively engaging in problem-solving. This spirit of "Wa-shite Nagarezu" aligns with the values that the school aims to foster and the qualities needed for global leaders today. In 2002, the school established Okayama Sozan Junior High School, becoming the first integrated middle-high school in the prefecture. A key feature of the school was the introduction of "Future Navigation," a systematic, progressive project-based learning program under the "Comprehensive Learning Time." The school has also conducted activities such as speech contests, debate competitions, and research presentations. In 2009, the Ministry of Education designated the school as a special school for English education, advancing a system of learning to improve students' English communication skills across listening, speaking, reading, and writing. Furthermore, in 2012, the school launched its unique "SOZAN Global Talent Development Program," focusing on the qualities necessary for global talent and working on enhancing these traits. In 2014, the school was selected for the Okayama Prefecture Board of Education's "Public School Management Budget Presentation Program," and established the "SOZAN International School," aimed at developing global talent. This initiative also included expanding project-based activities, collaborating with universities, and fostering exchanges with high school students abroad.

However, despite these previous efforts, "project-based learning" had not reached the level of in-depth research; it had remained at the level of basic investigations, often ending prematurely. There were also shortcomings in cultivating students' independence, enthusiasm, and willingness to tackle difficult problems during the course of solving challenges. Additionally, opportunities for cross-cultural exchanges with overseas students were relatively limited. With these issues in mind, in 2015, the school received SGH designation and began to further solidify and enhance the projects and practices it had been developing.

The SGH program at Okayama Sozan High School consists of three main components: "Future Voyage," "Sozan International Juku," and "Global Studies." The program demonstrates both systematic and practical course design, focusing on the development of leadership skills through rich community involvement and a global perspective.

The "Future Voyage" component is aimed at all students and guides them over three years of high school with a systematic curriculum. The goal is to engage students in research on social issues present in Okayama, Japan, and globally, ultimately enhancing their overall capabilities. In the first year, students start with local issues as entry points, engaging in group discussions, debates, and presentations. This helps develop basic research skills and theoretical thinking. During this phase, students conduct staged research on both local and global issues, improving their communication and teamwork through a series of collective activities.

In the second year, the curriculum focuses on the comprehensive theme of "Japan's Place in the World." Students work in groups to conduct in-depth studies on six topics: "Poverty and Hunger," "Conflict and Peace," "Education," "Health and Disease," "Trade and Development," and "Sustainable Development and Environmental Issues." A list of some of the research topics is shown in the Table 7 below. During the research process, professors, graduate students, and even professionals from local companies serve as teaching assistants to guide the students. This is followed by presentations and specialized seminars, providing students with opportunities to practice their expression and communication skills. In this phase, students can develop keen situational awareness in real social contexts with the support of local experts, enabling them to identify community needs and propose solutions.

[Table 7] A list of some research topics is provided below (created by the author based on the Okayama Sozan High School SGH report).

Topic	Theme
Poverty and Hunger	Literacy Rate and Water Resources
Poverty and Hunger	Poverty in the Philippines
Conflict and Peace	Awareness of the Right to Collective Self-Defense
Conflict and Peace	Conflict, Peace, and Maintenance: Learning from the Greater East Asia War
Education	Integrated Facilities for Children and the Elderly
Education	Fostering International Talent
Health and Disease	Organ Transplants in Japan
Health and Disease	The Possibilities of Regenerative Medicine
Trade and Development	The New Form of Shopping Streets
Sustainable Development and Environmental Issues	Investigation and Improvement of Water Pollution

In the third year, the curriculum deepens further, and students focus on "Solving Global Issues." They organize their previous learning and research into English, laying the foundation for studying abroad or continuing their education.

The "Sozan International Juku" is designed for students interested in further advancing their studies and operates on a voluntary application basis, with the application form Table 8 shown below. It attracts students from different grades to collaboratively engage in research and learning. This program particularly emphasizes interschool and international collaboration, partnering with high schools and universities in Australia and Malaysia, as well as Okayama University and local companies, to conduct cross-cultural research projects. Students directly experience the challenges of multicultural societies and present their research findings on international platforms. Additionally, the program encourages participation in TED Talks and national Model United Nations competitions. These practical activities not only enhance students' understanding of global issues but also develop their communication skills and self-awareness. Through activities such as TED Talks and Model United Nations, students reflect on their roles and contributions within the group.

[Table 8] Application Form (created by the author based on Okayama Sozan High School's SGH report).

SOZAN International Juku Enrollment Form (Fiscal Year 2016)						
Grade	Class	Student number	Date of birth	Year	Month	Day
Name _____		Male • Female				
Heisei	Year	Month	Day	I hereby apply to enroll in the above program.		
Guardian's Name				Seal		
Guardian's Contact Information (Phone Number)						
Remarks (e.g., special health considerations, preference for not showing face in online photos, etc.):						
* Please complete all required fields, affix the guardian's seal, and submit to ____ Sensei.						

The "Global Studies" segment emphasizes interdisciplinary integration, seamlessly incorporating the objectives of the SGH project into various subject courses to cultivate the five core competencies essential for leadership. Through active learning methods, this segment systematically develops students' theoretical thinking skills and sense of social responsibility, enabling them to understand problems and propose innovative solutions across diverse academic backgrounds. This approach aligns perfectly with the principles of community development learning, which emphasize collaboration, individual empowerment, and shared goals. It helps students experience firsthand how "diversity enhances collaborative outcomes" in practice.

As an exemplary case of the Community Development Learning Type, the SGH project at Sozan High School combines local resources with a global perspective, supporting students' comprehensive development not only in knowledge acquisition but also in their ability to engage meaningfully with their community and the international society. The program also collaborates

with external educational institutions to evaluate its effectiveness using the GPS-Academic assessment method. This framework divides essential critical thinking skills into three categories (critical, creative, and collaborative thinking), assessed through rubrics on a five-level scale from S to D. The results demonstrate that students consistently outperform the national average for high school students and even exceed the performance of other SGH schools of the same type. Notably, in the "critical thinking" category, under the rubric of independently "extracting and evaluating information," 10.9% of students nationwide achieved an S-level response, compared to 13.6% in SGH schools overall. At Sozan High School, this figure soared to 22%, significantly surpassing other schools of similar standing. In the "collaborative thinking" category, under "understanding similarities and differences with others," Sozan students achieved 13% (S-level), far exceeding the SGH school average of 8.6%.

These outcomes align closely with the educational direction and goals of the Community Development Learning Type. By engaging in in-depth research and practical activities, the program fosters students' initiative and sense of responsibility in addressing regional and global issues. It also encourages them to gain meaningful experiences and personal growth through real-world community development scenarios, empowering them to become influential agents of social change. The annual plan is detailed in the Table 9 below.

[Table 9] Annual Plan Table (Based on the SGH report of Okayama Sozan High School, created by the author)

Plan content		Future Voyage		Sozan International Juku,	Global Studies
		1st	2nd		
Implementation	April	Understanding basic research methods	Research Project (Identifying Issues)		English: Research on instructional methods to enhance language activity skills for global leader development (1st and 3rd years).
	May	Basic Research Training (Understanding the significance of research)	Research Project (Understanding Issues)	Australia Study Abroad Report Meeting	
	June	Basic Research Training (Using Digital Materials)	Research Project (Focusing the Issues) Cross-cultural understanding	Cultural Exchange with Malaysian High Schools (2nd Year Only)	Japanese: Creative language activities to foster communication skills (2nd year).
	July	Basic Research	Research Project		Social Studies,

		Training (Using Digital Materials) Logical Thinking Assessment	(Theme Setting) Collaborate with university's professor		Geography, History, Civics: Initiatives to improve classes
	August		Research Project (Exploratory Activities)		from the perspective of active learning
	September	Basic Research Training (Career Guidance)	Research Project (Exploratory Activities)	Presentations at the Shobaku Festival; Debate Competition by Okayama Prefecture English Education Research Group	(1st year). Mathematics: Task-setting in project-based learning based on competencies nurtured in class
	October	Basic Research Training (Debate Preparation)	Research Project (Mid-Term Presentation) Instruction by Okayama University Graduate Students		(1st year). Science: Research on mechanisms and instructional methods to enhance competencies (1st
	November	Basic Research Training (Debate Class and Grade Competitions)	Research Project (Preparation for Presentation) Instruction by Okayama University Faculty and Graduate Students	Global Camp Location: Kwansei Gakuin University Campus Exchange with SMA Neri No. 1 Depok	year). Home Economics: Five core competencies cultivated through practical lessons (1st year). Health and

	December	Evaluation Using GPS-Academic	Research Project (Field-Specific Presentations) Instruction by Okayama University Graduate Students	Research Presentation at ESD Café. Training at Marugo Rubber Chemical Industries (Collaborative Planning for Research Projects)	Physical Education: Developing problem-solving and communication skills through group activities (1st year).
	January	Group Discussions and Class Debates	Research Project (Final Presentation)	Presentations and Poster Sessions at Future Course Presentation Event. Exchange with Tokyo Gakugei University International Secondary School	By utilizing active learning methods, cross-disciplinary efforts are made to improve teaching practices.
	February	Basic Research Training (Understanding Global Issues)	Research Project (Reflection) Evaluation Using GPS-Academic	Participation in Okayama Joto High School Research Presentation	Each subject is also guided by a Global Can-do List, which establishes
	March	Basic Research Training (Multifaceted Analysis of Issues)	Evaluation Method Research Meeting	Research Paper Writing; Overseas Training Location: Nashville	specific learning objectives for each grade level based on five core competencies.

The SGH program at Sōzan High School takes local issues as a starting point, fully leveraging community resources to cultivate students' logical thinking, social responsibility, and global vision

rooted in self-awareness. Unlike the Overseas Fieldwork Type, which emphasizes overseas experiences, this program focuses on local realities. It helps students explore specific issues in depth, develop a clearer understanding of their roles and responsibilities in society, and enhance their communication and coordination skills in a multicultural context.

In the "Mirai Kōro" (Future Course) and "Global Studies" components, the program provides a structured learning process for all students. First-year high school students engage in lectures, writing, listening, and discussions to study issues from their immediate surroundings. This process not only improves students' logical thinking and awareness of social issues but also offers opportunities for self-reflection. For example, activities progress systematically from "individual reflection" to "group sharing," "discussion," "consolidation of ideas," and finally "individual summary," guiding students to integrate their personal views with group discussions. This approach helps students clarify their thoughts while learning to listen to and understand others, deepening their awareness of personal strengths, values, and communication styles.

The program also includes thematic lectures, such as "The Talent Needed in a Global Society: The Spirit of Challenge," encouraging students to recognize and evaluate their place and potential in the global community. In the program's initial stages, foundational knowledge and skills are emphasized to help students understand global issues from a local perspective. To make these issues more relatable, the program transforms complex international topics into concrete issues closely tied to Japan, such as consumption tax and refugee problems. This approach bridges the gap between students and the issues, enabling them to reflect more deeply on how they can address societal challenges. Students develop critical thinking and problem-solving skills through debates and research, with debate topics over five years including:

"Should Japan introduce a reduced tax rate for the consumption tax?"

"Should Japan expand its acceptance of refugees?"

"Should Japanese companies implement a two-day weekend system?"

"Should Japan transition all nuclear power generation to alternative energy sources?"

"Should Japan mandate the surrender of driving licenses for all individuals aged 75 and older?"

The goal is not to determine a winner but to provide students with opportunities to independently research modern societal issues, engage in discussions or debates, encounter diverse perspectives and values, and deepen their research content. Through these debates, students delve into the background of issues, reflecting on their own positions and thought processes during information collection and analysis. This self-awareness-based learning model helps students understand the relationship between personal values and social responsibilities, exploring questions like, "As a Japanese citizen in the global society, what can I contribute?"

Both components emphasize fostering self-expression and reflective abilities through teamwork. When summarizing their views, students are encouraged to articulate their positions clearly. At the same time, through collaboration with team members, they learn to communicate effectively and respect differing opinions. This iterative training process reinforces self-awareness, helping students clarify their roles in teams and society while gaining a deeper understanding of others' perspectives. By building communication and leadership skills, students develop a profound sense of self-awareness and action-oriented mindset, preparing them to contribute to societal change.

In the SOZAN International Juku component, participation is voluntary, offering an environment for students who wish to delve deeper into their studies to explore and grow. By the time students reach this stage, they have already developed an awareness of self-development through various activities in the previous two components. Students gradually identify their interests and concerns, selecting research topics to explore further. In this component, students use their extracurricular time to extend their learning and gain practical experiences. Activities are diverse, including overseas training programs where they engage in real-world cross-cultural exchanges, collaborative activities with universities or external institutions, and corporate visits. These activities not only make effective use of local and international resources but also provide students with a broad perspective and varied experiences. Through these practical experiences, students constantly update their understanding of available resources while engaging in new cycles of self-reflection. For example, during cross-cultural exchanges, students are encouraged to consider problems from different perspectives, helping them identify their roles and contributions in multicultural contexts. Similarly, interactions with universities or corporations allow them to reassess their abilities, interests, and future directions through observation and participation. These experiences provide students with rich opportunities for growth, helping them forge a strong connection between self-awareness and self-development. Students not only acquire new knowledge and skills but also enhance their self-understanding by deeply reflecting on their goals and abilities. This leads to breakthroughs in personal growth. This self-driven approach is a hallmark of the SOZAN International Juku and plays a vital role in nurturing leadership among students.

(3) Okayama Amaki High School (Science and Technology Inquiry Type)

Okayama Amaki High School upholds the "Tetsuken Spirit" as its guiding principle, aiming to foster a well-balanced education encompassing "wisdom," "virtue," and "physical strength." The school's motto, which serves as a foundation for its educational philosophy, is designed to nurture capable individuals who can contribute to society in this era of globalization. The school's educational goals are encapsulated in three key principles:

"Simple and Robust" : Cultivate strong and resilient minds and bodies without pursuing unnecessary extravagance.

"Diligence and Practice" : Strive not only in academics but also exert maximum effort in all endeavors.

"Indomitable Spirit" : Foster the courage and determination to face challenges without faltering or breaking under any difficulty.

Okayama Amaki High School places great emphasis on developing students' ability to engage in self-directed activities. Over three years, students enhance their critical thinking, communication, and problem-solving skills by participating in diverse activities. These experiences help them discover their interests and clarify their future aspirations. Additionally, the school creates a supportive environment through various group activities, encouraging students to think independently, express themselves fearlessly, and realize their potential in a stress-free atmosphere. As a combined middle and high school promoting advanced and exploratory learning, Amaki High School aims to equip students with broad perspectives, adaptability to new challenges, and scientific inquiry skills. The school endeavors to cultivate individuals who can contribute to regional and international communities through educational activities designed to foster these

competencies. The school's students are divided into two tracks: the "General Course" and the "Science and Mathematics Course". Both emphasize STEAM education and incorporate problem-based learning into the curriculum. For students in the Science and Mathematics Course, the focus is on cultivating scientific problem-solving skills, aiming to develop individuals who can play active roles in the advancement of science and technology and contribute responsibly to the information society on an international stage. In contrast, the approach to STEAM education in the General Course focuses more on leveraging subject-specific knowledge to foster connections between disparate disciplines and diverse individuals. The emphasis lies in bridging differences—whether academic, personal, or cultural—and harnessing varying perspectives to create new values and insights. By encouraging collaboration among students with different characteristics and viewpoints, the General Course seeks to instill the ability to integrate knowledge across disciplines and work effectively with others to generate innovative ideas and solutions. This approach highlights the unique role of STEAM education within the General Course.

Since fiscal year 2005, Amaki High School has been designated as a Super Science High School (SSH) by Japan's Ministry of Education, Culture, Sports, Science and Technology (MEXT) and launched a five-year SSH project across the entire school. The General Course students primarily engage in AFP (Amagi Future Project) research, while the Science and Mathematics Course students focus on ASE (Amagi Science Eminent-er) research. These two projects complement each other, integrating academic knowledge effectively while encouraging students to conduct creative research based on their interests.

From their first year to their second year, students participate in systematic courses spanning two semesters. The school creates opportunities for students from different grades to interact freely, fostering the sharing of knowledge and experiences. By leveraging ICT tools and resources, the school ensures that students have access to optimal learning materials and technology. This approach not only broadens their horizons but also places a strong emphasis on cultivating self-awareness. Particularly for Science and Mathematics Course students, the curriculum focuses on mastering scientific knowledge and enhancing problem-solving skills in scientific contexts. Y School also has an international partnership with The Barstow School in Kansas City, Missouri, USA. Since 2005, the two schools have engaged in annual short-term exchange programs, allowing students to broaden their global perspectives. Domestically, the school organizes regular field activities centered around the local community. During these activities, students acquire essential observation methods and conduct research projects.

To deepen students' understanding and application of knowledge, the school actively promotes workshops and activities related to physics, chemistry, biology, geography, and mathematics. Furthermore, Y School collaborates extensively with local businesses and universities, providing students with opportunities to engage in real-world experiences and diverse practical activities. These initiatives not only strengthen students' academic abilities but also lay a solid foundation for their future pursuits in scientific research and professional development.

In the implementation of Y School's SSH project, the integration of self-awareness and situational awareness has been deeply embedded within scientific education and inquiry-based learning. The cultivation of self-awareness helps students gain a deeper understanding of their own interests, abilities, and values, allowing them to set clear personal goals and continuously refine themselves through research and practice. Situational awareness, on the other hand, enables

students to perceive changes in their surroundings with acuity, understand societal needs and global trends, and propose innovative solutions using scientific methods. In practical terms, students develop these competencies through AFP and ASE research projects, field activities, and various international exchange programs. These activities not only enhance their abilities in self-reflection and critical thinking but also teach them how to effectively integrate resources and collaborate within teams in diverse contextual settings. Furthermore, students learn to actively contribute in multifaceted group environments. The combined cultivation of self-awareness and situational awareness equips students with a comprehensive skill set that is crucial for addressing future uncertainties and solving complex problems. These foundational competencies foster adaptability and innovation, preparing students to thrive in an increasingly dynamic and interconnected world.

As mentioned earlier, Amaki High School's SSH program focuses on two major research areas.

Science and Mathematics Course Research: A step-up program has been established, starting with ASE 1st Stage (1st year, first semester), followed by ASE 2nd Stage (1st year, second semester to 2nd year, first semester), ASE 3rd Stage (2nd year, second semester), Research Presentations (2nd year, second semester to 3rd year), and Science Relay (all grades).

General Course Research: Through AFP Expression (1st year) and AFP Research (1st year), students develop various skills, such as presentation abilities, proficiency in utilizing information technology, and the capacity to analyze scientific data, based not only on knowledge but also on practical experience.

In the 2nd year, the school holds a General Course Research Presentation to showcase students' work. The details of the curriculum arrangement are shown in the Table 10 below.

[Table 10] Content Arrangement of Y's Educational Curriculum

Subject/ Course	1 st Year	2 nd Year	3 rd Year	Target
	Subjects/Course Names	Subjects/Course Names	Activities	
Science and Mathematics Course	ASE 1st Stage (First Semester)	ASE 2st Stage (First Semester)	Science Relay" (Research presentations outside of school)	All Science and Mathematics Course students
	ASE 2nd Stage (Second Semester)	ASE 3rd Stage (Second Semester)		
General Course	AFP Research (Full Year)	AFP Presentation (Integrated Research Time)		All General Course students
	AFP Expression (Full Year)			

The ASE research program for the Science and Mathematics course is structured progressively, providing students with a systematic process for developing scientific research skills. In the first year, the "Science" school-designed subject and "ASE 1st Stage" course are implemented in the first semester. At this stage, students begin by learning fundamental research methods and interdisciplinary knowledge through the subject of "Science." They discover research topics of interest and begin to identify their passions. This subject focuses on the six-month process of

setting a research theme. In the second semester of the first year, the program transitions to "ASE 2nd Stage," where students embark on formal research activities. Students collect experimental data, accumulate empirical materials, and become proficient in using various scientific instruments, acquiring the necessary technical skills. They also learn how to analyze and synthesize information scientifically. In the first semester of the second year, students continue with "ASE 2nd Stage," and in the second semester, they enter "ASE 3rd Stage." In this phase, they summarize and conclude their research through essays and posters, participating in both internal and external activities or competitions. Through these presentations and exchanges, they receive feedback from others, which helps them refine their research content and further develop their research capabilities.

The general course research in the Ordinary Course places greater emphasis on the development of students' comprehensive practical abilities and interdisciplinary literacy. In the first year, students engage in the school-designed subject "Science" and the courses "AFP Research" and "AFP Expression." "AFP Research" is conducted during the 3rd and 4th periods on Wednesdays, and "AFP Expression" is held during the 7th period on Tuesdays. All first-year teachers are involved in guiding these activities. The focus during this year is on cultivating students' ability to analyze scientific data, use information technology, and engage in research design, thus acquiring foundational research skills. Students also begin independent group research. Additionally, in the specialized presentation and public speaking courses, students practice presenting their results and delivering speeches, which enhances their expressive and logical thinking abilities. In the second year, during the "Comprehensive Inquiry Time" (held during the 7th period on Fridays), students present and improve upon their research outcomes from the previous year's "AFP Research," focusing on increasing the completion level of their research papers. In June, the "Ordinary Course Research Presentation" is held, and a "Research Paper Collection of Ordinary Course" is published within the academic year. In the third year, both ordinary and science courses follow a unified sequence of research activities from the first year, referred to as "Science Relay." As the culmination of their research, students submit their results to academic conferences, various exhibitions, and competitions. They also engage in English research presentations and focus on developing communication skills. This process, as mentioned above, primarily targets students in the Ordinary Course. The emphasis is placed on three key developmental objectives. First, the cultivation of self-decision-making abilities. During the project, students are given as many opportunities as possible to make independent decisions. Self-decision-making is a process of deep thinking and self-awareness, where students must continuously explore and judge their own interests based on academic resources and research facts. Through this, students not only uncover their potential but also clarify their goals and direction as the project progresses. Second, creating an environment for cognitive awareness of oneself and others. The project design particularly focuses on providing opportunities for participants to encounter and understand each other's differences. In this diverse environment, students not only perceive the uniqueness of others but also discover and learn new values and perspectives by collaborating with peers of different personalities and viewpoints. This cross-cultural and cross-personality exchange process aims to allow students to experience the importance of diversity through practice, thus inspiring new insights and creativity. Third, emphasizing the application of interdisciplinary knowledge. As the research deepens, students must not only learn the specialized knowledge of various disciplines but also integrate this knowledge to solve complex problems. This process allows students to find

new entry points and inspirations, further stimulating their academic interests and cultivating their ability to translate theory into practical applications. By achieving these three goals, the project aims to help students grow holistically, achieving breakthrough growth in self-awareness, understanding of diversity, and the flexible application of academic knowledge. This multidimensional training model not only promotes students' personal development but also prepares them for future, more complex social environments and career challenges. To ensure the achievement of these educational goals, this unit particularly focuses on the effective use of webbing techniques. In the initial phase of the activity, students write down the research keywords they are most interested in within the central circle and use radial expansion to conduct divergent thinking and association. They gradually improve their personal webbing diagrams. After completing individual webbing, students enter the second phase of group collaboration, where group members jointly create a team webbing diagram. By integrating individual ideas, a richer and more structured knowledge network is formed. To enhance the efficiency and visualization of the activity, digital technologies such as Google Classroom are fully utilized, allowing students' webbing results to be shared online and updated in real-time. This technology not only makes the individual thinking process transparent but also facilitates team communication and collaboration. The design of individual webbing helps students clarify their thinking logic and areas of interest, while group webbing further transforms individual ideas into visual content, displaying them in the form of keywords and text. In this process, students stimulate new understandings and creative ideas about problems through absorbing and integrating others' perspectives, ultimately leading to the collision and sublimation of knowledge and values. This multi-stage, interactive teaching model not only cultivates students' independent thinking and teamwork skills but also provides ample space for innovation and value creation. The specific yearly plan is as Table 11.

**[Table 11] The annual plan based on the report from Okayama Amaki High School SGH
(Specialty Program for Global Talent)**

Plan content		Normal Course AFP		Science and Mathematics Course ASE	
		1 st Year	2 nd Year	1 st Year	2 nd Year
schedule	April	The learning includes the use of information technology and communication networks, information ethics, copyright, reviewing and analyzing previous research using information technology, and		Guidance, Science and Mathematics Course Symposium I Poster session for the research project (based on themes from	Introduction of faculty and confirmation of research progress and plans through "Roadmap Evaluation," Science

		basic statistics. It also includes guidance, introduction of case studies for setting research themes, and the formation of provisional groups.		middle school) and setting new research themes, forming groups (tentative) [Trial of theme setting using one device per student].	Research activities, during which preparations for the first in-school research presentation and the "Paper Writing Workshop" by Professor Yoshihiko Inada from the Graduate School of Education, Okayama University (in July) will take place. The first open school (collaborating with first-year students) and Science Symposium II will also be
	May		Create posters for the research projects conducted in the previous year's "AFP Research" and "AFP Expression," and hold the "General Course Research Presentation Conference."	Start of research (Creation of roadmap).	
	June	Setting the research theme.			
	July	Research activities such as experiments and surveys. Review of previous research and theme setting, investigation and research activities. Research activities.		Science English Experiment Program First Open School (Collaborating with second-year students), Science and Mathematics SymposiumII Preparing reports and slides for theme setting. Special Lab	

	August			Training for Science Students	held.
	September				
	October	Mid-term Presentation: Verification of Input and Output Variables		Mid-term Presentation for Research Selection.	The first in-school research presentation
	November	Research Activities, Preparation of Mid-term Paper		Research activities based on this study.	Conduct follow-up experiments, revise and expand the paper, and prepare for the research presentation.
	December				Second internal research presentation event.
	January	Preparation of Thesis and Poster. Thesis Writing Workshop (Guidelines on Writing Using		Participation in the second-year science students' research presentation. Creation of slides	Follow-up experiments, revisions and additions to the thesis, preparation for

		Rubrics).		for the mid-term presentation, and Science and Mathematics Symposium III.	the research presentation. Third internal research presentation event, Science Symposium III.
	February	Preparation of Thesis and Poster, Presentation Practice. Final Presentation.		Mid-term presentation, research activities. Review and revision of the roadmap based on "Roadmap Evaluation."	Okayama Prefecture Science and Mathematics Course Joint Research Presentation Final thesis creation and organization.
	March				

The SSH program at Y School focuses on developing a solid scientific foundation for its students, aiming to help each participant discover their interests and gain a clearer understanding of themselves. Based on this foundation, the school strives to provide students with opportunities and platforms to showcase and enhance their abilities. It creates an environment where group collaboration is encouraged to complete research projects within the school, while also actively promoting student participation in regional and national academic exchanges and competitions. For example, the school encourages students to participate in regional activities such as the Science Challenge Okayama, the Junior Session of the Japan Physical Society (for 2nd-year science students), the Mathematical and Engineering Contest (for 2nd-year science students), and the Okayama Prefecture Statistical Graph Contest (for 2nd-year general course students). Furthermore, students are actively recommended to participate in national science competitions, such as the Road to the Science Olympiad, the Okayama Physics Contest, the Physics Challenge National Competition, and the 16th Japan Earth Science Olympiad, offering them higher-level competitive and learning platforms. As a partner school of WWL (World Wide Learning), Amaki High School organizes exchange activities every year, collaborating closely with other schools in the region and participating in related events hosted by affiliated schools. The school also

organizes overseas short-term study programs with its sister school in the United States every year between October and November, providing students with valuable opportunities for cross-cultural learning and exchange. These activities not only enrich students' academic experiences but also greatly expand their international perspectives and practical application skills, helping them grow into outstanding individuals with a global vision in scientific research and practice.

4.4 Characteristics of Global Leadership Development Programs across Three Case Schools

This section outlines the key characteristics of global leadership development programs at three selected schools: Gakugeikan High School, Okayama Sozan High School, and Amaki High School. While each program varies in design and focus, they all aim to cultivate core competencies such as critical thinking, self- and situation- awareness, and collaborative problem-solving. Through structured curricula, project-based learning, and interdisciplinary activities, these schools offer practical models for fostering global leader prepared to address complex social issues. The following subsections detail the unique features of each school's approach.

4.4.1 The SGH program at Gakugeikan High School

(1) Three-Phase Structured Learning Process

The program is systematically organized into three stages, each corresponding to different grade levels. The first phase introduces the concept of poverty in developing countries, guiding students to understand its complexity and the relationships between various contributing factors. Students are encouraged to analyze these issues from multiple perspectives, including education and the environment, laying the foundation for more targeted investigations in subsequent phases.

In the second phase, students focus specifically on Cambodia, conducting fieldwork and developing action plans to address local issues. This hands-on approach shifts the program from theoretical learning to practical application, allowing students to translate their research into concrete, actionable plans for social contribution.

The final phase allows students to revisit and refine their research outcomes. They participate in workshops, forums, and presentations, providing opportunities to reflect on their work, improve their plans, and engage with peers from other countries, thus fostering a global mindset and intercultural exchange.

(2) Use of the PDCA Cycle for Continuous Improvement

A central feature of the SGH program is its adoption of the PDCA (Plan-Do-Check-Act) cycle. This cyclical approach encourages students to take leadership of their learning process by planning, executing, evaluating, and refining their action plans. Each stage of the program reinforces students' practical skills through iterative practice, helping them to not only grasp theoretical concepts but also to apply them in real-world contexts.

In the Plan phase, students develop action plans based on their research. The Do phase involves implementing these plans through fieldwork and collaborative activities. The Check phase encourages students to reflect on their experiences, evaluate the results, and identify areas for improvement. Finally, the Act phase allows them to revise their plans and continue refining their strategies. This process empowers students to grow as autonomous learners and effective

problem-solvers.

(3) Project-based Learning Learning and Collaboration

The SGH program places a strong emphasis on active learning, moving away from traditional, passive learning models. Students are actively engaged in their learning through project-based learning, critical thinking exercises, and collaborative discussions. The program encourages students to explore global issues and solutions in a supportive environment, fostering creativity, problem-solving, and teamwork.

Collaboration plays a key role in the program, as students work together in groups to explore global issues, share ideas, and develop collective solutions. For example, in the first phase, students engage in group research on topics like the "causal relationship between education and poverty" and "barriers to achieving a non-cyclic society." Through these activities, they deepen their understanding of global poverty issues while learning to work collaboratively toward shared goals.

(4) Guest Lectures and Expert Guidance

The SGH program also incorporates guest lectures from experts in relevant fields, such as university professors and local activists. These lectures provide students with insights into the complexities of global issues and expose them to diverse perspectives. For instance, in the first phase, students participate in lectures focused on overcoming cultural and linguistic barriers in cross-cultural collaboration. These sessions help students develop the communication skills necessary for working effectively in international contexts.

Through this exposure, students gain a more nuanced understanding of global poverty issues and the importance of cultural sensitivity and respect for diversity. The expert guidance enhances students' critical thinking abilities, enabling them to approach problems from multiple angles and develop well-rounded solutions.

(5) Focus on Student-Oriented Learning and Self-Reflection

The program prioritizes student-centered learning, where students take an active role in determining their learning path. As part of this, students maintain a "Learning Notes" portfolio, where they record their reflections, personal thoughts, and future goals. This portfolio serves as a valuable tool for self-assessment and growth, allowing students to track their progress and reflect on their learning journey.

Through self-reflection, students are encouraged to recognize the impact of their actions and consider their responsibility as global citizens. Feedback from their peers and mentors further supports their growth, fostering a sense of accountability and personal responsibility.

4.4.2 The SGH program at Sozan High School

(1) Three-Tiered Program Structure Integrating Community and Global Perspectives

This program consists of three interrelated components: Future Voyage, a compulsory, three-year inquiry-based learning curriculum for all students; SOZAN International Juku, a selective and intensive research track for highly motivated students; and Global Studies, an interdisciplinary initiative that integrates global issue exploration into subject-based instruction. This structure enables the program to cater to a wide range of learners by providing both inclusive

participation opportunities and specialized pathways for advanced development. By scaffolding learning from foundational skill-building to high-level academic inquiry, the program allows students to gradually deepen their understanding of complex issues. Moreover, by strategically combining the exploration of local community problems with broader global challenges, the program fosters a dual perspective that equips students with the competencies necessary to lead and collaborate across diverse social and cultural contexts.

(2) Systematic Development of Critical Thinking and Situation-Awareness

A defining characteristic of Okayama Sozan High School's SGH program is its deliberate, multi-year scaffolding of critical thinking and situational awareness. Throughout the three-year curriculum, students are guided through a progression that begins with the analysis of local social issues and gradually expands to the investigation of complex global themes such as poverty, public health, environmental degradation, and international conflict. This thematic deepening is reinforced through continuous collaboration with universities, graduate students, and local professionals who serve as research mentors and teaching assistants. Their guidance enables students to acquire not only theoretical insights but also a practical understanding of the social contexts in which these issues arise. As a result, students are better equipped to assess real-world needs and to formulate evidence-based, context-sensitive solutions. Those skills are essential for future global leaders operating in dynamic and unpredictable environments.

(3) Voluntary, Self-Directed Advanced Learning Opportunities

The SOZAN International Juku serves as an advanced platform for highly motivated students who seek to explore academic themes beyond the standard curriculum. Participation is voluntary and often includes students from multiple year levels, promoting vertical collaboration and peer mentorship. Through this initiative, students engage in interdisciplinary and cross-cultural research projects in partnership with institutions in Australia, Malaysia, and local universities. They also participate in events such as TED Talks and national Model United Nations conferences, where they are challenged to present their findings in public forums. These activities are instrumental in cultivating students' self-awareness, helping them understand their own intellectual interests, communication styles, and personal values. At the same time, the international and interscholastic nature of the activities fosters cross-cultural understanding and prepares students to lead with empathy, adaptability, and clarity in multicultural settings.

(4) Cross-Curricular Integration via Global Studies and Active Learning

The Global Studies component distinguishes itself through its emphasis on cross-curricular integration and the use of active learning methodologies. Rather than confining global education to specialized subjects, Sozan embeds global themes into everyday classroom learning across disciplines such as language arts, science, social studies, and even physical education. Each subject is aligned with a school-wide "Global Can-do List," which outlines developmentally appropriate learning goals connected to the five core competencies of leadership. Through inquiry-based tasks, collaborative group work, debates, and digital portfolio development, students learn to synthesize information from diverse sources and disciplines. These experiences not only foster academic depth but also encourage students to make interdisciplinary connections, weigh multiple perspectives, and articulate complex ideas clearly. In doing so, the program cultivates a

robust foundation for global citizenship, critical dialogue, and problem-solving across borders of knowledge and culture.

(5) Assessment and Measurable Growth through GPS-Academic Framework

A further hallmark of the Sozan SGH program is its implementation of a rigorous assessment framework, the GPS-Academic, which systematically evaluates students' competencies in critical thinking, creative thinking, and collaborative thinking. Using a five-level rubric from S to D, the school conducts regular evaluations to track student development across cognitive and interpersonal domains. Evaluation results consistently show that Sozan students exceed the national average among SGH-designated schools, especially in key areas such as the independent extraction and evaluation of information, and understanding diverse perspectives. For instance, while 10.9% of students nationwide reached the highest level (S) in "critical thinking," 22% of Sozan students achieved this distinction. Similarly, Sozan outperformed other schools in "collaborative thinking," with a significantly higher percentage of students demonstrating advanced abilities in recognizing similarities and differences with others. These data confirm the program's effectiveness in nurturing both intellectual rigor and social-emotional intelligence which attributes essential for responsible leadership in a globalized society.

4.4.3 The SSH program at Amaki High School

Amaki High School, a Super Science High School (SSH), implements a comprehensive academic leadership program designed to foster scientific inquiry, interdisciplinary thinking, and self-reflection. The school emphasizes the cultivation of students' global leadership qualities through both structured academic research and practical experiments, aiming to create future leaders equipped with both self-awareness and situational awareness. This section explores the key characteristics of Y School's approach to global leadership development through the SSH program.

(1) Two-Track Educational Focus

Amaki High School's SSH program is divided into two main tracks: the Science and Mathematics Course and the General Course. Each track emphasizes different aspects of global leadership development, with a particular focus on STEAM education (Science, Technology, Engineering, Arts, and Mathematics).

Science and Mathematics Course: This track is designed for students aiming to pursue careers in scientific research and technology development. The curriculum emphasizes scientific problem-solving and research methodologies, preparing students to contribute to advancements in science and technology on a global stage. Students in this course engage in structured research projects, starting with the ASE 1st Stage and progressing to ASE 3rd Stage, which involve conducting experiments, collecting data, and presenting their research findings at internal and external science symposia.

General Course: While focusing on interdisciplinary knowledge, this track emphasizes the integration of subject-specific knowledge and practical skills. It encourages students to bridge academic, personal, and cultural differences through project-based learning. Students engage in AFP (Amagi Future Project) research, where they analyze real-world issues and develop innovative solutions by connecting knowledge from multiple

disciplines. The program's primary goal is to foster creative problem-solving and effective collaboration among diverse groups.

(2) Progressive Research and Project-Based Learning

A distinctive feature of Amaki High School's SSH program is its progressive research model, which enables students to build their research and critical thinking skills over time. The program is organized into a multi-stage research process that encourages students to engage in both self-directed learning and collaborative inquiry.

In the first year, students are introduced to fundamental research methods through courses like AFP Research and AFP Expression, where they learn to set research themes, gather data, and develop their presentation skills. This stage focuses on providing a foundation in scientific thinking and research methodologies.

In the second year, students deepen their research by engaging in more complex tasks, including data analysis, presentation preparation, and scientific writing. This phase includes various opportunities for fieldwork, scientific symposia, and interactions with professionals in the scientific community. Students also participate in the General Course Research Presentation to showcase their research progress.

In the third year, students apply their knowledge to real-world scientific problems. They participate in global science competitions, and refine their research for presentation at academic conferences. This stage emphasizes research synthesis, members and facilitators' feedback, and the application of learned skills in cross-cultural settings.

This sequential learning process not only builds students' academic abilities but also promotes continuous self-reflection through project-based learning, where students are encouraged to assess their progress and adjust their strategies.

(3) Self-Awareness and Situation-Awareness

A core component of Amaki High School's SSH program is the cultivation of self-awareness and situation-awareness, both of which are essential for developing global leadership skills.

Self-awareness: Through the research process, students are encouraged to reflect on their personal interests, values, and goals. This is especially evident in the ASE and AFP research stages, where students must identify research topics that resonate with their passions and contribute meaningfully to their personal growth. By engaging in regular self-reflection exercises and feedback sessions, students gain a deeper understanding of their strengths, weaknesses, and how they can contribute to societal issues.

Situation-awareness: The program emphasizes the need for students to develop the ability to understand global trends, analyze societal needs, and respond to challenges in real time. Through field activities, global exchanges, and cross-cultural interactions, students learn to recognize and adapt to different social, political, and environmental contexts. For instance, during their collaboration with The Barstow School in the United States and their involvement in international conferences, students develop a heightened sense of global awareness and learn how to propose innovative solutions based on a deep understanding of both local and global issues.

(4) Collaboration and Practical Experience

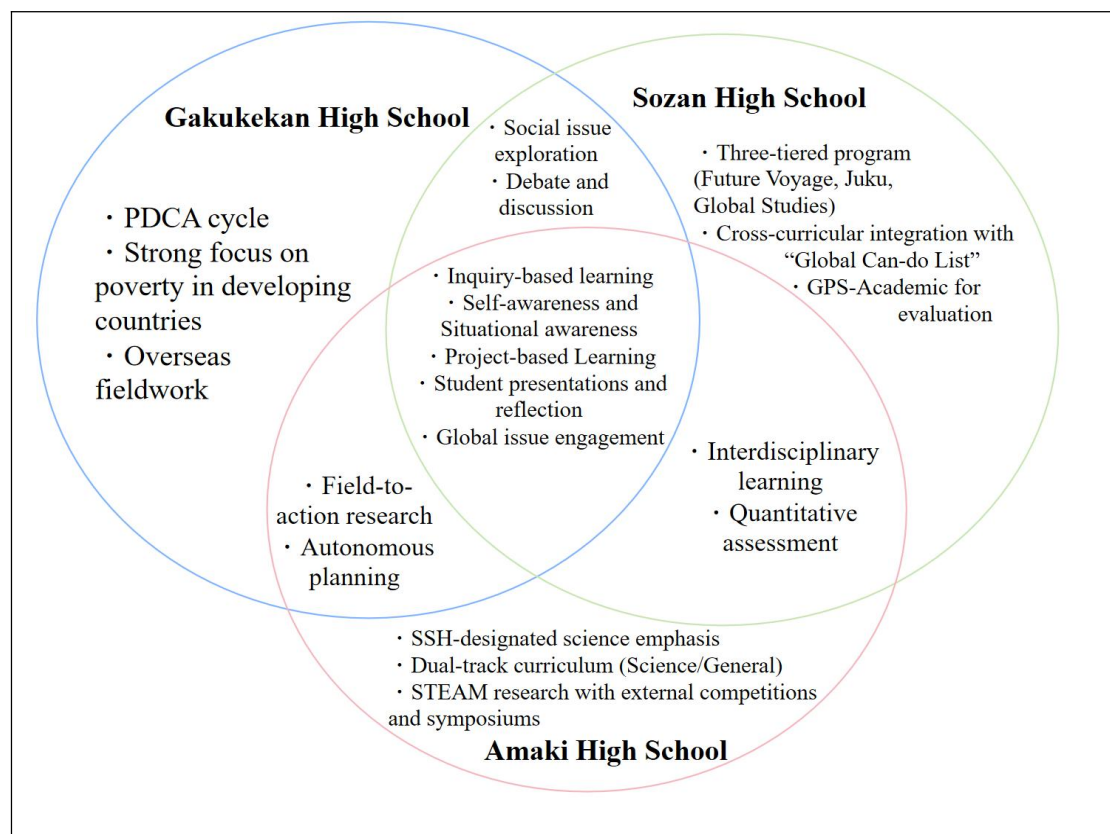
Collaboration is a key characteristic of Amaki High School's SSH program. The school fosters an interactive and collaborative learning environment where students work together to tackle complex problems. This is facilitated through activities such as, group research projects, students in both the General and Science and Mathematics Courses collaborate on various academic and scientific inquiries, often with students from different tracks to encourage cross-disciplinary thinking. In addition, global exchange programs: Amaki High School maintains a long-standing partnership with The Barstow School in the United States, providing students with opportunities to engage in short-term study abroad programs, collaborate on research projects, and experience cultural exchange. These exchanges allow students to gain a broader perspective on global challenges and deepen their understanding of different cultures. However, because of the coronavirus, the exchange program has been put on hold. Finally, Real-world applications, Amaki High School actively partners with local businesses, universities, and research institutions to provide students with hands-on learning experiences. These collaborations allow students to apply their research in practical settings and gain insights into the professional world, reinforcing the practical value of their education.

4.5 Discussion

For those three schools, the SGH and SSH programs at Gakugeikan, Sozan, and Amaki High Schools, reveal both shared principles and distinctive approaches in fostering global leadership. As illustrated in the Venn diagram below (See Figure 1), all three schools emphasize the development of critical thinking, self-awareness, and collaborative problem-solving through inquiry-based and project-oriented learning. These core elements form the foundation for nurturing students capable of engaging with complex global and local issues.

However, each school also demonstrates unique characteristics shaped by its institutional orientation and program type. Gakugeikan High School, for example, places strong emphasis on the PDCA cycle and practical engagement with poverty-related issues, guiding students through a highly structured, phase-based model. Sozan High School integrates global leadership development across the entire curriculum and offers a tiered program that combines local community learning with international collaboration. In contrast, Amaki High School, as an SSH institution, focuses on scientific inquiry and STEAM education, with students engaging in advanced research through a dual-track system emphasizing either scientific specialization or interdisciplinary exploration.

By visualizing these overlaps and differences in a three-circle Venn diagram, these programs share a common goal that is equipping students with global competencies, while differentiating themselves in method, emphasis, and academic focus. This comparative framework highlights the diversity and adaptability of Japan's leadership development strategies, suggesting that flexible, context-responsive models may be essential for future educational policy and practice.



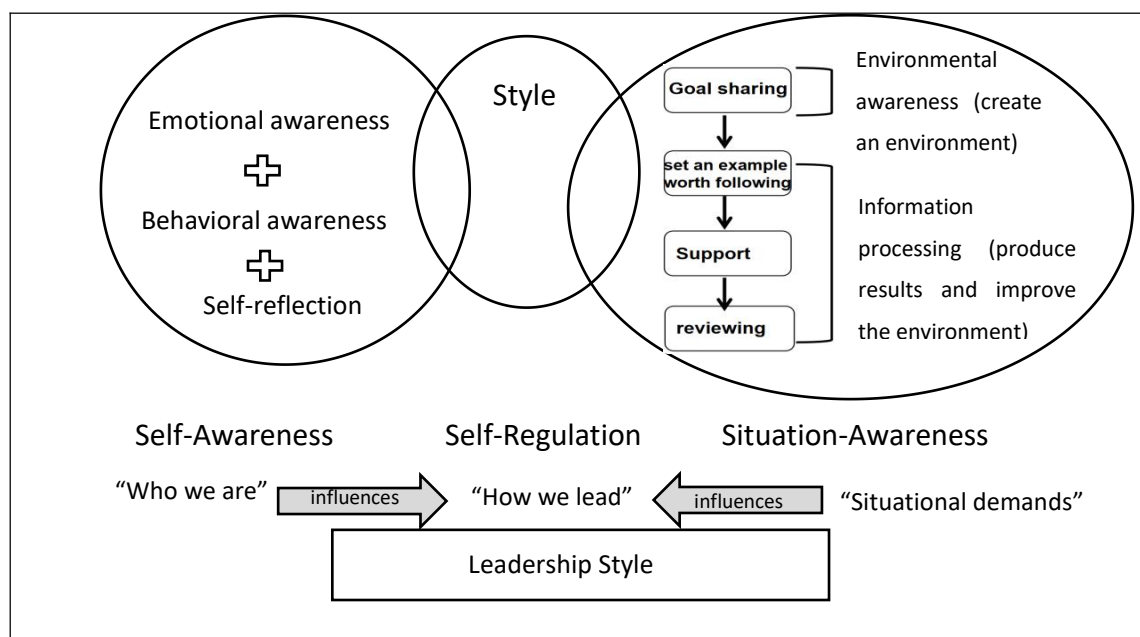
[Figure 1] Characteristics of Global Leadership Development Programs across Three Case Schools

Chapter 5 Research Plan

Chapter 5 explains the research plan designed to empirically examine the long-term impact of leadership development programs in Japanese high schools, particularly within the SGH and SSH programs. Building on the theoretical framework presented in earlier chapters, this research adopts a conceptual framework centered on two key dimensions, situation-awareness and self-awareness, to explore how global leadership is cultivated through educational experiences.

5.1 Theoretical Framework for the Research

In the previous sections, various definitions related to global leadership were examined. This research attempts to clarify the definition of leadership competence within the global context. In this thesis, global leadership competence is defined as “a dynamic process that involves effectively utilizing situation-awareness and self-awareness to influence individuals, groups, and organizations from diverse cultural, political, and institutional backgrounds. It enables leaders to foster self-understanding, facilitate team collaboration, and create outcomes in specific contexts.” This definition is influenced by the work of scholars like Burns (1978) and Walumbwa (2008), whose transformational and authentic leadership theories align with the dynamic and context-dependent nature of leadership. Building upon this, global leadership education is defined in this research, based on Tateno's research, as "aiming to enhance individuals' abilities, qualities, and behaviors to effectively exert global leadership, particularly in an interconnected and culturally diverse world." The theoretical framework of this research is grounded in the author's previous master's research thesis and incorporates the key points drawn from the analysis of leadership theory development, specifically "situation-awareness" and "self-awareness." This framework envisions global leadership education as an approach that enables all participants, with different cultural backgrounds, languages, and values, to effectively demonstrate leadership. Therefore, it offers distinct educational outcomes compared to conventional leadership education, which tends to focus on a single cultural context. The specific analytical framework is as follow (see Figure 2).



[Figure 2] Framework based on the elements of "situation-awareness" and "self-awareness"

The core idea emphasized in this framework is to ensure that every student clearly understands how their leadership abilities will play a role in their future lives. Before designing global leadership development programs, key considerations must address: How can the program ensure that all participants acquire leadership abilities? And, how can the program create experiences and team dynamics that allow participants to deeply reflect on and understand their leadership abilities?

Additionally, the process involves placing students in environments where they can subjectively judge the types of leadership they can demonstrate and, objectively, feel how they apply these abilities within a team. This process does not only apply during the program, it is also intended to have a long-term influence on students, helping them realize that leadership is cultivated and developed through personal growth, life experiences, and interpersonal relationships.

In this framework, students are encouraged to explore fundamental questions such as: What are your interests? What are your areas of expertise? These questions are designed to deepen students' self-awareness, which can even lay the foundation for future career choices. And for students to truly understand themselves, the following three concepts play key roles, they are "Emotional Awareness", "Behavioral Awareness", and "Self-Reflection".

Emotional Awareness: This involves recognizing and understanding one's emotional responses and their impact on interactions. Students need to become aware of their emotional triggers and how emotions influence decision-making and relationships in leadership contexts.

Behavioral Awareness: This refers to understanding how one's behaviors are perceived by others, and how those behaviors impact team dynamics and leadership effectiveness. It helps students develop the capacity to adjust their actions to improve their leadership approach.

Self-Reflection: Self-reflection is the process of reviewing one's leadership experiences, understanding successes and failures, and using this insight to improve future behavior. This step encourages students to critically examine their past decisions and identify areas for growth.

In the project process, in addition to fully understanding oneself, four important steps to foster the development of global leadership are also set. These steps are: "Goal Sharing," "Setting an example worth following," "Support," and "Reviewing." Each of these four steps as explained in detail as following.

Firstly, "Goal Sharing" refers to setting common goals that all members, who come from different social and historical backgrounds and hold different values and perspectives, can share. This creates an environment conducive to the effective exercise of global leadership. Specifically, it involves constructing situations where global leadership is necessary, such as tasks that present challenges or new issues. These challenges are difficult to overcome alone and require collaboration with others. However, merely setting difficult tasks is not enough. It is crucial to strike a balance between "goals" and "capabilities" when creating an environment for global leadership. This is because overly difficult tasks can discourage participants, while simpler tasks may lead to boredom. Furthermore, the gap between group goals and individual goals should also be considered. At this stage, communication within the group members is essential.

Next, after creating an environment where global leadership can be demonstrated, the focus should shift to how global leadership can be further developed. Specifically, "Setting an example worth following" involves accepting the differences in values and thinking among group members, moving beyond these differences, and taking action to set an example for others, thus creating consensus. Within the group, this behavior is essential in global leadership, and one should first

focus on taking initiative and stepping forward. However, when encouraging participants to take proactive actions, it is important to ensure they do not force actions based on global leadership styles that do not suit them. Global leadership should allow individuals to express their authentic selves. Exploring one's unique style of global leadership is crucial.

"Support" refers to providing support according to each member's differences to achieve the agreed-upon goal. This step helps individuals understand how they are perceived by others. Understanding both the positive and negative aspects of one's global leadership allows for the creation of an environment in which both individuals and the entire team can work more effectively. It emphasizes not just using one's own strength but also maximizing the potential of others within the group.

Finally, "Reviewing" involves comparing the shared goals within the group with the actual outcomes. Group members need to reflect on the differences between the group and individual strengths and weaknesses. Based on these reflections, they should identify areas for improvement and revise future action goals accordingly.

In summary, the theoretical framework for global leadership education presented in this research emphasizes the dynamic and context-dependent nature of leadership. It integrates key concepts such as situation-awareness, self-awareness, and self-reflection, which are essential for fostering leadership competence in a globalized, culturally diverse world. By incorporating four key steps, "Goal Sharing," "Setting an Example Worth Following," "Support," and "Reviewing", this framework provides a comprehensive approach to developing global leadership in students. The goal is not only to help students understand their leadership abilities but also to cultivate an environment where these abilities can be actively applied and refined. Ultimately, this framework highlights the importance of self-awareness and continuous development in leadership, emphasizing that leadership is not an innate trait but a cultivated skill. Through thoughtful design and reflection, global leadership education can equip students with the necessary tools to navigate complex, cross-cultural challenges and contribute to the creation of a more interconnected and inclusive world.

5.2 Research Targets

To gain a deeper understanding of the current status of leadership development programs in Japanese high schools, this research selected two of the case study high schools for interviews and investigations. In this research, 11 college students in all, 7 college students with experience taking the SGH program at X High School, an accredited SGH school; 4 college students with experience taking the SSH program at Y High School, an accredited SSH school, were interviewed. The 7 had taken the SGH program at slightly different times, with 4 having taken the program starting in 2016, 2 from 2017, and 1 from 2019. The 4 had taken the SSH program, with 3 having taken the program starting in 2020, 1 from 2019.

Considering the time required to complete the program and reflect on it, the target interviewees were limited to students who completed the program one year after graduation. These interviewees were selected using a snowball sampling method by asking some of the graduates of X High School and Y High School to nominate others for selection. Of the 7 participants selected from X High School, 4 of them had participated in the overseas fieldwork and 3 had not, and it was felt that it would be possible to compare the data between the two groups. Basic information about the interviewees is shown in Table 12. On the other hand, of the 4 participants selected from Y High

School, 2 of them had participated in the mathematics and sciences course and 2 had not. Basic information about the interviewees is shown in Table 13.

In the process of examining participant D's interview content, it was found that the phrase “PDCA cycle” was mentioned many times. For this key phrase, an additional interview was considered to be necessary. So among the four, only participant D was interviewed twice. The interviews lasted about one hour in each case.

[Table 12] Basic information about the interviewees of X High School

	Gender	Year of participation	Overseas Experience	Major in University	Interview Date (2022)	Interview Method
A	Female	2016-2018	YES	Faculty of Integrated Arts and Sciences	8.31	Line
B	Female	2019-2021	YES	Faculty of Beauty	8.31	Line
C	Female	2016-2018	YES	Faculty of Culture and Information Studies	8.30	Line
D	Male	2016-2018	YES	Faculty of Dentistry	(1)8.23 (2)8.29	(1)Zoom (2)Zoom
E	Male	2017-2019	NO	Faculty of Education	8.23	Zoom
F	Male	2017-2019	NO	Faculty of social Education	7.6	Y University
G	Male	2016-2018	NO	Faculty of social Education	7.19	Y University

[Table 13] Basic information about the interviewees of Y High School

	Gender	Year of participation	Scientific Research	Major in University	Interview Date (2025)	Interview Method
J	Female	2020-2023	NO	Faculty of Education (Sports)	2.20	Y University
K	Male	2020-2023	YES	Faculty of Education (Music)	3.10	Y University
L	Female	2020-2023	NO	Faculty of Law	3.14	Y University
M	Male	2019-2022	YES	Faculty of Science	3.20	Y University

5.3 Research Methods

The interviews were conducted after applying for and obtaining approval from the Research Ethics Committee of Okayama University. At the beginning of each interview, explanations were given about the purpose, objectives of the interview, and protection of privacy. It was also stated

that the collected data would not be used for any purpose other than this research and that care would be taken not to identify individual names when the research was published. A semi-structured interview was used as the research method. The following interview questions were designed with the aim of genuinely understanding the long-term effects of leadership development programs and the issues that arise in practice. The goal is to provide directions for improvement for future leadership development programs.

The interviews were conducted by the author herself. The main interview questions are shown in Table 14 for SGH program's participants and Table 15 for SSH program's participants.

The questions consisted of a reflection on the learning experience of the SGH program, the impact of the SGH learning on their future life, and how the survey participants came to perceive global leaders through their learning.

[Table 14] Interview Questions for SGH program's participants

- 1 Please tell me why you participated in the SGH program.
- 2 Please talk about an event or experience in the SGH program that left a particularly strong impression on you. Please also explain why the event or experience was particularly memorable.
- 3 The SGH program was designed to nurture global leaders. What specific qualities did you acquire?
- 4 What was the meaning of your experience in the SGH program for you? Do you have any experience that your learning has been useful to you after the program?
- 5 What are you most engaged in now, and how does your SGH experience affect it?
- 6 What qualities do you think an ideal global leader should possess?

[Table 15] Interview Questions for SSH program's participants

- 1 Please tell me why you participated in the SSH program.
- 2 Please talk about an event or experience in the SSH program that left a particularly strong impression on you. Please also explain why the event or experience was particularly memorable.
- 3 The SSH program was designed to nurture global leaders. What specific qualities did you acquire?
- 4 What was the meaning of your experience in the SSH program for you? Do you have any experience that your learning has been useful to you after the program?
- 5 What are you most engaged in now, and how does your SSH experience affect it?
- 6 What qualities do you think an ideal global leader should possess?

5.4 Analytical Methods

The analysis method used was the Ueno Method of Qualitative Analysis Method developed from the KJ Method proposed by sociologist Chizuko Ueno (Ueno, 2017). This analysis method orderly collates the implementation sequence of the well-known KJ method and proposes a simpler method that anyone can actually perform. From the generation of the analyzed results to the discussion, the process is shown in Table 16.

[Table 16] The process of the Ueno Method of Qualitative Analysis

Process	Analyzing	Main Process
1	Making cards	In replaying the audio recordings of the interviews, the one-card-one-information principle was used to capture the discourse in the interviewees' narratives about the transformation that occurred as a result of the implementation of the SGH program.
2	Getting meta-information	The created cards were categorized and a theme was generated.
3	Mapping and charting	The meta-information was placed close together if they were the "same" and far apart if they were "different" (mapping), and the relationships among them were charted by connecting them with three types of arrows: causality ($A \rightarrow B$), antagonistic relation ($A \leftrightarrow B$), and correlation ($A \rightleftharpoons B$).
4	Storytelling	A narrative was created based on mapping and charting.
5	Analysis and discussion	In addition to examining the narratives of each subject, a discussion of the similarities and differences in their growths was also included.

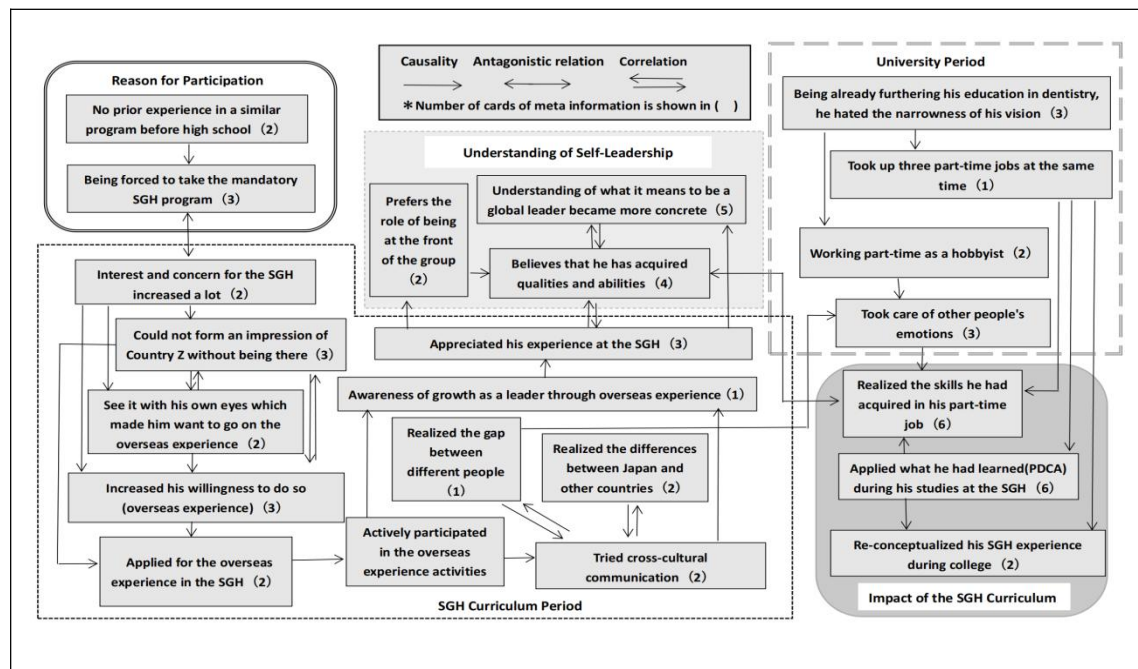
One of the reasons for adopting Ueno's analytical approach is that it has been mentioned before that the meaning and value of long-term educational activities such as the SGH program, which involves the development of the whole personality of the learner, will change with the various experiences of the learner in the future. Therefore, the impact of the SGH program can be narrated in a more logical way. In Ueno's (2018) analysis method, it is mentioned that "telling stories by drawing logical relationships between meta-information can reveal hidden structures between information sets, and these hidden associations are not even noticed by the participants"(p.206). Regarding this point, Ueno's method was considered to be more coherent in showing the learner's change and growth in the SGH program, so it was adopted. Another reason the analysis method was adopted is that only three relationships(causality, antagonistic relation, and correlation) tell the story of the SGH program's impact on the learner so far, from the analysis to the discussion, it's a method that is easy for even beginners to use. At the same time, Ueno's(2018) method of analysis is a reliable and practical method that "removes the arbitrariness of the analyst by reading and interpreting the data within the structural context in which it is placed"(p.234).

Through the process of analysis, cards and meta-information were made from the data of the eleven interviews (See Table 17).

In this research, only participant D was selected at random to use as an example in Figure 3. In addition, the author shared the narratives she created based on the mapping and charting of the cards and meta-information in the following chapter.

[Table 17] Number of cards and meta-information for the four interviewees' data

SGH	A	B	C	D	E	F	G
Card	62	50	63	68	60	61	51
Meta-information	22	22	24	23	23	22	20
SSH	J	K	L	M			
Card	77	60	72	59			
Meta-information	24	23	22	21			



[Figure 3] Figure diagram of the growth of participant D under the SGH program

Chapter 6 Research on the Significance of Global Leadership Development in Japan

Chapter 6 presents an insight analysis of X High School (SGH-designated) and Y High School (SSH-designated), to explore how global leadership development programs are designed and implemented in practice. Drawing on program outlines and interview data, this chapter begins by analyzing the educational structures of two schools. The key factors such as student needs, school philosophy, and institutional resources are considered essential foundations that shape the relevance and adaptability of the program. Additionally, the school's regional culture, access to community resources, and partnerships with universities or local governments provide important support for implementation. This chapter also integrates insights from interviews with program alumni to understand how these environmental factors influenced their learning experiences and leadership development. This chapter seeks to uncover the underlying mechanisms that enable or constrain the success of global leadership education at the high school level.

After each storyline, based on the theoretical frameworks presented by Snook, Nohria, and Khurana (2011) in *The Handbook for Teaching Leadership: Knowing, Doing, and Being* and the theoretical concept “non-hierarchical leadership” stated by Higano (2018) in *An Introduction to Leadership for High School Students*, this section analyzes the interview content with a particular focus on two key elements of leadership development: **self-awareness** and **situation-awareness**. These two dimensions have been consistently emphasized in both Western and Japanese leadership education literature as foundational competencies for effective leadership. Rather than drawing conclusions from general impressions, this analysis seeks to interpret participants' reflections and experiences through the lens of these concepts. By doing so, the research aims to clarify how leadership development programs in Japanese high schools have influenced students' internal growth and practical leadership capabilities. The dual focus on personal insight (self-awareness) and contextual adaptability (situation-awareness) serves as a conceptual anchor for evaluating the developmental impact of these programs on participants' own leadership leadership type.

6.1 Research on the Significance of Global Leadership Development Through Social Issue Exploration – An Interview Study of SGH

6.1.1 Results of the Interview Research: Storyline of Participant A~G

Based on the analyze methods mentioned at Chapter 5, each participant's storyline is in a separate box. The **bold text** indicates meta-information and the underlined text indicates cards.

Participant A: Being able to care for others who are different from you.

A was born into a family with three different cultural backgrounds... it has **developed her cross-cultural understanding**. A **participated in the SGH program because of her interest in overseas activities**. **In the first year**, A gained a basic understanding of Country Z. In the second year, A applied for the overseas fieldwork in Country Z. A **experienced a lot of things there** like smelling the smell of the garbage dump...which **shocked her** a lot. Then she saw the charming smiles on the faces of the locals, which **changed her impression of the place**. A described her feelings as follows: "... What we wanted and what they needed were completely different, that was the gap. I realized that the best form of support is the one that meets the needs of the other side."

In other words, when **A went to the local area, she began to realize the gap between what she thought and what others thought**. She began to think about the causes of the current situation on her own and **consider the cause- and-effect relationship between things**. Later, **in her second year, she was impressed by the English presentation competition she attended**. In the process, she **acquired abilities such as** how to cooperate and communicate with others. A began to **pay attention to the importance of others' opinions**, and would accept others' opinions first rather than rejecting them in group activities. In addition, in group activities, **A realized that her role was a leader** rather than a supporter. Therefore, it can be said that A has acquired the qualities and abilities of presentation skills, thinking skills, cooperation skills and communication skills through the SGH. Through the SGH program, A **realized the diversity of global leaders**, and has a more concrete **understanding of a global leader** as someone who has the ability to be receptive, expressive, cohesive, and caring for people with diverse backgrounds.

The SGH experience has also been very helpful to A in her college experience. A claimed that she could now talk to everyone. **The SGH experience has influenced her future endeavors as well**. A believes that if she can feel happy by contributing to society, it can be her happiness. What's more, she thinks self- happiness comes from being able to do what she is interested in, so she is now looking for something she really likes to do. After **careful consideration of her future**, A **decided to take a year off from school and traveled to Europe for a month** to gain a broader perspective on the global community. A demonstrates that the kind of leader needed in a group, which she realized in SGH, is someone who can create an environment in which it is easy to take action in a group, and A now pushes herself to become such a leader. At the time of the interview, she was still taking a year break from college to **think about her relationship with society and to figure out her own way of life**.

For A, the SGH program brought her the awareness of the existence of others who are different from herself and the importance of working with them. A also considered a leader to be someone who cares about others and creates a positive environment for them.

A's reflections indicate notable development in both self-awareness and situation-awareness. In terms of self-awareness, A articulated a clear understanding of what global leadership entails, describing a leader as someone who is "receptive, expressive, cohesive, and caring for people with diverse backgrounds." This internalization of leadership attributes was reinforced through her recognition of her own role: she knew herself as "a leader rather than a supporter," marking a shift in identity shaped by program experiences. Although raised in a multicultural family, A remarked that she "could now talk to everyone," implying that her intercultural communication abilities were not innate but cultivated through the SGH program. Her learning process involved not only cross-cultural interactions during fieldwork in Country Z but also repeated reflection on what makes her feel fulfilled—namely, the connection between doing what she is interested in and contributing to the happiness of others. This **cause-and-effect** logic became a key lens through which she reevaluated her goals, ultimately leading her to take a gap year and explore the broader world to **figure out her own way of life**.

Regarding situation-awareness, A emphasized two core insights: **the gap between what she thought and what others thought** and the value of "an environment in which it's easy to take action in a group." These were not mere observations but formed the foundation of her practical behavior. For example, she stated that she "would accept others' opinions first rather than rejecting

them,” and she actively worked to create inclusive group settings that encouraged participation and comfort. This combination of sensitivity and initiative illustrates her capacity to bridge differences and build trust within teams.

A’s leadership style is characterized by collaborative sensitivity and self-driven decision-making. It was constructed through the accumulation of cross-cultural experiences and reflective practices, particularly her awareness of interpersonal gaps and her efforts to foster inclusive group environments.

Participant B: Taking action to communicate with others and contribute to the global society

B has always been interested in developing countries and felt that participating in the SGH program would be highly meaningful for her life. As a result, she **voluntarily applied to join the program**. During her first year, in the pre-study phase, she **focused on the garbage issues in Country Z**. At that time, her **impression of Country Z was one of poverty**. She even **struggled to understand the lives of local people**. For instance, while studying the problem of garbage mountains, B thought, "People in rural areas are being forced to live near garbage mountains." With these thoughts in mind, **her desire to visit the area and experience it firsthand grew stronger**.

In her second year, she **independently signed up for an overseas fieldwork activity**, which **left a particularly deep impression on her**. Through this experience, she gained knowledge that was not covered in textbooks and significantly **changed her perception of Country Z**. For example, after actually visiting the country, she realized it was not as poor as she had initially imagined. However, she observed economic and educational disparities between urban and rural areas. While she had assumed that people living near garbage mountains must be unhappy, she discovered that they had chosen to live there voluntarily. This proximity allowed them to care for their livestock more conveniently. Moreover, she found the locals to be kind, warm, and seemingly happy in their lives. This hands-on experience in Country Z completely **reshaped B’s preconceptions**. In addition to participating in the overseas activities, B actively **engaged in contribution activities held in Japan**, which also left a profound impact on her. From these SGH educational activities, the most important lesson B learned was about **preconceived notions**. Her strong preconceptions about Country Z had initially shaped her perspective, but during her local studies, she was continually challenged and compelled to revise her understanding. Through experiential learning, she gradually developed the ability **to understand things from multiple perspectives**. She learned not to determine the entirety of a situation solely based on her own ideas or the information she had received but instead to observe matters calmly and consider them from diverse angles. Another memorable aspect of the SGH program was its ICT-based educational approach, which **encouraged her to try using SNS for communication**. She created a dedicated SNS account for SGH activities and regularly uploaded updates about the program. Throughout these activities, B honed her skills in listening to others' opinions and summarizing them within the collaborative environment fostered by the SGH program. During the reflection sessions after each activity, she **practiced her presentation skills**, which significantly improved over time. Additionally, **the reflection sheets frequently used in the program have positively influenced her current life**.

Through the SGH program, B **developed her understanding of global leadership**. She believes that an global leader must, as a foundation, show concern for global issues and possess

the ability to absorb and synthesize others' opinions to facilitate group interactions. Inspired by this ideal, she strives to **approach societal issues as if they are her own** and works toward becoming such a leader.

After completing the SGH program, B is now **pursuing studies in beauty-related fields at university**. Despite differences in the educational methods, she continues to apply and develop the skills she learned from the SGH program. At her university, she actively **participates in after-school exchange activities with international students** and **has created a new SNS account** to share updates about her field of expertise and related information. Outside of school, B **interacts with foreign customers at her part-time job** and takes the initiative to share her insights internationally.

B entered the SGH program as someone already highly interested in exploring the world and global issues. Her proactive participation in both domestic and overseas research activities during the program demonstrated a strong sense of initiative and engagement. One of the most significant realizations that emerged for her throughout the experience was the impact and danger of **preconceptions**. At the start of her project-based learning on developing countries, B instinctively associated terms like “**poverty**” and “**unhappy**” with the local context. However, through her fieldwork, she discovered that these assumptions were misguided or overly simplistic. She remarked that the experience “**reshaped her preconceptions**” and emphasized that she “**learned about preconceived notions.**” Following this turning point, B consistently practiced “**understanding things from multiple perspectives**” during group activities, consciously working to avoid the trap of a single narrative or limited viewpoint. This growing awareness of the complexity of social issues directly shaped her interpretation of global leadership. She described a global leader as someone who can “absorb and synthesize others' opinions to facilitate group interactions,” and viewed her own role in teams as one of “listening to others' opinions and summarizing them.” In this way, her self-awareness, particularly the recognition of her own cognitive habits, clearly influenced and deepened her understanding of global leadership.

This consciousness also carried over to her situation-awareness. When participating in the overseas activities, B demonstrated the ability to identify knowledge that was not found in textbooks. For example, she independently noticed the “disparities between urban and rural areas” in Country Z. She also repeatedly trained herself to quickly grasp environmental cues in team-based contexts. One notable behavior that reflects this is her use of SNS. B created a dedicated SNS account during high school to share updates about SGH activities, and later created a second one at university to communicate her expertise and engage with a global audience. Each post became an opportunity for her to process information, reflect, and reframe her message for others.

B's leadership style is characterized by interpretive flexibility and collaborative synthesis. It was shaped through her active engagement with global issues, her repeated self-awareness of the limits of preconceived notions, and her deliberate practice of integrating diverse perspectives to support inclusive group processes.

Participant C: Being able to act positively for those who have different values.

C's reasons for joining the SGH program were as following: one was **her own desire** to “learn about the world and participate in various activities rather than learning from textbooks”; and the

other was **her own current situation** of "giving myself an advantage in further education and employment". C saw the SGH program as a **life opportunity**. C undertook the foundation studies **in her first year**. The program was **student-centered** and **developed C's collaborative skills through teamwork**. She **actively participated in the overseas experience activities in her second year**, and **was impressed by the local experience** through activities such as picking up garbage and interviewing locals. In addition, during the interviews with local people, C said that there were very few Japanese who thought that eating with their family made them happy, which was something she had never thought of before, and that she had learned a lot about such values as a result. **Through cross-cultural exchanges there, she noticed the differences in values and culture.**

C was **very impressed with the presentations and reporting sessions**. Based on the mentioned experience of participating in garbage pick-up activities during her overseas experience in Country Z, C delivered a presentation in both English and Japanese. She said that these presentation were very important to her, and that she paid great attention to the approach of the presentations, trying to make them as easy to understand as possible even for those who had not heard of Country Z. In other words, C **began to care about others**. After that, C **conducted a study on water quality** and reported the results in English. Meanwhile, she thought the reflection process called the portfolio, which she experienced in the SGH, was **also a special feature of the SGH program**. C thought it was important to learn a lot of knowledge in SGH classes, but the value of the SGH lay in taking action practically, and she believed that the significance of the SGH was to give her the awareness to do and take action on whatever she was doing in the first place. By participating in the SGH program, C realized that **her ability to use SNS had improved** and she had acquired **self-leadership qualities** such as her must-do, planning, foresight, and taking action. In addition, C **realized the diversity of leadership** and gained a comprehensive understanding of qualities and competencies such as the ability to stand up for others and take action. **The understanding of a global leader** is reflected in the person who, first of all, has the language skills, who takes care of others as if they were his or her own while having a desire to help others, and who is able to make decisions decisively.

C also found it **useful** to have a year-long group task study in college based on **her experience at the SGH**. She mentioned that she had started her graduation thesis with a study focusing on the differences in leadership characteristics between males and females. C said that her experience in Z country made her feel quite close to a foreign country and enabled her to find her place in a global company. She also mentioned **how helpful it was** for her to talk about her SGH experience during the job application process and how it was appreciated. At the time of the interview, she had actually received a job offer from a company active in the global community. In other words, **the SGH experience influenced her university thesis, and the career choice**.

It can be said that C, who initially joined the program for practical reasons as further education and employment, was able to recognize the existence of other, learn about their different values through her overseas experience in Country Z, and gain the ability to lead in a group through the SGH program.

C showed very clear logical thinking throughout the interview. During the conversation, she answered questions with well-structured reasoning. This was especially evident from the moment she shared the two reasons why she participated in the SGH program. Her description of SGH as a

life opportunity and her determination to seize that opportunity revealed her strong sense of initiative. C's awareness and emphasis on taking action was remarkably high. She mentioned related expressions no less than four times during the interview: "**The value of the SGH lay in taking action practically,**" "**The significance of the SGH... was... taking action on whatever she was doing in the first place,**" "**Self-leadership qualities such as... taking action,**" and "**Realized the diversity of leadership... such as the ability to take action.**" These statements clearly demonstrate how highly she values action and how consistently she exercised strong execution skills. It was through the SGH program that she repeatedly strengthened her own capacity to act.

Additionally, through her overseas fieldwork, she became aware of "**the differences in values and culture.**" It is reasonable to believe that this awareness also influenced her presentation preparation, particularly when she mentioned trying to "make them as easy to understand as possible." Interestingly, she also actively participated in English (as a second language) presentation contests, and is currently preparing to work in an international company. Through all of these experiences, she has developed a deep sensitivity to cultural differences and has immersed herself in a multicultural atmosphere.

C's leadership style is characterized by goal-oriented execution and cultural sensitivity. It was shaped through her consistent commitment to taking action, her awareness of cultural and value-based differences, and her ability to adjust communication with empathy and clarity. The SGH experience helped her transform intention into initiative, and awareness into impact.

Participant D: Being able to think and act from various perspectives with a broad perspective.

D had no prior experience in a similar program before high school and had never volunteered for an SGH program. Rather, he was forced to take the mandatory SGH program by his teacher's strong encouragement. However, after starting the course, D's **interest and concern for the SGH increased a lot**, and the idea that he **could not form an impression of Country Z without being there**, which he learned about in the fieldwork, was very strong. D said that no matter how much he learned about Country Z in first grade, he could not change his impression of that country because it was a world that he had no connection with. D wanted to **see it with his own eyes, which made him want to go on the overseas experience and increased his willingness to do so.** Therefore, he **applied for the overseas fieldwork in the SGH.**

D **actively participated in the overseas experience activities and tried cross-cultural communication** in Country Z. D visited a garbage dump in Country Z and learned about the difference in garbage disposal between Japan and Country Z. Specifically, Japan burns its garbage more often, while Country Z disposes of its garbage in a landfill. D interacted in English at a high school where some of the best high school students in country Z were gathered. D **realized the gap between different people and the differences between Japan and other countries.** D developed **awareness of growth as a leader through overseas experience.** D **appreciated his experience at the SGH**, and in his report after returning to Japan, he mentioned that he had learned an important lesson during his time at SGH, which was that it was necessary to act not only from one's own point of view, but also from the points of view of those around you, from different people's perspectives. D also realized that he **prefers the role of being at the front of the group and believes that he has acquired skills** such as presentation, problem-solving, collaboration and communication during the SGH period. Meanwhile, D's **understanding of what**

it means to be a global leader became more concrete, as D articulated that a global leader is someone who is able to think from everyone's point of view, who is able to organize those around them, and who has the ability to communicate with others and draw attention to himself or herself.

D later studied dentistry at university. Therefore, his career path was almost set and what he learned at university was limited to the content of his expertise to become a dentist. Even though **D was already furthering his education in dentistry at university, he hated the narrowness of his vision.** Even though he was busy with his professional studies, he **took up three part-time jobs at the same time** during his university years to broaden his horizons, and there was a sense of purpose in working in different industries. Especially as a cameraman, **working part-time as a hobbyist**, D **took care of other people's emotions** in his work. D also stated that in other jobs, he would review the way he received feedback, look at his response each day, self-analyze how he was judged because of the way he responded to a customer yesterday, and analyze what he should do in the next conversation, using the same methodology as the SGH. In other words, D **applied what he had learned during his studies at the SGH and realized the skills he had acquired in his part-time job.** D mentioned the term PDCA (plan-do-check-act) several times during the interview. For example, he said that he made himself think about a lot of things during his time at the SGH so that he planned to do them, acted on them, reviewed them, and did the same thing the next time. D said that it was during college that he first learned about PDCA. He had not heard of the PDCA cycle in high school, but in terms of how the SGH actually works, it is actually doing the same thing. As a result, it was found that **D re-conceptualized his SGH experience during college.**

For D, the SGH program was not something he initially found appealing. As he stated, he **was forced to take the mandatory SGH program**, and his early participation was largely passive. However, this changed as the program progressed. What triggered his shift in attitude was the realization that “he could not change his impression of that country because it was a world that he had no connection with.” This remark helps explain his early disinterest. It is not from a lack of motivation, but because he had yet to find personal relevance in the program. Once D became directly involved as seeing the world for himself, adapting to new information networks, and confronting differences such as **the gap between different people and the differences between countries**, his perspective began to expand. These experiences led him to recognize “the importance of listening and acting from different people’s perspectives.” a realization that deeply shaped his understanding of leadership and responsibility.

This awareness also extended into his life at university. Although D pursued a specialized track in dentistry, he made a conscious effort to connect with others by working multiple part-time jobs across different industries. These experiences allowed him to apply interpersonal and reflective skills developed through SGH in broader, real-world contexts.

In group research and project activities within SGH, D also became aware of his own tendencies: he mentioned that he **preferred the role of being at the front of the group**, and showed strong confidence in his problem-solving and presentation skills.

D’s leadership style is characterized by outward-facing awareness and a proactive approach to problem-solving. It was shaped through his shift from passive participation to personal engagement, his growing recognition of others’ perspectives, and his desire to actively connect and lead in diverse settings.

Participant E: Being able to think about things from different perspectives and values.

E did not know about the SGH program when he entered the school, nor did E actively seek to take the SGH program. Because the class to which E belonged had to take join the program, his **participation in SGH was mandatory**. The SGH program in which E participated in had two features: firstly, the participation of international students in the SGH program **created an environment for cross-cultural exchange**; secondly, the SGH program was student-centered and **facilitated group activities**. In the first year, the students **had some preconceived ideas about Country Z**. For example, there was a garbage problem there, it was dangerous, they should move away, and so on. Based on these assumptions, they **conducted a problem-solving study focusing on content related to Country Z**. In the process, E heard that Country Z had a problem with garbage. In the process, E heard that people in Country Z were able to make a living by picking up things from the garbage and selling them. E elaborated, "If you just take your own point of view and do what you think is good for the other person, sometimes it can be a very poor way to do things instead. This is deeply felt." E stated that he realized the gap between his way of thinking and that of others, as well as the difference in values between his country and other countries. In second grade, he participated in a collaborative speech contest with other high schools even though **he did not participate in the activity**, and **it made a lasting impression on him**. When working in groups to solve problems and participating in presentations, he often mentioned in the interview that he had to look at problems **without preconceived ideas**, thus constantly honing in on **other people's ideas and values** versus his own. In addition, through the SGH program, E's **understanding of global leadership has become more concrete**. In this regard, it is specifically the ability to accept the values of different people and the ability to express oneself in a group that was developed in E.

Regarding the college classroom, he said, "I still think I owe it to the SGH that I was able to approach research from different perspectives and know which points were important to me and which were important to others." In addition, in a class with many presentations, he said that he was not afraid to present his ideas in front of others, in part because of his SGH experience. E **was influenced by the SGH in his college classes, which helped him develop his presentation skills during college**. E also participated in college clubs and served as a club leader. E said, "Sometimes club activities didn't go well, but I don't have the feeling that the club leader is the one who takes care of everything and don't feel like I can't do anything well. It's because I get help from people around me." E **became more considerate of others** after he became the head of the club. E also worked part-time and said, "What I learned in the SGH is that when things are not going well or I am not very effective in my work, I would think about why I am not getting good grades and how I am dealing with things." E started to think about the cause and effect of things.

E did not participate in the overseas fieldwork in Country Z. However, like those who had participated, he now had a positive attitude towards his SGH studies (which were initially not positive) and found them quite useful **for his future daily life and university life**. In particular, he strongly believes that it is his SGH studies that have enabled him to think not only from his own perspective, but also **from others' perspectives and different viewpoints**.

Although E did not voluntarily join the SGH program and did not participate in the overseas fieldwork, he still actively engaged in collaboration with international students on campus and gathered information from those who had participated in the overseas fieldwork. These

experiences gave him access to a broad range of perspectives and shaped two core realizations that he mentioned repeatedly: the problem of **preconceived ideas**, and the gap between his way of thinking and that of others, as well as the differences in values between countries. These insights deeply influenced his evolving understanding of leadership. For E, a leader is not only someone who listens to diverse perspectives but also someone who expresses themselves within the group. These views were clearly reflected in his university life. As a club leader, E emphasized that he did not consider that a leader should control everything, nor did he fear failure in the leadership role. Instead, he said, “I get help from others.” This statement strongly echoes his SGH experience. He never over- or underestimated his position based on experience or status; rather, he consistently placed himself alongside others, sharing information and responsibility equally within the group. It is difficult to determine whether this leadership tendency was innate or developed later, but what is certain is that the SGH program gave him the opportunity to refine and practice this leadership style through reflection and team-based engagement.

E’s leadership style is characterized by perspective-sharing and collaborative humility. It was shaped through his recognition of value differences, his critical stance toward preconceived assumptions, and his active pursuit of balanced roles within collective environments.

Participant F: Collaborating with others and leading them

Before participating in the SGH program, F **was aware of its existence** but did not show much interest initially. After enrolling in the high school for other reasons, F **was required to participate in the SGH program**. During the first year, he **learned about the program and actively explored fields that interested him**. In his second year, he officially began **group research projects**. Through his first-year exploration, F discovered his interest in “politics” and decisively **chose a political topic for his group research** in the second year. However, F openly admitted that he was one of **the less motivated members in his group**, and his enthusiasm for participating in the research activities was low. When reflecting on the reasons, F analyzed both **the topic and the group dynamics**. First, the research topic itself posed significant challenges for him at his current level, as completing the project with limited time, information, and knowledge was difficult for all group members. Second, the atmosphere and environment of the group also presented challenges. F mentioned, “There was a noticeable gap between motivated and unmotivated members, which made progressing with the research harder than expected.” Regarding the opportunity to participate in an overseas experiential activity, F felt that only outstanding students were selected, and he acknowledged his own shortcomings at the time, so he **chose not to apply**. Instead, he **focused on his strengths and excelled in his specialty: soccer**(that is the “other reason” he chose to enter this high school). Despite **not participating in the overseas activities**, F **actively interacted with members who had gone abroad**, bridging the information gap between himself and his peers through dialogue. In the final presentation stage, he **collaborated with his group members to complete the research presentation**.

For F, the SGH program activities **facilitated significant personal growth**, particularly in terms of communication skills. However, he **objectively evaluated the research activities**, noting that they were more focused on group interactions than on achieving concrete outcomes. During the program, F also **developed a clear understanding of what it means to be an global leader**. He described an global leader as someone who possesses “initiative to show others what needs to be done and to actively express their own ideas.” Such a leader should also have the decisiveness

to guide a group and influence those around them when the group struggles to make decisions. Although F **does not frequently discuss his SGH experience**, he acknowledged that participating in the program **had a positive impact on his academic path and future life**, even **influencing his career aspirations**.

F is currently studying to become a social studies teacher at university. It is reasonable to consider that the high school research project played a role in uncovering his interest in politics and shaping his career direction. At university, F has **encountered similar group activities to those in the SGH program**. Thanks to his SGH experience, he handles these activities with greater ease than students without such a background. Moreover, during group activities, F **pays particular attention to the diversity of team members**. As a student in the Faculty of Education, F has mentioned that the skills he developed in the SGH program—such as becoming an active communicator and improving his ability to interact with others—are proving valuable when designing lessons. However, F **has also reflected critically on his SGH experience**. When asked whether he had truly developed these skills, he expressed skepticism and admitted that he lacks confidence in this regard.

F did not fully embrace the SGH program during high school. Although he **was aware of its existence**, his participation was mandatory rather than voluntary. During the group research project, he described himself as a **“less motivated member,”** and he approached the overseas fieldwork opportunity with the belief that “only outstanding students were selected.” This mindset suggests that F had mentally drawn a line between himself and the program, assuming that its goals and design did not match his personality or abilities. His understanding of leadership defined as “initiative to show others what needs to be done and to actively express their own ideas”, reflects the very challenges he experienced during the SGH group research: issues with both **the topic and group dynamics**.

However, after entering university, F’s relationship with his SGH experience underwent a notable shift. When facing similar project-based projects in college, F began to demonstrate the advantage of being an “experienced participant.” Despite his low self-awareness during high school, his prior exposure to team-based inquiry and reflection helped him engage more effectively than many of his members. Moreover, the research topic he chose in high school became the basis for both his current academic field and his future career as a social studies teacher. The struggles he once faced became, in hindsight, valuable experiences—resources he now actively applies in educational settings.

F’s leadership style is characterized by the internalization of past challenges. It was shaped through reflective engagement with adversity, and although it emerged slowly, it now supports his capacity to contribute meaningfully in collaborative, real-world environments.

Participate G: Sharing problems with others and working collaboratively to find solutions.

Before enrolling in high school, G was aware of the SGH program but was not particularly motivated to participate. However, upon entering the school, he **was required to take part in the program**. He found **the first-year foundational courses especially memorable**, as they covered **fundamental knowledge related to SGH and global leadership**, along with the basics required for research **focused on Country Z**. Among these experiences, G was most **impacted by the group activities**. The innovative, student-centered teaching approach brought students together in the

gymnasium to discuss topics in small groups, often with close friends. This collaborative environment encouraged G to engage more actively in the activities. In his second year, G began formal **group research on Country Z**, choosing **Japanese language education as his primary topic**. Throughout the research process, he actively **participated in various communicate activities** to support group work. His accumulated experiences in the SGH program highlighted **the importance of group atmosphere** and **helped him understand the challenges of collaborative activities**. These experiences led him to actively **listen to and accept others' opinions** during communicate activities, enabling him to grow personally. Through these activities, G **gained a deeper understanding of himself**. He realized that he is naturally introverted and finds it difficult to initiate conversations with unfamiliar people. Nevertheless, he identified his role within the group and focused on providing support to his team. The SGH program provided him with continuous opportunities for self-growth.

G also **developed a clear understanding of what it means to be an global leader**. He believes that global leaders must guide and influence those around them through their actions, emphasizing the importance of practical ability. Through his participation in the SGH program, G **experienced significant personal development**. His ability to collaborate, listen to others, and work as part of a team improved, as did his skills in information analysis and critical thinking. He also recognized **the importance of flexible guidance from teachers and a relaxed, cooperative atmosphere**, which **left a lasting positive impact on his life**. G noted, "Through SGH, I experienced the joy of collaborating with others, which reinforced my desire to pursue a career involving interpersonal interaction." This realization **inspired him to aim for a career** as a social studies teacher and pursue systematic education at university. Specifically, G concluded that fostering deep self-reflection among students and encouraging them to apply what they have learned should be the ultimate goals of his teaching. To achieve this, he recognizes the need to continually reflect on and improve his teaching methods. The ability to implement his ideas was rooted in **the critical thinking skills** he continuously developed during the SGH program. He trained himself to consistently question the reasons and causes behind events and to analyze the cause-and-effect relationships involved. **This mode of thinking became a significant area of growth for him**.

Moreover, both during the SGH program and in his current university life, particularly through overseas experiential activities, he realized that **without taking concrete actions, there remains a disconnect between reality and the knowledge acquired from textbooks**. This insight left a profound impression on him.

G demonstrated a clear understanding of both his role within a group and his personal interpretation of leadership. While he did not initially express strong interest in the SGH program, he actively participated in **various communication activities** and often described himself as someone who would **“support group work”** and focus on **“providing support to his team.”** G recognized that he is naturally introverted and tends to avoid initiating communication, but he compensated for this by listening attentively and creating a stable presence within the group.

Interestingly, his personal understanding of leadership **“to guide and influence those around them through their actions”** complemented his preferred team role. While he did not position himself as a dominant figure, he emphasized contribution through consistent action and support. This form of leadership, grounded in initiative rather than authority, reflects a quiet but effective influence that aligns with his character.

In collaborative settings, one of the recurring themes in G's reflection was **the importance of group atmosphere**. He noted that the emotional environment of a team can significantly affect its productivity and harmony. He identified this as both a past challenge and a future professional task, especially as he prepares to become a social studies teacher. From his own experience, he came to deeply value the role of **a relaxed and cooperative atmosphere** in fostering effective teamwork. G aspires to become someone who can consciously create such environments in the classroom. This aligns closely with his earlier self-awareness regarding his role within the group.

G's leadership style is characterized by supporting and action-based influence. It was shaped through his self-awareness of interpersonal roles, his respect for group dynamics, and his belief in creating supportive spaces where collaboration can thrive.

6.1.2 Discussion

The SGH (Super Global High School) program provided participants with extensive opportunities to engage deeply with global issues, develop essential leadership qualities, and refine critical skills necessary for effective global collaboration. Through structured group research projects and diverse experiences, including overseas fieldwork and cross-cultural interactions, students expanded their cultural understanding, enhanced their self-awareness, and sharpened their communication abilities. These multifaceted experiences facilitated participants' personal and professional growth, guiding them towards clear and meaningful life trajectories, thereby laying a robust foundation for their future contributions to a globalized society. In this section, 6 characteristics are discussed.

(1) Development of Cross-Cultural Understanding

Across all participants, there is a strong emphasis on understanding and engaging with diverse cultures. All those 4 participants who had experienced the overseas fieldwork noted that their overseas fieldwork study and interactions with people from different cultural backgrounds significantly expanded their perspectives. After experiencing the local environment firsthand and interacting with local people, A learned to adopt a more empathetic approach, recognizing the differences in individual perspectives. She reflected, "What we wanted and what they needed were completely different, that was the gap. I realized that the best form of support is the one that meets the needs of the other side." B, on the other hand, had a deeper realization of her own stereotypes. She noted, "While I had assumed that people living near garbage mountains must be unhappy, I discovered that they had chosen to live there voluntarily. This proximity allowed them to care for their livestock more conveniently." Similarly, C also had a similar insight when she learned that "there were very few Japanese who thought that eating with their family made them happy, which was something I had never thought of before. I learned a lot about such values as a result." D realized the differences between Japan and other countries in how they deal with the same social issue, which became an important lesson he learned during SGH. Through these experiences, the participants learned to bridge cultural gaps and engage meaningfully with individuals from various backgrounds.

The remaining three students did not actually participate in overseas exchange activities, but both E and F actively engaged in dialogue with those who had participated, seeking to bridge the information gap. For example, E heard that people in Country Z were able to make a living by picking up things from the garbage and selling them. F also actively **interacted with members**

who had gone abroad, bridging the information gap between himself and his members through dialogue. In this way, they were able to gather as much information as possible about the overseas experiences, ensuring they could still learn from others' firsthand knowledge.

(2) Leadership Development

Firstly, the students have gained new insights into their self-awareness and definitions of leadership. By synthesizing all the participants' understanding of global leadership and the qualities ideal global leaders should possess, high-frequency keywords include cooperation and supporting others, as well as communication skills, listening, understanding others, and accepting opinions. All participants emphasized the importance of teamwork and mutual support in leadership. Whether it was A's role as a leader, B's collaboration experience, or C and D's roles within their teams, everyone agreed that leadership is not just about individual leadership but also about effectively cooperating and supporting others during group collaboration. In addition, many participants also mentioned that leadership is not just about giving instructions; it is more about listening and thinking about others. For example, A realized the importance of caring for people with diverse backgrounds and B and E emphasized the necessity of accepting others' opinions. E even pointed out that a leader doesn't necessarily need absolute decision-making power because, during the challenging process, he needed "to get help from people around me." Furthermore, while some abilities were not mentioned as frequently as the ones above, they were still noted by many participants, such as initiative, leading by example, empathy, problem-solving skills, and the ability to understand diversity and respond flexibly to challenges. C, D, and F all highlighted the importance of decision-making and action-oriented leadership. Empathy and the ability to put oneself in others' shoes were also considered essential leadership qualities. Nearly all participants recognized the importance of others within the team, emphasizing the need to care for others and think from their perspectives. It is also worth mentioning that C and D emphasized in their responses that leaders should be flexible in adjusting their roles and collaboration methods based on the needs of the team and the task at hand.

Almost all of the participants (A, B, C, D, E, G) recognized the importance of leadership, not just in guiding others, but in fostering an inclusive environment that encourages participation and collaboration. They learned to take initiative, listen to others, and understand the needs of their team, especially during group research activities and presentations. C, for example, realized the importance of both standing up for others and making decisions decisively, like she said: the ability to stand up for others and take action... a global leader is who, has the language skills, who takes care of others as if they were his or her own while having a desire to help others, and who is able to make decisions decisively. While D highlighted the ability to organize and communicate effectively within a team. Like he said: a global leader is someone who is able to think from everyone's point of view, who is able to organize those around them, and who has the ability to communicate with others and draw attention to himself or herself.

(3) Collaboration and Teamwork

In the SGH program, despite differences in participation in overseas exchange activities, all participants were required to work on group research projects, which emphasized collaboration and teamwork. Among the participants, A, E, and G highlighted **the importance of listening to and accepting others' opinions in group activities**. Specifically, A and E learned to pay attention to

the importance of others' opinions, recognizing that in group settings, it's crucial to listen to others' perspectives rather than rejecting them first. A and G emphasized the necessity of accepting others' opinions, as this fosters an environment of mutual respect and effective teamwork.

B and D, on the other hand, focused on the value of approaching tasks **from multiple perspectives**. B openly stated that she learned to understand things from multiple perspectives, particularly when her initial assumptions about Country Z were challenged during her fieldwork. D echoed this sentiment, noting that it is necessary to act from different people's perspectives, especially when working in a diverse group. This ability to approach situations from various viewpoints not only enhances problem-solving but also strengthens team cohesion.

C, while also acknowledging the importance of multiple perspectives, placed greater emphasis on the need for doing and taking action. She mentioned that the SGH program's group activities taught her the importance of acting and taking initiative on whatever task she was engaged in from the outset. This action-oriented mindset helped her stay focused and proactive in group work, making her a more effective contributor.

For F, communication skills were highlighted as essential. He noted that in group activities, it was necessary for everyone to actively express their own ideas and engage in meaningful dialogue. F's experience showed that effective communication, along with active listening and idea-sharing, is key to successful collaboration and ensuring that all team members are on the same page.

In conclusion, the SGH program significantly enhanced participants' abilities to work collaboratively, value diverse perspectives, and develop essential personal leadership. Whether it was learning to listen and accept others' opinions, understanding different viewpoints, taking decisive action, or improving communication skills, all participants recognized the importance of these competencies in contributing to successful group dynamics and personal growth. These skills not only shaped their experiences during the SGH program but also laid a solid foundation for their future academic and professional endeavors.

(4) Self-Awareness and Personal Growth

Through their SGH experiences, participants gained valuable self-awareness to know themselves better, which was central to their personal development.

This growth was particularly notable for participants like G and E, who reflected on their introverted personalities and learned to overcome personal barriers. G, for instance, realized that he was naturally introverted and found it difficult to initiate conversations with unfamiliar people. However, through the collaborative nature of SGH group activities, he gradually became more comfortable engaging with others. He recognized that his role within the group was not to be a leader in the traditional sense, but rather to provide support to his teammates. This insight allowed him to better understand his strengths and weaknesses, and he worked on adapting his approach to group interactions by becoming a more active listener and contributor. Similarly, E also underwent significant self-reflection during the program. Initially skeptical about the SGH program, E eventually came to appreciate the importance of engaging with others from different perspectives. E realized that his previous approach of solely viewing problems from his own perspective limited his ability to work effectively in a group. As he interacted with peers from diverse backgrounds, he learned to broaden his thinking and adapt to various viewpoints. E's self-awareness grew as he recognized his tendency to avoid confrontation and instead sought a collaborative approach to

resolving conflicts. This shift allowed him to become a more active participant in group activities, helping him further develop his leadership skills.

For A, C and D, the SGH program was instrumental in recognizing their leadership roles and taking on more responsibility within group settings. A, who initially joined the program due to her interest in overseas activities, discovered that she had a natural ability to lead in group settings. She realized that leadership wasn't just about making decisions but also about creating an environment where others felt comfortable expressing their opinions and contributing to the group's success. Through this realization, A developed the confidence to embrace her leadership role and learned how to foster collaboration atmosphere among her peers. C, similarly, reflected on her evolving leadership skills. Initially joining the program to gain an advantage for her future career, she found herself growing in her ability to take initiative and make decisions. She learned that being a leader wasn't just about guiding others, but also about fostering an environment where team members felt valued and heard. C's experiences taught her to not only lead by example but also to inspire action within her team, balancing her personal growth with her ability to inspire and motivate others. For D, although he didn't hold the motivation to join the SGH program at the beginning, he gradually became more engaged as various activities unfolded. Through these activities, he realized the excitement and value of global communication. This experience broadened his perspective on the world and opened his mind to different ways of thinking. It had a lasting impact on his future life planning, as he started to recognize the importance of global mindset and cross-cultural communication. Despite choosing dentistry as his university major, D continued to seek opportunities to expose himself to diverse backgrounds and experiences.

Through their SGH experiences, many participants gained greater self-awareness, which shaped their growth into confident leaders. They learned to assess their strengths and weaknesses, adapt to new challenges, and take responsibility in group settings. This enhanced self-awareness allowed them to better navigate both personal and professional challenges, fostering a deeper understanding of themselves and their roles within teams. The SGH program was a transformative experience that helped these participants develop into more capable, reflective, and self-aware individuals.

(5) Effective Communication and Presentation Skills

All participants improved their communication and presentation abilities significantly through their experiences in the SGH program. However, it is noteworthy that each participant emphasized different aspects of effective communication and presentation. For A, creating a positive and inclusive environment was an essential criterion, ensuring that group members could easily take action in a group. B, on the other hand, discovered that her strength lay in summarizing and synthesizing everyone's opinions. This realization cleverly connected to the self-awareness shared by both B and E regarding the necessity of approaching discussions **without preconceived ideas**. They both clearly recognized the risks associated with holding onto stereotype, which could hinder genuine communication and collaborative outcomes. C's focus differed slightly, as she emphasized the importance of clearly and effectively conveying her ideas to others in an understandable manner. For D, his ability to draw attention to others' perspectives and actively incorporate diverse viewpoints broadened his own perspective and allowed him to engage more meaningfully in group dialogues. F and G coincidentally identified their strengths in providing supportive roles within group communication and presentations. They recognized that their ability

to support others' ideas and facilitate smooth communication significantly contributed to their group's overall effectiveness. Moreover, through participation in SGH activities, E gained a newfound confidence in expressing his ideas in front of others, overcoming previous apprehensions about public speaking or presentation. Similarly, A and D clearly recognized their strengths and potential talents in public speaking and presentation, becoming more confident and capable speakers as a direct result of their SGH experiences.

Ultimately, through diverse experiences and self-reflections fostered by the SGH program, all participants deepened their understanding of their unique communication and presentation skills. This self-awareness not only helped them contribute effectively to their teams but also laid a solid foundation for their continued growth in future academic and professional settings.

(6) Commitment to Contributing to Society

Many participants expressed a strong desire to contribute to society, and demonstrated clarity about their future career directions. While it is unclear whether their interest global topics existed prior to joining the SGH program or gradually developed during their participation, it was evident that the four students who engaged in overseas fieldwork experiences gained broader perspectives and clearer visions for their futures. A, who was already born into a multicultural family, had an inherent curiosity and passion for exploring diverse cultures. Her involvement in the SGH program reinforced and further clarified this interest, providing her with the confidence and motivation necessary to explore the world actively and pursue what truly resonated with her personally. During her university studies, she made the bold decision to take a year off to travel around Europe, using this period to explore new interests and passions, and to define her future aspirations more clearly. B utilized her SGH experiences as an opportunity to communicate actively with the broader world, notably through ICT-based educational approach. Throughout her time in the program, she consistently practiced **using SNS for communication** to share her insights and engage in global dialogues. This approach continued into her university life, where **she created a personal SNS account** dedicated to sharing her professional achievements and engaging in global conversations. She expressed genuine enjoyment and satisfaction in interacting with individuals from various cultural backgrounds worldwide. For C, her SGH experience was invaluable and transformative. It not only broadened her worldview but also opened new possibilities for her future **university thesis and the career choice**. The insights and skills she gained through participating in the program significantly boosted her appeal **during the job application process (especially the job interview)**, showcasing her teamwork abilities and cross-cultural communication skills. As a result, she successfully received a job offer from a leading global corporation, directly attributing her success to the unique and formative experiences provided by SGH. Although D's involvement in the SGH program did not directly influence his academic direction in terms of university major, it undeniably expanded his horizons and changed his outlook on life. Despite having a clear and defined career path in dentistry, **he hated the narrowness of his vision**. Throughout his university years, D proactively sought opportunities to interact with individuals from diverse cultural backgrounds, enriching his understanding of the world and acquiring new, varied life experiences. This deliberate choice made his university life more fulfilling and engaging.

Even for those participants who did not participate directly in overseas fieldwork, the SGH program still significantly broadened their horizons through group discussions on global topics.

Participants E and F, for instance, used their experiences from collaborative group activities during SGH to better adapt to collective projects and extracurricular group dynamics at university. G, on the other hand, emphasized how the SGH experience enhanced his critical thinking, especially in understanding cause-and-effect relationships. He expressed a clear intention to incorporate this method of thinking into his future teaching career, aiming to create a supportive and intellectually stimulating environment for his future students.

Overall, the SGH experience effectively widened the participants' perspectives, encouraged them to explore diverse interests, and ultimately helped them clarify their personal and professional aspirations.

6.2 Research on the Significance of Global Leadership Development Through Academic Issue Exploration – An Interview Study of SSH

6.2.1 Results of the Interview Research: Storyline of Participant J~M

Each participant's story is in a separate box. The **bold text** indicates meta-information and the underlined text indicates cards.

Participant J: Integrating Sports and Research through Collaborative Leadership

J initially **did not have a clear goal or motivation to join the SSH program**. She chose this SSH-designated school because she wanted to continue participating in extracurricular activities, and this school provided the opportunities she was looking for. She mentioned that she was particularly impressed by the requirement for **all students to participate in the SSH program**: “Since it’s school-wide, everyone has to do it.” For J, the research project felt **more like a mandatory task rather than something driven by personal interest or passion**. Therefore, she didn’t have any particular expectations and hadn’t done much research on the specifics of the SSH program beforehand.

In terms of subject selection, J **chose the humanities** and focused on sports as her main area of research. During her first year in the SSH program, J mainly focused on the research project. She **clearly remembers this process** and particularly **emphasizes the importance of teamwork**: “The team atmosphere was really great.” J repeatedly mentioned that **the progress of the project was smooth due to the exchange of ideas within the group**. Her team had five members, four of whom were from the baseball club, and J was the only one from the handball club. J said, “Even though my personal interest was baseball, which wasn’t my field of expertise, I could still relate it to my own sport and field of interest.” In this team atmosphere, J experienced the enjoyment of working across different sports fields, which was a completely new experience for her. J spontaneously mentioned the research topic: “The title was something like ‘Analyzing how Y High School could reach Koshien based on the examples of regular high schools that have participated in the Koshien tournament in the past.’” She also **has a clear memory of the research objectives, background, and methods**. The research methods mainly involved **literature review approach** and **survey interviews approach**. J particularly emphasized the process of conducting the surveys, which she undertook in a collaborative team environment. As this was her first time trying this kind of research method, it was undoubtedly a new experience for her. She said, “When the answers came back, it was my first experience, and I was so happy, and that left a lasting impression on me.” Despite the joy the survey results brought, the literature review process was relatively challenging for J, especially the part involving data collection. “We had to ensure the

information we were presenting was accurate, because when we present, we have to **make sure the information is correct.**” J gradually realized. **Although there were challenges, she still found the experience extremely worthwhile and was happy with the outcome.**

In her second year, the focus of SSH shifted to **presenting the research** within the school. Due to the impact of the coronavirus, J didn’t have much opportunity to collaborate with other schools. However, she still **has a vivid memory of the feedback and reflection section of the SSH program.** J believes that this reflection process had a positive impact on her growth. When asked about **the ideal leader**, J shared her views on leadership in team cooperation: “I don’t like the idea of one person making all the decisions, so I think there are various opinions that come out from everyone. Through various research and discussions, I think a good leader is someone who can take all the different opinions and skillfully combine them to come up with one solution.” This perspective aligns with her experience in the group, where she tended to listen and support, rather than simply take the lead.

Although J did not change her academic interests due to SSH, and **did not explicitly mention SSH in relation to her decision to continue her education**, she acknowledged that the experience deepened her understanding of teamwork, research, and interdisciplinary learning. **These experiences have had a positive impact on her university life.** During her university application process, J realized **the importance of teamwork through her long-term involvement in the handball club.** In high school, she served as the captain in her senior years, and in her lower years, she was a trusted member who always provided guidance to those in need. She mentioned, “Since I have more years of experience, I tend to be the one people rely on.” This experience and the role transitions allowed her to **better understand the importance of different roles within a team.** In her **interactions with others**, J **became more skilled** at listening and supporting, **realizing that she often played a supporting role within the team.** This ability was also honed during her SSH experience, especially in collaborative research, where she **learned how to manage her time effectively** in the “liberal” atmosphere and apply this skill in her university life.

Although J’s university major does not directly overlap with the academic content of the SSH program, she believes the research methods and teamwork skills she learned during SSH will undoubtedly influence her future academic work, particularly in conducting her thesis and future teaching practices. As she clearly stated, “Since I became experienced in survey research, it will help me with my thesis.” For J, regardless of whether it directly relates to her major or profession, she prefers to experience a variety of things, and becoming an experienced person is also part of her growth through the SSH program.

Through participating in SSH, J broadened both her academic and personal horizons, learning how to integrate knowledge and perspectives from different fields in team cooperation. Although she did not change her academic direction, this experience laid a solid foundation for her university life and future career.

J had nearly ten years of experience in handball club activities, and it was largely due to this athletic commitment that she chose her high school and, as a result, participated in the SSH program. Although her participation was not entirely voluntary, **her long-term involvement in team sports** made her particularly comfortable in the group research environment. Even in a setting where she was the only non-baseball player on a five-member team, J actively sought

common ground between handball and baseball, ultimately stating that she “experienced the enjoyment of working across different sports of interests.”

This deep background in collective activities also enabled J to **better understand the importance of different roles within a team**. Her belief that every member's opinion has value translated directly into her concept of leadership. As she put it, “A good leader is someone who can take all the different opinions and skillfully combine them to come up with one solution.” This understanding wasn’t just abstract—she applied it in her own approach to group work, showing an intentional effort to listen, support, and balance perspectives.

While it cannot be said that the SSH program alone shaped J’s coordination-oriented leadership style, it certainly provided a new, academic setting for collaborative experience. This opportunity to engage in structured teamwork with a research focus helped lay a solid foundation for her current university life and her future professional path.

J’s leadership style is characterized by integrative thinking and interpersonal balance. It was developed through her accumulated experience in team activities and refined through the SSH program, where she applied her strengths to support collective problem-solving in academic contexts.

Participant K: Embracing Leadership and Discovering His Passion Beyond Science

K chose this SSH-designated school primarily because of his interest in the science and mathematics track, along with family influence and school recommendations. He was admitted to the science and mathematics track through a special entrance exam. However, he wasn't particularly familiar with the SSH program before entering the school. After starting school, in his first year, almost all his time was spent **learning specialized knowledge in the science and mathematics fields**. K mentioned that he was impressed by the intensity and fast pace of the science courses. In particular, his interest in chemistry grew steadily. Therefore, during the first-year research project, he **chose to focus on chemistry and began studying related professional knowledge in depth**.

In his second year, K formally began his research project. As he stated, “I went to the area I wanted to research and conducted experiments,” he **applied the knowledge he had learned in his first year and focused on the chemistry field** that interested him. However, the start of the research was not smooth. “At the beginning, it took time to find a research topic.” K found that the selection of the research topic and **collaboration with his group members were not straightforward**. Although the team decided to collaborate due to shared interests, each member had different focuses and interests, which **made integrating opinions difficult**. Additionally, as the research deepened, **the difficulty of teamwork increased**, with some members even giving up midway. Despite these challenges, K **took on the responsibility of being the leader**, guiding the team to complete the project. He said, “Someone had to do it...” and with the support of his team members, he divided the work and successfully completed the research project.

In his third year, K **focused on finalizing the research project and presenting the results**. He still vividly **remembers the tension he felt during the presentation**, which left a lasting impression on him. Throughout the SSH project, K had **several interactions with university professors**, which presented challenges and rewards. He recalled, “The university professors came and gave precise answers, so I was really nervous.” These exchanges not only deepened his understanding of the professional field but also helped him understand how to communicate

research results effectively. Due to his extensive involvement in presenting, K **developed a deep understanding of the importance of clear communication**. He worked hard on preparing the materials and creating the presentation slides to make his research more accessible and understandable.

Regarding leadership, K believes that **an ideal leader should not only have decision-making abilities but also create a harmonious team atmosphere, and be able to understand and embrace differing opinions**. He emphasized, “The first step in thinking about research is really good,” “Someone who can create a good atmosphere,” “Someone who can align everyone’s opinions.” These views are deeply connected to his experiences in the SSH program. In his team, K learned how to reconcile different opinions and, under pressure, effectively advance the project. This experience had a profound impact on his SSH journey.

Over the course of the three years in SSH, K realized that focusing solely on scientific research was not entirely suited to him. When asked about the prioritization of SSH and extracurricular activities (such as his wind instrument club), K responded, **“I prefer club activities to SSH.”** However, **this does not mean that SSH had no influence on him**. Firstly, when it came to the overall presentation, he **paid attention to the research of others and praised the initiative of his peers**. Secondly, K chose a major in music in university, but he did not limit himself to the instrument he played in high school. He continuously **tried new instruments and explored new areas**. Moreover, the experience in SSH made K’s university courses much easier: “Since I had a certain level of knowledge, it was very easy.” In facing presentations and making various PPTs, he was more comfortable. Additionally, in his university studies, K **found many similarities between SSH and his current music major**, despite the apparent differences. He said, “Music has a somewhat mathematical aspect to it. Understanding that logic was easier for me.” K stated that in composing music, the process resembled the SSH research process. If progress was slow, he would go back to the previous step, clarify it, and then take the next step. In this ongoing iterative process, he would continue creating. On this foundation, he **has a clear direction for his future personal plans**.

Through his SSH experience, K faced challenges and grew academically, gradually realizing that his interest in scientific research was limited, which led him to focus on his true passion—music education. In this path, the teamwork experience and research methods gained from SSH provided invaluable support in his university life, while also laying the foundation for his future career as a music teacher.

K **entered his school through a special entrance exam** due to **his strong interest in science**, particularly in chemistry. However, he was unfamiliar with the SSH program before enrolling. As he engaged with SSH, K quickly realized that it was not just about learning knowledge but about engaging in deeper, group-based research. Through this process, he encountered not only the intellectual challenges of academic exploration but also the complexities of collaborative work. These experiences prompted him to reflect on his personal preferences. He came to the conclusion that he **“preferred club activities (music) to SSH.”** This clear self-awareness led him to make a conscious decision to change his academic direction in university and pursue music education. His decision was based on a careful analysis of both his interests and his strengths. K transferred many of the skills he developed through SSH such as research methodology, coordination, and communication into his university studies. He even stated that he **found many similarities**

between SSH and his current music major, particularly in how both fields required structured, step-by-step thinking and continuous iteration. This transfer of learning suggests that while SSH did not determine his field of study, it played an important role in shaping his learning habits and professional foundation.

K's experience with team research was also formative in shaping his leadership perspective. When his research group faced difficulties, including members who dropped out due to the project's complexity, K stepped up and took responsibility, saying simply, "Someone had to do it." This act of initiative under pressure deeply influenced his concept of leadership. For K, an ideal leader is someone who **not only has decision-making abilities but also creates a harmonious team atmosphere**. This definition clearly stems from his own experience balancing task leadership with emotional awareness, and those skills he continues to develop and apply.

K's leadership style is characterized by responsible initiative and harmonizing insight. It was cultivated through the challenges of research-based teamwork and later extended into creative disciplines, where logical thinking and group coordination remain central to his personal and professional identity.

Participant L: Gaining Interdisciplinary Insights and Building Leadership Skills for a Stable Future"

L **chose this SSH-designated school not because of the SSH program**, but due to family circumstances and her academic ability. When choosing the school, she didn't particularly consider the SSH program but instead selected a school that suited her overall academic strengths. Although **she knew that the school offered an SSH program before enrolling**, she chose the regular track because she wasn't very interested in science. After entering high school, **she was particularly impressed by the research project in her first year**.

L **chose the field of biology based on her personal interests**, and her research topic focused on controlling the pest, the rice snail, in rice fields. She and three other team members worked together to **explore how to effectively control the pest without using chemicals through experiments and data analysis**. Although the research topic was very interesting, L faced many **difficulties during the process, especially with data collection and analyse**. She mentioned that the influence of individual differences made the research more difficult. L said, "Because it's in the biology field, there are individual differences, and controlling it was difficult." However, despite the challenges, **the collaborative atmosphere within the team was very positive**, and she found it very enjoyable. L said, "There were various roles in the research, and over time, we understood them. It wouldn't have been interesting if everything remained the same... So, we didn't just distribute roles from one person but started to actively share roles." She candidly **described her group as a "team that brings things together."** L emphasized the importance of teamwork, especially in task allocation and roles in the research. The team members had clearly defined responsibilities, ensuring that everyone participated actively without leaving anyone idle. **This atmosphere continued during the presentation phase**. During preparation and implementation, everyone cooperated and "equally" shared the workload to complete the group presentation together. In her second year, **they focused on wrapping up the research results from the previous year, but there weren't many additional activities**. L **has a unique understanding of leadership**. She believes that leadership should be adaptable, changing strategies based on the needs of the team and the task at hand. A leader is not necessarily the person who always drives

the team forward; sometimes, in group collaborations, what's more needed is someone who can effectively summarize opinions and integrate resources.

For L, SSH wasn't her first research experience. **During her middle school comprehensive study period, she had similar experiences.** Therefore, when it came to the SSH project, she said, "I didn't feel like I had no idea what to do," and "I didn't feel anxious or resistant about team building or presentations in SSH... I was able to work with the members as we discussed things normally." After two such research experiences, she **had a deeper understanding and reflection on this SSH project.** She reflected on the learning methods for data collection, including the limitations of focusing solely on a single biological field. **L believes that the SSH experience can't always be directly linked to specific practical applications,** but she said, "If I hadn't done this, I wouldn't have been able to go into the world of biology, so I don't know, but this definitely had plus value." Additionally, rather than just improving subject scores, she **viewed SSH as a human growth experience.** During the research and presentation process, L particularly mentioned how it improved her ability to think from multiple perspectives and communicate effectively. Through this research project, she **learned how to view problems from multiple angles** and draw on different viewpoints to adjust her thinking. She also **learned how to communicate better with people from different backgrounds and social identities.** This experience also helped L **gain a clearer self-awareness. This awareness has influenced her choice of university major.**

L carefully chose law as her university major among many options, but she said the teamwork and research skills she gained from the SSH program had a significant impact on her university studies and interpersonal relationships. Particularly in her law studies, L was able to use the multidimensional thinking and clear communication skills she developed during SSH to tackle problems. In addition to her university coursework, L also **actively participates in a traditional dance club with a social focus.** By connecting with diverse people, she is able to integrate more easily into the local culture. This also aligns with **L's broad range of personal interests.** In her **future career planning,** L expressed that she hopes to pursue a more stable job. Considering her practical personality, she ultimately decided to pursue a career in the public sector.

L's experience with the SSH program provided her with valuable skills in thinking from multiple perspectives and collaborating effectively in teams, both of which helped her succeed in university studies and interpersonal relationships. Although she ultimately chose a career in the public sector, the SSH experience has had a profound impact on her career choices, pushing her to pursue a more stable working environment in the future.

L has always demonstrated clear self-awareness and strong judgment when it comes to her own capabilities. Although she chose not to enroll in the science track due to a realistic assessment of her academic strengths, she still pursued a biology-based topic in her SSH group research—an area she found deeply interested. As she recalled, "If I hadn't done this, I wouldn't have been able to go into the world of biology," showing how the experience opened a new intellectual path for her. While she **encountered difficulties with research methods and data collection,** particularly noting, "because it's in the biology field, there are individual differences, and controlling it was difficult". L responded with a calm reflection on how such challenges could be improved in the future. Her approach consistently emphasized resolving problems through thoughtful revision, not avoidance. This rational decision-making process was evident not only in her research but also in

her academic and career planning. At every stage, whether choosing her high school track, university major, or future career path, L carefully evaluated her options to select the most suitable direction for herself.

L placed great importance on **group atmosphere** and **role sharing**, repeatedly describing her group as one that functioned “**as a team to bring things together.**” She emphasized the positive atmosphere and shared responsibility that allowed each member to contribute equally. Her understanding of leadership reflects this approach: “A leader is not necessarily the person who always drives the team forward.” Instead, she believes that leadership should adapt to the needs of the group and the nature of the task. While some groups followed a one-leader model, L’s team exemplified a balanced, collectively-driven approach that emerged from mutual understanding and appropriate team structure.

L’s leadership style is characterized by adaptive coordination and reflective role distribution. It developed through her ability to assess both personal capacity and team context, allowing her to foster collaborative, well-balanced environments that supported mutual contribution and practical progress.

Participant M: Moving Beyond Specialized Research to Explore Broader Career Horizons

M chose this SSH-designated school not because of a strong interest in the SSH program, but due to his family background and academic ability. When choosing the school, M did not particularly focus on the SSH program, but rather **selected a school based on his strengths in science and mathematics.** Although **he knew the school had an SSH program before enrolling**, he was more focused on the school’s science track.

In his first year, **due to the impact of the coronavirus, the school went into a state of suspension**, and the progress of learning was slow. After classes resumed, the entire first year was almost **entirely dedicated to learning professional knowledge.** During the research project, M chose mathematics as his focus and began delving into complex concepts and problems related to mathematics. He recalled the challenges of the project, particularly the deep exploration of mathematical fields, saying, “**Mathematics is a bit difficult.**” Despite this, M did not retreat, but instead, he worked together with his group members to discuss and collaborate in order to solve the challenges they encountered. However, M also **faced some challenges during the research, especially in terms of teamwork.** There were certain differences in opinions among the group members, and collaboration became more difficult, especially when some members had strong personalities. M **recalled one particular member who caused conflict within the group**, saying, “I ended up working with the most problematic member in the class.” Despite these challenges, M still took on the role of a leader, **coordinating the work within the team.** Ultimately, despite the difficulties, he led the team to complete the research and continued to play an active role in the presentation phase.

In his second year, M **focused on the research topic related to the mathematical concept of “i” and conducted a series of rigorous studies.** Despite the various challenges from both his group members and the research itself, M was able to successfully complete the project through careful thought and teamwork. However, M **faced challenges during the presentation phase as well.** As he repeatedly emphasized, due to the complexity of the mathematics research, M worked hard to make his presentation clearer and more understandable. He still remembers the nervousness and the shortcomings during the presentation. The three years of high school

experience helped M make a clear judgment when choosing his university path.

Regarding his understanding of the SSH experience, M first **realized the importance of the research attitude**. Secondly, he **gained a deeper self-awareness of his communication and coordination skills**. Regarding communication, he said, “Communication skills mean that if you don’t say what you need to, no one will understand.” As for coordination, he mentioned, “When it comes to coordination, from my experience as a leader, it’s about being able to move everyone around you.” Through the systematic process of the SSH research project, M learned what research is and how to conduct research, which he sees as **the academic significance of the SSH program**. Additionally, he realized that **although the project tried to foster leadership abilities in everyone, it was somewhat idealistic**. Through this process, he learned how to recognize his strengths and weaknesses, allowing him to continue leveraging his strengths.

Through this experience, M **gained a clear understanding of leadership**. He believes that an ideal leader should be someone who can lead a team forward, not only having decision-making abilities but also maintaining a positive attitude in the face of challenges. He emphasized, “A leader must definitely move in the direction of solving problems.” He believes that, as a leader, it is important to maintain a positive attitude when facing challenges, driving the team to solve problems rather than giving up or retreating. Through SSH’s research project, M further understood the importance of teamwork and a good atmosphere. He also reflected on himself and realized that at times, when dealing with the team atmosphere, **he lacked the necessary judgment and execution**.

Although **M’s experience with the research project during high school encouraged him to continue pursuing his path** and led him to choose the Faculty of Science, he also realized that he wasn’t entirely suited for continuing with mathematical research. M stated that through the SSH project, he **realized that he was not passionate about delving deeper into mathematics as an academic discipline**: “I decided not to go to graduate school.” He chose to focus on employment instead of pursuing a graduate degree. In university, M shifted his focus to the practical applications of mathematics and became actively involved in various extracurricular activities, **expanding his interests and career direction**.

Through the SSH project, M learned how to face challenges and collaborate effectively in teams, providing him with important skills for his future university studies and career development. Despite ultimately choosing employment over continuing in mathematical research, the experience from SSH in communication, leadership, and practical application had a profound impact on his career planning and personal growth.

M’s academic journey followed a relatively focused trajectory centered on mathematics. Although he had a genuine interest in the subject, his motivation to participate in the SSH program was not particularly high. It was only through engaging in hands-on research that M realized he lacked the passion to pursue mathematics as a research discipline. This insight led him to make a firm decision not to continue into graduate school. This clear-eyed evaluation reflects M’s ability to make rational choices based on both his interests and capacities—a quality that consistently shaped his academic and career direction.

This same judgment was evident in group work situations. When his team encountered difficulties, particularly due to conflicting personalities—he recalled working with “the most problematic member in the class”—M stepped up and took on the role of leader, coordinating the

team's work and pushing the project forward. From this experience, he gained a lasting awareness of the importance of **communication**: "If you don't say what you need to, no one will understand." This realization taught him that effective collaboration relies on clear expression of intentions and needs. Additionally, the experience led M to highlight **optimism** as a core leadership quality to create an atmosphere where even challenges can be approached with a positive mindset.

Notably, M also demonstrated critical thinking toward the structure of the SSH leadership training itself. He reflected that although the program aimed to foster leadership in all participants, this goal could feel overly idealistic. For M, this wasn't just a critique of the system—it was a recognition of the complexities of leadership and a reflection on his own growth. He came to understand that not everyone leads in the same way, and leadership cannot always be uniformly cultivated. Through this reflection, he gained a deeper awareness of his own leadership strengths, limitations, and style.

M's leadership style is characterized by pragmatic coordination and constructive self-reflection. It was forged through the challenges of team dynamics and reinforced by his ability to critically assess both his academic path and his evolving role within collaborative environments.

6.2.2 Discussion

Through in-depth interviews with four graduates of an SSH-designated high school, this research explores the multifaceted impact of the SSH program on students' academic growth, leadership development, and future trajectories. Although none of the participants initially chose the SSH program out of personal ambition, their experiences reveal how the program's project-based learning framework, characterized by interdisciplinary collaboration, hands-on group work, and structured presentation opportunities that fostered significant personal and academic transformation. From learning how to collaborate in teams and exercise adaptive leadership, to cultivating communication skills, developing self-awareness, and expanding academic and career horizons, each participant's narrative demonstrates that the SSH program served not only as a scientific training ground, but also as a platform for discovering their own identities, strengths, and future directions. The following sections examine five key characteristics of growth that emerged from their experiences: teamwork and collaboration, flexible leadership, communication and presentation skills, self-awareness and role adaptation, and the long-term impact of SSH on their academic and personal development.

·(1) Enhanced Teamwork and Interdisciplinary Collaboration

Although none of the four participants initially joined the SSH program out of personal ambition, each was given the autonomy to choose their research topic and form their group, decisions that ultimately shaped their collaborative experience. J and L, both from the general course, benefited from selecting teammates they already knew, creating an atmosphere of clear division of task and mutual support. For J, who was new to **literature reviews and survey research approach**, the group's proactive discussions and collaborative spirit made the work both productive and rewarding. She said, **although there were challenges, she still found the experience extremely worthwhile.** Likewise, L faced significant **challenges in sample collection and data analysis**, yet her team's shared commitment and flexible role allocation allowed their project to proceed smoothly. Just like she said, my team didn't just distribute roles from one person but started to actively share roles. In contrast, K and M from the science track encountered

more friction: limited options for collaborators, highly specialized research topics, and a sometimes tedious process all strained their teamwork. K confessed that some members, himself included, often prioritized extracurricular activities over the research, causing frequent interruptions. Just like he stated, **I prefer club activities to SSH**. As for the project, he said that someone had to do it, so he had no choice but to **take on the responsibility** to finish it. M struggled with personality clashes and conflicting opinions, finding himself forced to shoulder responsibilities he had not chosen. These experiences highlight that the degree of freedom in team formation, preexisting familiarity among members, and alignment between project focus and individual interests are critical factors determining the efficiency and harmony of SSH group collaborations.

(2) Development of Flexible, Supportive Leadership

All four SSH participants developed clear and unique models of ideal leader through their hands-on experiences in group research. First, J, K, and M unanimously identified “decision-making” as a core leadership quality. K described after he took the responsibility to lead the team to complete the project, he divided the work and supported by the team members. However, L offered a more flexible definition of leadership, arguing that a leader must adapt their role to suit the team’s needs and the nature of the project. She explained that during phases when her group needed “shared responsibility and mutual support,” she shifted from being solely a decision-maker to acting as a “coordinator” and “supporter,” ensuring every member could contribute their strengths and ideas.

A second shared insight was the importance of “embracing and integrating diverse perspectives.” Both J and K stressed that an effective leader respects and incorporates team members’ differing viewpoints as well as fresh outside perspectives. As J put it, “A good leader is someone who can take all the different opinions and skillfully combine them to come up with one solution”. K, on the other hand, emphasized that during this process, “creating a harmonious team atmosphere” is really important, a lesson he learned through SSH experience. M echoed this view, asserting that “cultivating a positive, collaborative environment” is itself a key leadership responsibility. He went a step further by saying leaders should possess an “unwavering optimism” which was also a lesson learned from SSH experience.

In sum, these four participants discovered through their SSH practicum that while decisiveness and inclusivity form the foundation of leadership, the ability to “flexibly switch roles,” “foster team spirit,” and “maintain optimistic energy” are equally vital at different project stages. Their experiences clearly demonstrate that an ideal leader must combine firm decision-making with the flexibility to support and integrate the team, guiding the group toward its goals together.

(3) Growth in Communication and Presentation Skills

Effective communication and presentation skills were a cornerstone of the SSH experience for all four participants, though the timing and emphasis varied by track. For the humanities students (general track) J and L, the intensive research phase in their first year culminated in in-school presentations during their second year, providing ample opportunity to practice exchanging ideas in a relaxed, collaborative environment. J repeatedly praised “the team atmosphere,” noting that open dialogue among members kept the project moving smoothly. Likewise, L highlighted how “clearly defined responsibilities ensured that everyone participated actively without anyone idling,”

and that her team “equally” shared tasks and completed them together, reinforcing the importance of mutual feedback and collective leadership of presentations.

By contrast, the science-track students K and M spent their first two years deeply immersed in experimentation and data collection, with formal presentation exercises concentrated in their second and third years. Both emphasized the challenge and necessity of articulating complex findings clearly. K described how he “made a concerted effort to craft slides and explanations that made my research more accessible and understandable,” especially when fielding tough questions from university professors. M echoed this sentiment, explaining that “because our mathematical topic was so intricate, I worked hard to make my presentation clearer and more understandable,” transforming technical results into a narrative that his team members and even non-specialists could follow.

In sum, regardless of discipline or schedule, each participant recognized that SSH’s structured blend of collaborative discussion and formal presentation sharpened their ability to communicate ideas effectively. J and L learned to facilitate and integrate diverse viewpoints within their teams, while K and M honed the precision and clarity necessary to convey specialized content. Those skills that they all carry forward into their university studies and beyond.

(4) Heightened Self-Awareness and Role Adaptation

Across their SSH experiences, each of the four participants confronted personal barriers whether introversion, uncertainty about one’s role, or difficulties in group dynamics and emerged with a clearer understanding of their individual strengths and how best to deploy them. J, who initially viewed the research as **a mandatory task**, discovered that her greatest contribution lay not in directing others but in creating a supportive and collaborative environment where teammates felt heard and motivated. She learned that her natural tendency to listen and encourage was in fact a powerful form of leadership. K, on the other hand, wrestled with balancing his scientific ambitions and extracurricular passions; through trial and error he honed the judgment to know when to take charge, dividing tasks, soliciting input, and when to step back, cooperating with his peers to complete the work forward. L’s prior experience with group research projects in middle school meant she was never a stranger to collaborative learning. In fact, it enabled her to adapt more quickly to the SSH program’s project-based learning and to transition smoothly into leadership roles. As she observed, “Leadership isn’t one-size-fits-all.” Drawing on her background, she learned to identify the role in which she could contribute most effectively, whether that meant coordinating tasks, synthesizing ideas, or supporting her teammates, and to step into that position with confidence. This adaptability allowed her to find the most stable, well-suited place within any group, demonstrating a nuanced understanding that true leadership often lies in choosing the right role rather than simply taking charge. Finally, M, who struggled early on with strong personalities in his math research group, realized that his upbeat outlook and knack for coordinating diverse viewpoints not only diffused tension but also kept projects on track. Based on this he also realized that his lacking of **the necessary judgment and execution**.

By identifying these personal “superpowers” and learning to adapt their styles to meet each team’s needs, all four students transformed initial insecurities into enduring self-awareness—and a toolkit of strengths they carry into their university pursuits and beyond.

(5) Broadening of Academic and Influence on Personal Horizons

For all four participants, the SSH experience significantly contributed to the deepening of their academic abilities and the broadening of their personal horizons. In their interviews, each of them, in their own way, acknowledged that the research and presentation experiences gained through SSH had provided tangible support for their current university studies, whether in understanding academic content, preparing for final thesis projects, or approaching collaborative tasks with confidence. Especially for K, although his SSH experience did not lead him to pursue further specialization in chemistry, it laid the foundation for his ease in tackling university-level coursework. As he noted, “Since I had a certain level of knowledge, it was very easy.” Despite switching fields to study music, K discovered conceptual overlaps between his new major and his SSH research background, especially in the logical thinking and iterative creation processes involved in both scientific research and music composition. This helped him frame his new learning within a familiar cognitive structure, reinforcing the value of interdisciplinary thinking nurtured through SSH.

J and L, both from the general academic track, highlighted how the research approaches that once challenged them in SSH, especially interview research, survey interview and data analyze approach, which later became strengths. As J remarked, having gained experience in designing and analyzing surveys during SSH, “Since I became experienced in survey research, it will help me with my thesis.” L similarly found that the teamwork and role distribution practiced in SSH contributed to her smooth adjustment in university group projects and honed her ability to manage complex information.

Beyond academic growth, the SSH experience helped both J and L build stronger personal awareness and transferable skills. For J, over a decade of experience in handball club helped her develop a deep sensitivity to team dynamics. This became especially apparent in her SSH group, where she was the only member not from the baseball club. Nevertheless, she found common ground and research enjoyment by integrating her handball perspective with the team’s shared interest in sports. She later reflected that the SSH program helped her “experience the enjoyment of working across different sports fields,” expanding her athletic worldview and capacity for interdisciplinary research.

L, on the other hand, came into SSH with prior experience in research during junior high school, which made her more adept at handling teamwork and role negotiation. She described her team as “a team that brings things together,” emphasizing how roles were actively shared rather than rigidly assigned. This experience, coupled with her strong self-awareness and structured thinking, allowed her to evaluate the pros and cons of her university and career choices with clarity. As demonstrated in the SSH program and throughout her academic trajectory, L was able to assess her strengths objectively, identify suitable roles within group dynamics, and pursue a stable career path aligned with her practical disposition.

For K and M, both of whom entered the science track by passing special entrance exams, the SSH experience functioned as a form of academic self-assessment. K initially pursued deeper knowledge in chemistry, but as the project progressed, he realized that research alone did not fully align with his personal interests. This insight led him to pursue music, a long-standing passion he had cultivated in his extracurricular life. Rather than seeing this as a departure, he recognized the synergy between SSH research processes and musical creativity, using SSH as a foundation upon which to build his future in music education.

M, on the other hand, had long been drawn to mathematics, which led him to select a math-focused research project in SSH and later a mathematics major at university. However, he frequently mentioned the difficulty of the subject, stating, “Mathematics is a bit difficult,” and

acknowledged that his strengths might be better suited to applied rather than purely theoretical research. The SSH program allowed him to confront this realization early and redirect his focus toward more practical applications of mathematics in society.

In sum, the SSH program not only supported academic development but also served as a catalyst for personal exploration. It provided students with the space to reflect on their interests, abilities, and future trajectories. Whether it was J's interdisciplinary exploration through sports, L's refined academic and career planning, K's shift from science to music, or M's redirection from theoretical research to practical application, the SSH experience played a pivotal role in helping them better understand themselves and take concrete steps toward their futures.

6.3 Significance of the Programs for Participants in Both Types of Global Leadership Development Programs

This section explores what the SGH and SSH programs have meant for the students who participated in them, based on the results of the interview survey.

The findings indicate that most participants did not exhibit a strong self-identification as "global leaders" nor did they express clear confidence that they had fully acquired the competencies typically associated with global leadership. In this sense, limitations of the programs were revealed. The participants' reflections suggest that while the programs aimed to cultivate global leaders, the idealized vision of global leadership might not have been fully realized.

However, it is also evident from their narratives that the programs helped nurture a range of qualities considered essential for global talent and leadership—such as problem-solving skills, collaborative abilities, self-awareness, and cross-cultural understanding. Some participants gained greater adaptability, became more proactive in team settings, or developed better communication skills. Even if the participants themselves were not fully conscious of these developments, their growth in these areas was significantly more pronounced than that of students who had not participated in such programs.

In particular, many participants mentioned the challenges they overcame during project-based projects, interactions with people from different backgrounds, or participation in presentation activities. These experiences allowed them to reflect on their own behavior, recognize others' perspectives, and develop practical insights into leadership dynamics. While they may not directly associate these learnings with becoming a global leader, these reflections point to meaningful progress in foundational leadership.

Thus, while these programs may not have directly cultivated global leaders in a narrow sense, they can be evaluated as meaningful educational frameworks that help develop core competencies required for active participation in a global society. Their value lies in equipping learners with transferable skills and mindset shifts that may support future leadership development in various domains.

6.4 The Significance of Global Leadership Development in Japan

This section summarizes the key characteristics of Japan's global leadership development initiatives, focusing on two major national high school programs: the Super Global High School (SGH) and the Super Science High School (SSH). Although their thematic orientations differ, SGH centers on global and social issues while SSH emphasizes STEM research, both programs provide rich, project-based learning experiences that foster students' leadership, communication,

and self-awareness. The Table 18 below compares the distinctive and shared characteristics of the two programs based on interview contents with graduates, highlighting the multifaceted ways in which each initiative contributes to the development of global leadership.

In this research, an interview survey of graduates of an SGH school and an SSH school was conducted to clarify the significance and role of the Global Leadership Development Program in upper secondary schools. The results are as follows:

A) Both the SGH and SSH programs emphasized the development of essential 21st-century competencies such as teamwork, leadership, critical thinking, and effective communication. While SGH placed a stronger focus on intercultural understanding and social issue exploration, SSH encouraged deep engagement with scientific inquiry and interdisciplinary collaboration. In both programs, students learned to recognize their roles within teams, respect diverse perspectives, and contribute to collective problem-solving through flexible leadership and shared responsibility.

B) Participants in both programs reported growth in self-awareness and personal adaptability. Through project-based learning and collaborative research, students encountered challenges that required them to reassess their strengths, roles, and attitudes. Whether through overcoming group conflicts, leading under pressure, or adapting to new perspectives, the programs cultivated resilience, reflective thinking, and a stronger sense of agency that carried over into their university and social lives.

C) The SGH and SSH experiences had a significant and enduring influence on participants' academic and career paths. SGH experiences often led to broader global mindsets and clearer career direction, especially for those who engaged in overseas fieldwork. SSH experiences, on the other hand, provided opportunities for academic self-assessment, some participants confirmed their passion for STEM, while others discovered new interests in the arts, law, or education and other fields. In both cases, students gained the confidence and skills to make informed decisions about their future paths and to engage more actively with society through their chosen fields.

In sum, SGH and SSH represent two distinct yet complementary pathways to cultivating global leadership in Japanese high schools. What's more, they demonstrate how leadership development can be realized not only through international exposure, but also through rigorous academic inquiry, reflective learning, and interdisciplinary practice.

[Table 18] Comparison of SGH and SSH Program Characteristics

Category	SGH	Common Points	SSH Features
Program Type	Overseas/Community Cross-cultural fieldwork & Discussion on social issues	Project-Based Learning(PBL) Approach & Group collaboration/ Public presentation of results	Interdisciplinary STEM research
Leadership Development	Leading by example; Perspective-taking; Citizenship; Promotion of Intercultural Empathy	Decision-making; Multi-perspective thinking; Flexible adaptation of leadership style; Recognition of the importance of a harmonious and relaxed group atmosphere	Ability to switch roles within the team flexibly (Leader, Coordinator, Supporter)
Communication & Presentation & Expression	Creating dialogue opportunities in real-world social contexts; Strengthening global communication and dialogue across diverse cultural backgrounds	Skills for speech delivery; Expressing and exchanging opinions; Giving/Receiving feedback; Fostered through repeated practice and group discussion	Transforming complex professional content into clear and accessible presentations
Self-awareness	Reflection of self in relation to social issue and study; Developing of collective responsibility and initiative with the group environment	Overcoming personality conflicts and unclear roles; Establishing clear self- and team-role recognition	Development of academic resilience under intensive research pressure; Discovery of personal strengths and future interests
Situation-awareness & Interdisciplinary Vision	Formation of a global perspective through acceptance of diverse views in cultural/social issue discussions	Integration of knowledge at the intersection of disciplines and specialized topics; Cultivation of systemic thinking and multi-faceted problem-solving	Incorporation of humanities and arts perspectives into STEM research; Possibility for coexistence of deep research and diverse personal interests

Chapter 7 Implications and Future Perspectives

Chapter 7 explores the broader implications of the research by placing Japan's leadership development practices in conversation with emerging trends in China. As China undergoes significant educational reform, this chapter begins by examining how recent policy such as Gaokao reform, curriculum diversification, and the promotion of school-based programs shifts signal a growing emphasis on cultivating global leaders. Through a case study of N High School's school-based curriculum and interviews with two graduates, the chapter illustrates how Chinese students are developing global competencies even within a traditionally exam-oriented environment. Drawing from these insights and comparing them with the Japanese cases analyzed earlier, the chapter then proposes practical suggestions for strengthening leadership education in China. These include enhancing program continuity, fostering stable team-based learning environments, and encouraging a broader understanding of leadership beyond positional authority. Overall, this chapter offers a forward-looking perspective on how East Asian education systems can evolve to nurture global leader for the 21st century.

7.1 Brief Introduction to Emerging Policies and Practices in China

Following a series of education reforms in recent years, China has also shifted its educational objectives toward cultivating global human resources. This trend is reflected in key national policy documents, such as the 2010 Outline of the National Medium- and Long-Term Education Reform and Development Plan (2010–2020) and the 2022 revised National Curriculum Standards for General High Schools, which emphasize the development of students' core competencies, innovative thinking, and global mindset. These efforts, while still in their early stages, suggest a growing interest in fostering leadership, autonomy, and cross-cultural understanding among Chinese high school students. This section briefly introduces a few representative practices as a foundation for cross-national reflection.

7.1.1 The Characteristics of Global Leader Development Policies in China

Since the mid-1980s, the term "GaoKao" has had a deep significance in Chinese education, and at the same time, the problem of deliberately pursuing the rate of advancement has arisen. Success in the Gao Kao is the ultimate goal to almost every student, which has resulted in school education overburdening students and causing some students to suffer from varying degrees of mental health problems. As Yang (2020) said, the equity of education in mainland China is significantly lower than that of the world, which is mainly reflected in the disparity between schools and students caused by the highly competitive exam-oriented education, and the competition in exam-oriented education is being alienated into an escalating "arms race", in which every parent and student is involved, with layers and layers of selections, rigorous trainings, and out-of-school tutorials in the holidays, which makes family education a heavy payment and stressful for students. The heavy burden of family education and the pressure on students have even led to physical and mental health problems(pp.6-9). However, as China modernizes and develops, and the division of labor in society becomes more and more refined, the development of society also puts forward new requirements for education, and the monotonous and excessive exam-oriented education is no longer able to satisfy society's demand for comprehensive human resources. Modern education requires all-round development of each individual, explores the potential of each individual, and

hopes to cultivate global leaders with rich personalities. Therefore, in order to response to the changes in social development, Chinese education has also begun to carry out reform and innovation.

As early as 1999, the Central Committee of the Communist Party of China issued “the Decision of the State Council of the Central Committee of the Communist Party of China on Deepening Educational Reform and Comprehensively Promoting Quality Education”, which provided a clear guiding framework for comprehensively promoting quality education(Ministry of Education of China, 1999);

Following this, in 2001, the State Council promulgated “The Outline of Basic Education Curriculum Reform (for Trial Implementation)”, which laid out the blueprint for Chinese education reform at the beginning of the twenty-first century and set forth instructions for all departments to carry out and implement in a practical manner. Among other things, it explicitly calls for a re-examination of the high school curriculum program and a reform of the high school curriculum standards, standing in the broad vision of global education and the practical experience of its own reform. It is clearly stated in the Outline that "the high school is mainly a subdisciplinary curriculum. In order to enable students to realize personalized development on the premise of generally meeting the basic requirements, the curriculum standard should have different levels of requirements, and while compulsory courses are offered, a rich variety of elective courses are set up and technical courses are introduced. The credit system should be actively tried out." At the same time, for the first time, the Outline explicitly states that a three-tier management system will be implemented at the national, local and school levels, giving localities and schools more opportunities to participate in curriculum management and development(MOE, 2001);

Meanwhile, in July 2010, the State Council issued the "Outline of the National Medium- and Long-Term Education Reform and Development Plan (2010-2020)", which further pointed out that high school education should improve the quality of the nation, meet the demand for diversified global leaders' cultivation for the economic and social development of the country, and cultivate qualified citizens on the basis of the compulsory education stage (elementary school and junior high school stage). As a key stage in the national education system, the stage of high school not only leads to the improvement of the quality of basic education, but also determines the quality of higher education students and influences the development of higher education and the process of cultivating comprehensive global leaders. For this reason, it is clearly stated in the Outline that "in the context of social development, such as the multi-polarization of the world, the in-depth development of economic globalization, the rapid progress of science and technology, and the increasingly fierce competition for global leaders, it is the first and foremost task to improve the quality of the nationals and to cultivate innovative global leaders. The key to Chinese future development depends on global leaders, and the foundation lies in education". And for high school education, clearly required to "create conditions for the opening of a variety of elective courses, to provide students with more choices, and to promote the overall and personalized development of students. Actively carry out research studies... Promote the diversified development of ordinary high schools. Promote the diversification of cultivation modes to meet the development needs of students with different potentials, and encourage general high schools to develop their own characteristics". And on this basis, at the stage of higher education, "Encourage the advantageous disciplines of schools to face the world, support the participation in and

establishment of international academic cooperation organizations and international scientific programs, and support the establishment of joint research and development bases with high-level educational and scientific research institutions outside the country. Accelerate the pace of creating world-class universities and high-level universities, train a number of top-notch innovative global leaders, form a number of world-class disciplines, and produce a number of world-leading original achievements, so as to contribute to the enhancement of Chinese comprehensive national power"(MOE, 2010).

Then based on the reform of Chinese education policies mentioned above, the specific features of these policies in the process of cultivating global leaders are as follows.

(1) Responding to the Requirements of the Reform of the System of GaoKao and the Global Development of the Education System

In Jia(2014)'s research "A Case Study on the Implementation of Elective Courses in General High Schools", she explained why curriculum reform is necessary in terms of the international context. First of all, the quality and structure of the labor force has changed significantly(pp.35-37). In the era of knowledge-based economy, the traditional neat and tidy industrial workers are to be replaced by comprehensive leaders. Secondly, the global competition is intensifying, and this global competitiveness is mainly reflected in the comprehensive national power, of which the most important is the economic strength and national defense strength, and the cultivation of such leaders is based on education. Therefore, that's why when seeking strategies to strengthen the country, without fail, emphasis has been placed on education. On the other hand, the new concept of "sustainable development", which has been put forward by more than 180 countries, emphasizes that the relationship between material and spiritual civilization must be properly handled, and this needs to be fully reflected in curriculum reform.

On the other hand, the reform of the system of GaoKao is also promoting the diversified development of general high schools in disguise. The first thing that needs to be clarified is what is a general high school. A general high school is a general senior middle school, which is an independent education system and belongs to the basic education stage(Yang, 2006,). From this point of view, the specific role of general high schools is to provide basic education for the general public on the basis of the nine-year compulsory education, to undertake the task of improving the quality of the nation, to meet the developmental needs of students with different potentials, and to provide a large number of global leaders for universities. The high school, which carries the heavy responsibility of the GaoKao, ushered in the first beginning of the diversified development of the high school in 1998. That year began to change the national unified examination to the provincial unified examination. In "the Notice of the General Office of the Ministry of Education on Doing a Good Job in the Pilot Reform of Independent Selection and Admission of Colleges and Universities" issued in 2003, some pilot universities began to implement the "according to the needs of selecting innovative leaders and professional cultivation, and actively exploring the combination of unified examination and admission as the main, with diversified examination and evaluation, and diversified selection and admission, with the schools selecting and admitting independently and exercising self-restraint. The government's macro-guidance, services, and effective social supervision of the selection of outstanding innovative talents of the new mechanism"(MOE, 2003). At the meantime, starting in 2014, the 3+3 approach was adopted to reform the subject examination system, and the unified Gaokao + high school academic level

examination results + comprehensive quality evaluation of the multiple admission mechanism. From this point of view, along with the reform of the Gaokao, these changes in the selection mechanism, but also fully embodies the current stage of Chinese education, is no longer “the only test that will determine the fate of individual’s life” (the main focus is on scores), and the goal is to cultivate global leaders with innovative ability, comprehensive quality and international vision.

Along with the reform of the Gaokao, in “the Outline of the National Medium- and Long-Term Educational Reform and Development Plan (2010-2020)” issued by the State Council, it is clearly pointed out that the strengthening of international exchanges and cooperation is a top priority, i.e., “in order to adapt to the requirements of the country's economic and social opening up to the outside world, to cultivate a large number of global leaders with an international outlook who are able to participate in global affairs and global competition” (MOE, 2010). This also encourages the diversified development of school organizations, encourages schools and international joint Chinese and foreign cooperation agencies or cooperation projects and their formation of multilateral cooperation and exchange platforms, the formation of international cooperation community, but also in the exact implementation of the “Belt and Road” along the countries to form sharing experience with each other, resource sharing, mutual recognition of qualifications of the educational cooperation institutions. The use of international organizations to innovate training methods and expand the form of education. Secondly, many colleges and international schools are encouraged to introduce international curricula, such as the International Baccalaureate Program (IB), the Cambridge A-Level Program and the American AP Program, which are complementary to Chinese GaoKao curriculum, so that students can have access to a more variety of international curricula while receiving the reformed the Gaokao curriculum.

(2) Management Reforms in General High Schools

After the implementation of the new round of basic curriculum reform in 2001, it was further clarified that “a three-tier management model of national, local and school curricula is to be established”, and at the same time, it was pointed out in the Outline that the responsibility of schools is to “implement the national curriculum and local curricula in schools of compulsory education and general high schools on the basis of the national curriculum and local curricula” issued by the Ministry of Education (MOE, 2001). On the basis of the national curriculum and local curricula, schools at the compulsory education and general high school levels shall, in accordance with the Guidelines for the Management and Development of School Curricula issued by the Ministry of Education, participate in the preparation of specific implementation plans for the school curricula of their own communities from a practical point of view, and, in conjunction with their own traditions and strengths, as well as with the interests and needs of their students, develop or select curricula suitable for their own schools and submit them to the higher education authorities for approval. Schools have the authority and responsibility to reflect on problems encountered in the implementation of the national and local curricula, as well as to establish an internal evaluation mechanism for school curricula, in order to ensure that the school curriculum passes into consistency with the national and local curricula in terms of objectives.

The establishment of the three-tier management system firstly signals a change in the management system, further clarifying the responsibilities of the education administrative departments at all levels, and at the same time “decentralizing” power to localities and schools. On the one hand, at this stage, the curriculum of the general high school consists of compulsory

courses and elective courses, and in the construction of the curriculum, the compulsory courses are the foundation of the elective courses, while the elective courses are the expansion of the compulsory courses. It can be understood that compulsory courses focus on the learning of professional knowledge and basic skills, while elective courses focus on the personalized cultivation of students' own interests and hobbies. As mentioned by Fang (2004), "Compulsory courses reflect basicity and balance, while elective courses mainly reflect diversity and selectivity, creating learning conditions and space for students to develop their strengths and personalities". From this, it is clear that the elective course is also an independent course with its own objectives and roles. "Putting students' development in the first" is one of the most fundamental teaching philosophies of elective courses. The specific policy points are as follows.

Curriculum Objective: Integrated learning of disciplines to enhance students' comprehensive ability to be developed; to trace their own life path in personalized development and to clarify the basic direction for their future development. The elective course curriculum is a change from the criticism of "spoon-feeding" education, and focuses on students' interests and developmental needs, providing a sufficient context and resources for students' independent learning and cooperation with others.

Curriculum Approach: The curriculum of elective courses has changed from the teacher-centered tradition to a student-centered one, which provides a diversity of learning opportunities and support for students' all-round development. The change in the vision and role of the teacher provides sufficient time and space for teachers to develop a diversified curriculum that is responsive to the individual development of students.

Curriculum evaluation mechanism: The evaluation mechanism that has emerged in elective courses has changed the traditional single grade (score) evaluation and established a comprehensive quality evaluation system, which can maximize the respect for the differences in students' personalized development and reflect the outcomes of students' curricula in a more diversified way(Jia, 2014).

That is, the elective course is a course that follows students' interests, deepens the understanding and application of textbook knowledge learned in compulsory courses, and develops students' comprehensive abilities in the context of practical social life. Everything is based on the students themselves, giving them the greatest autonomy in elective courses. The elective courses practiced in China are divided into two, elective I and elective II. Based on Jia's research, there is a clearer understanding of the elective courses.

Elective I course is based on the compulsory courses, according to the needs of diversified development of global leaders, set up a number of elective modules at different levels and in different categories for students to choose to study; Elective II course, also known as the school-based curriculum, is based on the premise of the implementation of the compulsory courses and the Elective I course, the school fully develops and utilizes the curriculum resources, combines with the needs of the local economy, science and technology, culture and other needs of the students, and sets up a number of elective modules for students to choose freely(Jia, 2014).

From this, it is obvious that in the curriculum, compulsory courses and elective courses are complementary to each other, and the elective courses are also interlinked and interact with each other. Through elective courses, students can truly develop their personalized abilities.

On the other hand, along with the decentralization of power to localities and schools, local

governments and schools can have greater autonomy to make full use of local resources and contexts, and by organizing activities such as international cultural festivals or cross-cultural exchanges, teaching students according to their aptitude on campuses, and vigorously advocating diversified exchanges and encouraging students to respect and understand different cultures, so as to broaden the international outlook of students and their ability of cross-cultural communication.

(3) Development of Specialized School-based Curriculum

Beginning in the 1970s, an important part of the process of curriculum reform in many European, American and international countries was the introduction of school-based curricula. And in the 1980s, China began to pay attention to the issue of curriculum diversification. It was not until 2001 that an official attempt was made to implement it. In the previous summary, the school-based curriculum, as a separate branch of the elective II curriculum, has received a lot of attention. Relevant policies have also clearly indicated that schools are strongly supported to develop school-based curricula with special features according to their own characteristics and students' needs. However, the development of school-based curricula in China is relatively late compared to other countries, and is still in a state of exploration, as mentioned by Liu(1993) in his research of education in Hong Kong and Taiwan in 1993, "School-based curriculum is school-based curricula development". Combined with the definition of elective courses in the second point, it can be further understood that a school-based curriculum is a school- and student-centered curriculum. Wu(2002) further refined the definition of school-based curriculum with the following explanation.

The school-based curriculum is developed by teachers based on the school's philosophy of utilizing community and school curriculum resources to assess the needs of students and develop resources for students to choose from, on the basis of re-testing the national and local curricula(pp.75-76).

That is to say, school-based curriculum is an optional curriculum based on the differences and uniqueness of each student, developed with all students in mind in order to meet the developmental needs of all students and also to meet the needs of global leadership development. In this regard, Wu(2008) explains that the purpose of school-based curriculum development is "to meet the different needs of different districts, different schools, and different students, so that students' individuality can be fully and freely developed in a comprehensive manner, and they can become unique in their further life". School-based curriculum development begins with students begins at school, focuses on the development of each student, and provides ample opportunities for each student to present themselves on the international stage. Then the school-based curriculum not only enables students to become global leaders to provide support, but also as a long-term curriculum, and students' high school life is closely related. So in the choice of school-based curriculum, Jia(2014) provided three principles of course selection, the principle of voluntary autonomy, the balance between comprehensiveness and individuality and the principle of coordination of compulsory courses with priority to elective courses(p.90). The principle of voluntary autonomy requires students to choose their own courses of study with the help of their parents and teachers, arrange their own personalized study plans, learn to plan their own life development trends, and take responsibility for their own choices. The principle of comprehensiveness and individuality, a broad foundation, is a prerequisite for preparing children to become global leaders. The national curriculum program requires students to be successful in

all areas of study and not to be prematurely sidetracked. This means that on a comprehensive basis, they can choose relevant modules to expand their studies according to their interests and aspirations. The principle of coordination of compulsory courses with priority to elective courses, electives as the main subject and electives as a supplementary subject, and the completion of compulsory credits is a prerequisite for high school students to qualify for graduation.

The school-based curriculum is like a multifaceted mirror, creating a diverse curriculum that requires students to choose the one that suits them on the premise of recognizing themselves. At the same time, the school-based curriculum also provides students with sufficient resources and support, giving them a context to expand their comprehensive abilities and paving the way for them to become global leaders.

(4) Partnerships between High Schools and Localities, Companies or Universities

In addition to the opening of international courses mentioned in the first point, the integration of Chinese education with international education is an opportunity for China to learn about the development of education in the world. In addition, based on the elective courses or school-based courses mentioned in the second and third points, on the one hand, general high schools are constantly exploring local cultural characteristics, and on the other hand, they are also actively cooperating with domestic and foreign companies and universities, and the more common examples of this are short-term study abroad exchange programs, short-term study and exchange programs such as summer camps and winter camps, as well as internships. With the advancement of technology and the popularization of online communication mode. At this stage of Chinese education, there is also a continuous attempt to innovate and create opportunities for multicultural exchanges or programs with people from different backgrounds, cultures and languages, mainly in English subject. At the same time, many high schools are cooperating with colleges and universities to offer joint programs at the high school level, which give students an early experience of college learning and further provide students with a variety of opportunities for experiential learning.

Therefore, as a whole, the characteristics of China's leadership education policy can be summarized as follows: personalized education is the main approach, and its purpose is to develop students' global perspective and innovation ability. Chinese leadership education policies are notably characterized by multi-level and multi-faceted reforms and innovations. These policies not only emphasize the reform of the traditional examination system and the promotion of the internationalization of the education system, but also focus on changes in the management of general high schools, especially in the provision of elective and school-based courses, in order to meet society's demand for diversified and comprehensive talents. The reform of the Gaokao, as the core of Chinese education reform, is no longer limited to a single test score, but comprehensively fosters students' innovative abilities and international perspective through the introduction of a diversified evaluation mechanism and the implementation of provincial unified examinations and independent selection and admission. At the same time, changes in the management of general high schools have promoted diversified and individualized curricula through the establishment of a three-tier curriculum management model at the national, local and school levels, giving more autonomy to localities and schools. The introduction of elective courses and school-based courses provides students with a wider range of choices and broader learning experiences, and helps to cultivate future leaders with international perspectives and comprehensive qualities. School-based

curriculum, as an important part of the Elective 2 curriculum, not only pays attention to the differences and uniqueness of students, but also provides a broad platform for students' holistic development and personalized cultivation through the development and use of local and school curriculum resources. In addition, the linkage and cooperation between high schools and localities, companies and universities further broadens students' international perspective and cross-cultural communication skills through various forms of short-term study abroad exchange programs, summer and winter camps, internships, and joint courses at colleges and universities. These cooperative programs not only give students the opportunity to get in touch with different cultural backgrounds and education systems, but also provide students with opportunities for practical and experiential learning, which helps to cultivate composite leaders adapted to the development of globalization. In the process, technological advances and the popularization of online modes of communication have also provided more opportunities for innovation in Chinese education. Through cross-cultural exchanges and project cooperation, students improve their leadership skills and teamwork spirit in real situations, and develop a global perspective and cross-cultural communication skills.

In conclusion, the implementation and advancement of Chinese leadership education policies have not only improved the quality of education and met society's demand for diversified human resources, but have also laid a solid foundation for the training of future leaders with an international perspective, the ability to innovate and a sense of social responsibility. The comprehensive implementation of these policies has provided strong support for China to win more advantages in global competition and to promote the modernization of the country and the sustainable development of society.

7.1.2 Principles of Global Leadership Curriculum: Educational characteristics of China's high school

(1) The Founding Background of N High School

N High School, established in 1950, has accumulated over 70 years of educational experience. It was one of the first model high schools in J Province and is the only school designated as a “window” by the J Provincial Government. In 2015, the school received approval from the Central Military Commission to establish an Air Force Youth Aviation School on its high school campus. Since its establishment, N High School has nurtured students with diverse and outstanding development outcomes. It consistently ranks at the top in the province in key metrics such as high college entrance exam pass rates, admissions to prestigious universities, and high-scoring students. The school has produced numerous gold medalists in international subject Olympiads and achieved significant results in science and technology innovations. It boasts a high domestic university admission rate and offers many direct admission programs to overseas universities, making it a foundation school for cultivating high-quality students.

Against the backdrop of educational reform in China, N High School has concretized its goal of developing global talent. To meet the needs of international societal development, the school has designed a diverse range of school-based curricula aimed at nurturing students' varied talents. During the early stages of China's educational reform, N High School advocated the educational philosophy of “returning time to students and methods to students.” A series of pilot school-based activities received high praise nationwide. The school motto, “Integrity, Erudition, Diligence, and Agility,” embodies its educational core.

Integrity: signifies that the school prioritizes character education, emphasizing that students must develop morally before achieving academic success. It encourages students to cultivate high moral standards, sound character, a strong sense of responsibility, and professional ambition alongside their studies.

Erudition: reflects the school's focus on students' lifelong development. It advocates a balanced approach to science and humanities, aiming to comprehensively enhance students' abilities to become well-rounded individuals with international competitiveness in the new century.

Diligence: underscores the school's philosophy of empowering students to become masters of their learning by cultivating self-directed learning skills and adopting research-based study methods.

Agility: highlights the school's emphasis on fostering students' innovative spirit and practical abilities, encouraging them to be bold and skilled in practice, serve society, and perfect themselves through hands-on experience.

This philosophy determines the school's development and shapes its students' futures. Under this philosophy, the school creates optimal learning conditions for the simultaneous development of students' intelligence and character. It lays a solid foundation for their physical and mental health, ensuring that education adheres to the five areas of development: moral, intellectual, physical, aesthetic, and labor education. The school actively organizes and optimizes its curriculum system, further enriching its school-based curriculum resources and developing more school-specific courses.

Additionally, the school has established partnerships with many overseas universities and regularly conducts international exchange programs. For example, it collaborates with the PASCH initiative (Schools: Partners for the Future) through Germany's Goethe-Institut, the "One Thousand Schools Hand-in-Hand" project between China and the United States, and the Cambridge University China Selection Center in the United Kingdom. These initiatives provide students with more opportunities for diverse development.

(2) The Vision of a Global Leader at N High School

N High School actively develops a diverse range of school-based curricula with the goal of nurturing "future global leaders." The curricula focus on three core goals: fostering robust physical and mental health, cultivating excellent character, and developing key competencies. The school prioritizes the cultivation of students' key competencies, emphasizing the development of strong physical and psychological qualities. It aims to nurture students with "a global vision, future insight, pioneering spirit, and steadfast perseverance." Additionally, the school focuses on enhancing students' critical thinking skills, team leadership abilities, and self-development capacities.

(3) Overall High School Curriculum Structure

N High School has designed its school-based curriculum to better reflect the comprehensiveness of development under the education reform policies and to meet the demands for well-rounded development. Currently, N High School's school-based curriculum is divided into nine categories:

Humanities Literacy Courses, Science and Technology Innovation Courses, Physical and Artistic Specialization Courses, Global Perspective Courses, PBL (Project-Based Learning) Courses, Civic

Literacy Courses, Labor Education Courses, Career Planning Courses, and Advanced Placement Courses.

These programs primarily target first- and second-year high school students, who are required to select two different courses each semester. For the 2024 – 2025 academic year, the school offers a total of 95 elective courses (19 of which are available to junior high school students). Among them, 37 courses are available for first-year students, and 39 for second-year students.

The Students' Science Institution of the N high school (SSI) at N High School operates under the educational philosophy of nurturing “future global leaders” through a diverse two-year school-based curriculum, as previously described. To better understand the curriculum content in which the survey participants are involved, this research will now focus on describing the SSI program in detail.

The SSI was established in 2001 with approval from the J Provincial Association for Science and Technology. It consists of students at N High School who are passionate about engaging in scientific practice and research. Recognized as one of N High School's distinctive school-based curricula, the program's mission is to cultivate students' innovation values, practical abilities, lifelong learning capabilities, and adaptability to societal life. Following educational guidelines, the program hands the initiative of learning and applying scientific knowledge to students, allowing every student participating in scientific research and practice to become an organizer, designer, and executor of research activities. The SSI program's goals can be summarized in the following three aspects.

Academic Research and Personal Development: Encourage students to engage in academic research and participate in academic exchanges. Master scientific research methods, stimulate academic thinking, improve scientific literacy, and integrate academic knowledge with practical research activities.

Promoting Scientific Spirit and Social Outreach: Disseminate scientific knowledge and technological advancement to the public. Advocate scientific principles and methodologies, defend scientific integrity, and increase public scientific literacy.

Fostering Interests and Cultivating Future Talent: Spark students' interests in science and technology. Identify and nurture students and teams excelling in technological innovation. Establish a talent pool by creating a network of capable SSI members and recommend these students to higher education institutions and society.

The content and implementation of the project encompass various fields, including Mathematics and Physics Research, Life Sciences, Chemistry, Astronomy and Earth Science, Social Sciences, Aerospace, Mechanical and Electronics Engineering, and Civil Engineering. Each year, approximately 400 students (accounting for 11% of the total student population) choose to participate in the program based on their personal interests. The course schedule consists of one formal class per week, with a total of 32 sessions over two semesters in a year. In addition to these formal classes, daily activities for the Student Academy include time slots from 12:50 to 12:50 and from 17:30 to 18:20 on weekdays (Monday to Friday), and from 12:50 to 17:30 on Saturdays. Each group's activity time is proposed by the group members and finalized after approval.

In the first year, students choose their research direction based on the introduction to the program. During the initial phase, students receive foundational courses such as Plant Taxonomy (learning through real-life exploration of campus plant resources), Anatomy (using carp as a model for anatomical studies and practice), Human Immunology, and Drug Studies (as

supplementary national curriculum knowledge). Following these foundational courses, students select their specific research topics based on personal interests and collaborate with like-minded members in group research activities. At N High School, the classroom experience goes beyond simply mastering specific knowledge. It places greater emphasis on students' understanding of fundamental academic structures, analytical methods, and modes of thinking. The school promotes interactive inquiry-based learning, group collaboration, project research, and simulation-based decision-making models to foster students' critical thinking, problem-solving, and other essential capabilities.

In the second year, students further delve into their research projects and summarize their findings. Additionally, as part of the program's unique characteristics, second-year students act as facilitators for first-year students, providing guidance and support as they embark on their research projects. To support the research, group members may independently invite or hire mentors from within or outside the school or consult with professionals for academic guidance.

How are the group activities and results of the Student Academy assessed? Each department conducts at least three activity records (photographs or videos) per semester. These records must include attendance and may also document the activity's content and evaluate member participation. The Student Academy employs a complete Organizational Capacity Rating (OCR) system to evaluate students' contributions. Contributions are assessed based on behavior and performance during the stages of research proposal development, participation in activities, and suggesting changes to frameworks or processes.

Students are rated at four levels: Junior (J1), Medium (M2), Advanced (A3), and Super (S4). These comprehensive assessments and dual evaluation systems ensure the transparency and scientific accuracy of research achievements, quantify individual contributions, and provide a clear path for students' further growth and development.

(4) Interviewees

In this part, two students who experienced the school-based program at N High School were interviewed. Considering the time it takes to experience a full school-based program and to reflect on the effects of the school-based program, the target group for this interview was set to be those who had been in the school-based program for more than six months after the completion of the school-based program. The interviewees were selected using the snowball sampling method by asking graduates of High School N and recommending new interviewees to each other. The basic interview information of the interviewees is shown in the table below(see Table 19).

The participants in this section were at a new stage in their life process and were interviewed in their busy schedules as they were adjusting to a new environment and life. Therefore, the interviews were conducted during the free time of the interviewees in a fragmented manner. In total, the interview time for each participant was four hours. And the analyse method is totally the same as chapter 5 mentioned.

(5) Results of Interview Survey of Participants

Through the process of analysis, cards and meta-information were made from the data of the two interviews (See Table 20).

[Table 19] Basic information about the interviewees

	Gender	Year of participation	Major in University	Interview period (2024)	Interview Method
H	Female	2020-2023	Faculty of Life Science	(1) 3.6-3.7 (2) 3.11-3.12 (3) 3.16-3.17 (4) 5.8	(1) Wechat (2) Wechat (3) Wechat (4) WH University (Face-to-face)
I	Male	2020-2023	Faculty of Materials Chemistry	(1) 5.17 (2) 5.26	(1) Wechat (2) Wechat

[Table 20] Number of cards and meta-information for the four interviewees' data

	H	I
Card	87	66
Meta-information	24	24

Two interviewee, each participant's story is in a separate box. The **bold text** indicates meta-information and the underlined text indicates cards.

Participant H: Realizing the importance of “interest” and keeping challenging herself.

H is a student who has worked his way through competitive education to N High School. The student-centered education model practiced at N High School has greatly challenged the traditional model of education. H, who had just entered high school, **felt unaccustomed to the new "student-centered" model of learning**. H expressed that "she is not used to the teacher's so-called 'irresponsibility' of not correcting homework, not talking about homework." It was this context that gave rise to **new styles of relationship between the student and the teacher**, such as "the student corrects the teacher and gives him or her pedagogical advice." At the same time, because of the curriculum reform, the emergence of elective courses and so on, it made the compulsory courses appear the phenomenon of time constraints and heavy tasks, which led to the teacher's progress in class would be relatively fast. Therefore, H needed to use a lot of time for pre-study before class and review after class, which made H **feel the great academic pressure of compulsory curriculum**. However, after getting used to the new mode of teaching, H found that she learned to do self-planning, studied at her own pace, and sought help from teachers when necessary. It can be said that H **developed a certain degree of autonomy as she gradually adapted to the new model of learning**.

H said that another thing that surprised her when she came to Y High School was the variety of school-based programs. The school also has a well-established system of clubs, which are not common in other high schools. H's attitude towards the different types of school-based programs was also slightly different. For the participation in the elective courses that required one lecture a semester, H chose to take special courses such as Japanese language's learning and medical emergency. However, these courses were **on the academic knowledge lecture side**, and H was

not impressed with them, even because the pattern was similar to that of the required course, which made H **feel negatively toward the elective curriculum**. On the other hand, **the non-utilitarian type of "SSI"(Students' Science Institution of N Middle School Affiliated to Central China Normal University)** at N High School has opened up the conversation and is highly recommended as a school-based program. H **volunteered for the SSI** and joined the Faculty of Biology because she had loved biology since junior high school. During the course of her study in the SSI, H **participated in variety of research projects**, such as animal anatomy, microbial fermentation engineering, and projects related to Chinese herbal medicine in the university's experimental field, and so on. There were two types of lectures: one was the sharing of experience by seniors, and the other was the hiring of teachers to support the lectures. So in the process, H had **the experience of sharing and collaborating with people of different ages**. It is such an experience that H has now switched her identity as a senior to teach her juniors to help them in their research. It is also such an experience that H realizes the existence of others and the diversity of life that makes her **care, understand and support others**. For H, the origin of these projects is "interest", and her group members are a group of similar-minded friends. Whether it is before choosing a topic or during an experiment, **this model of fully self-directed inquiry learning** allows her to enjoy herself and really do what she wants to do in her research project. From her description, it is also easy to see that one of the other crucial points for H to be able to reap the rewards of SSI is that the activities of SSI cannot be done without **the support of the school and teachers**. The school provides a dedicated space for their activities, as well as appropriate research equipment and funding to help them complete their research. In addition, H mentioned that she has another identity in SSI. She **served as an associate dean and gaining experience in managing this organization** as a resulting experience. During her tenure, she has learned to coordinate her tasks with other organizations; she has consciously taken responsibility for leading her team members to produce research results; she has also paid attention to the progress of her juniors' research and provided them with guidance; and she has even been personally involved in the development and implementation of **the Self-determined staff selection system**, among other things. H says that "management is not complicated, practice is simpler than theory" and that she herself has **realized that her leadership skills have improved**. For H, it was during high school that she **realized the importance of "interest"**. It was her interest that made her choose SSI, it was her interest that allowed her to do her favorite research, it was her interest that allowed her to have a group of like-minded people, and it was her interest that allowed her to gain experiences in the SSI that would **benefit her for a lifelong time**. It is also what allowed her to **enhance practical skills**. And all of these gains have allowed her to continue to be active in college.

In college she took the plunge and enrolled in the College of Life Sciences at WHU to continue her "interest" in the field. She **had a very clear personal plan for her four years of college**. First of all, graduate school is the way to go, and she made a two-handed plan. Firstly, she keeps striving to learn specialized knowledge and actively carries out **the accumulation of academic knowledge**; Secondly, she actively participates in practical activities at home and abroad. She is now involved in a project to study algae at the Chinese Academy of Sciences, and also has plans to participate in an overseas summer exchange program to actively **gain experience in social practice activities**. And while her high school experiences **enhanced her scientific skills**, it was at college that she fully realized the effectiveness of those experiences. In the midst of such an

intense personal life plan, the one thing that sustains her is still "interest". She continues to **foster a variety of interests**. She loves running and will run to relieve stress when she is under too much pressure, and thus she scored a perfect score in her college physical fitness test; she loves calligraphy and will produce a new piece of work every year, which was once successfully sold at the Sunshine Charity Sale; she loves volleyball and joined the varsity volleyball team to participate in tournaments when she entered the university, and so on. Each of these interests has become a driving force that has helped her take every step in her life.

Although so far, H has not had much experience interacting with overseas. However, thanks to her high school experience, she has firmly established the importance of her interests and continues to improve her personal abilities while realizing the importance of communicating and sharing information with others. At the university level, she has also continued to create opportunities for herself to connect with others and society through the cultivation of her interests, while solidifying her own abilities.

Participant I: Being able to create collective environment and positioning himself clearly

I was quite knowledgeable about the elective courses offered at N High School. Not only did he mention **the diverse school-based curriculum** such as the Pre-College Program, the Guanggu Program, and the Academician's Lecture Hall, but he also introduced the elective courses he had taken in Tang and Song Culture, Cardiac Resuscitation, Chinese Painting, and Cooking. He also reviewed in detail his study life in **the SSI (Students' Science Institution of N Middle School Affiliated to Central China Normal University)**, the school-based program featured by N High School. I **volunteered for the SSI** because of his love for science, especially scientific research. This decision has made I's high school life more fulfilling, and I mentioned that the courses at SSI are basically taught by senior students, and only a few of them, such as the Faculty of Astronomy and Geoscience, have specially invited teachers to the SSI, which is a very **innovative student-led management model**. This novel model gave him a high degree of freedom at the SSI. What made the I's even better was **the support of the school**. At the SSI they had a separate official seal as well as financial channels, all signaling the SSI's uniqueness and autonomy. In his first year of high school, I was affiliated with the Faculty of Biology and **participated in diverse project research**. For example, Carp dissection experiment, until now he still can't forget the shock and excitement of the first successful dissection experiment. In addition, he was **impressed by the participation and results of the "Discovery of Asteroids" project**. This is **a joint project with an off-campus social organization**, specifically a NASA science project with observatories all over the world. I was in charge of observing the celestial motion data, week after week. As a result, they have discovered three planets in total, and the one I was involved in discovering was the second one, which, at the moment of doing the interview, was undergoing a seven-year confirmation period, and if it was confirmed, he would have the naming rights to the planet. During the process, I said he **realized that the other side of research is "boring" and "lucky"**, and that research is full of constant speculation and luck. This **experiential learning has been impressive** and rewarding for him. I said his high school experience **opened his horizons and reshaped his worldview**. By interacting with different people and having a brainstorming session, it made him realize that each person's mind is unique. It is **in his cooperation and interaction with others** that I understand the importance of having his own value judgments and that it is important to recognize what he needs and believes. During one of the SSI's communication

meetings, I suddenly realized that I should not blindly pursue the so-called high scores and outstanding research ability at this stage, and that I would like to act as a supporter to **create a better environment for the SSI to learn together**. So let I choose to **challenge himself to take on the role of Dean**. This choice might seem contradictory, but it was well documented. This is because I was aware of two very important elements that influence the development of global leaders, that was to say, **the importance of "resources" and relationships and the influence of the "collective atmosphere"**. For the former, he **created the AAC (Academic Advisory Community of Students' Science Institution)** after he took over the presidency of the SSI in his second year of high school. The AAC aimed to develop and revise the SSI's rules and regulations, and to provide help and advice on the SSI's academic research and administrative matters. The AAC served as a bridge between the SSI and universities, laboratories, corporations and social organizations, and encourages every SSI's graduate to join. This definitely retains and expands the students' network of contacts and expands interpersonal relationships among the students, providing a more solid foundation for future research. For the latter, I stated that the modeling of the collective environment is critical to personal growth. With traditional education, many students were confined to grades or what is in front of them. However, the experience at the Y high school or at the SSI, where **the novel student-centered education model**, whether voluntary or not, subconsciously affects personal growth. Because within collaborative communications, there was an inevitable clash of ideas that could make students discover new possibilities for themselves. For I, this collective atmosphere is a shock and a salvation. It allowed him to liberate himself from inside the step-by-step scoreism and realized that the score gap was not scary, it's the mindset gap that's scary. Make I spend more time focusing on himself and have a clearer perception of himself. It had also **given him a clearer definition of a good global leader**, which he saw as someone who has an independent mind, who can think critically, and who can have an open mind to the world. I believed that a person with good grades is not necessarily a good leader, but he will not be mediocre if he has the ability to have an open mind to the world. Even when I entered college, I still followed this value.

It's easy to see how **the high school experience can have a profound impact on college**. His ability to read papers and do research is a definite experienced compared to others; he is also a master of all aspects of student work. He is also very **clear about his plans for college**. First and foremost, **a backup of academic knowledge** is essential. In terms of specialized knowledge, he can not only get full grades and efficiently complete his own research results while leading other students to complete their research results, but also juggle two research competition groups. In addition, I continues to **be actively involved in student work** after entering college. His student work at the college is to serve as a bridge to help faculty and students communicate more effectively with each other or with each other; he also serves as a member of the above-mentioned the AAC, providing guidance and research resources to N high school's juniors.

Although I did not go abroad for participant in overseas communication, I constantly refreshed his perception of the world and himself by his interactions with global and social organizations. I has learned the ability to look at the problem itself including himself with a more complete perspective.

(6) Comprehensive Discussion

Based on interviews with two participants (H and I) from N High School in China, their

storylines reveal the potential of school-based curricula and **student-centered** programs to foster leadership development within the context of China's ongoing educational reforms. Although relevant policies and systems in China are still in the early stages of exploration, the experiences of H and I demonstrate that, given adequate institutional support and student autonomy, students can develop a wide range of competencies aligned with global leadership standards through hands-on practice.

H's developmental trajectory highlights the importance of self-directed learning and **interest-driven** exploration in cultivating internal motivation and sustained personal growth. Initially, she struggled to adapt to the new “**student-centered**” learning approach. However, as she grew accustomed to the new pedagogical model, she gradually mastered strategies such as pre-study, review, and self-planning, thereby strengthening her self-management skills. Through participation in the Students' Science Institution (SSI), H actively engaged in multiple research projects aligned with her strong interest in biology. As a vice-dean of SSI, she also gained extensive experience in team management, task coordination, collaboration, and mentoring younger students. Although she did not engage in overseas exchange programs, she continued to broaden her perspective through university-level research projects and international exchange initiatives. Meanwhile, she maintained a positive life attitude by nurturing a variety of personal interests such as calligraphy, running, and volleyball which have served as sources of motivation and resilience. These experiences reflect a competence framework driven by intrinsic interest and sustained by self-awareness, which originated in high school and continued to develop in her university life.

In contrast, I's leadership development focused more on organizational systems and the creation of collective learning environments. While his initial involvement in SSI was motivated by the interest of science, his growth was rooted in a deeper awareness of the impact of “**resources and networks**” as well as “**collective atmosphere**” on personal development. As president of SSI, he established the Academic Advisory Community (AAC) to institutionalize the organization and facilitate intergenerational connections. The AAC served as a bridge linking SSI with universities, research institutions, and social organizations, thereby expanding students' academic networks and resource access. At the same time, I critically reflected on the limitations of exam-oriented education, emphasizing that “it's not the score gap that's frightening, but the mindset gap.” This perspective carried over into his university years, where he continued to engage in cross-organizational collaboration, lead research teams, and contribute to educational reform. I's leadership was not only evident in research outcomes and task execution but also in his insight into educational atmosphere, advocacy for student agency, and commitment to cultivating collective learning environments.

Overall, H and I represent cases of students who, during the early stages of China's leadership education initiatives and within the still-prevalent pressure of the college entrance examination system, engaged in the SSI program driven by personal interest and a strong sense of autonomy. With high levels of intrinsic motivation, both students actively participated in and benefited from the learning experiences offered by SSI. Although neither had opportunities to participate in overseas exchange programs, they nonetheless cultivated competencies closely aligned with the demands of 21st-century global leadership, thanks to the high-quality school-based curricula and the student-oriented management mechanisms available domestically. Their experiences suggest that within the context of China's ongoing educational reform, students with global leadership

potential can flourish in local educational environments, so long as they are granted sufficient autonomy and supportive resources.

7.2 Based on Japanese cases, several practical insights are suggested for China

The previous section has revealed that leadership development initiatives in China are still in their early stages, particularly those embedded in school-based programs like the SSI. However, these emerging practices already demonstrate significant potential under the right conditions of student autonomy and institutional support. Compared to China, Japan also an East Asian country has taken earlier and more systematic steps in designing and implementing leadership development programs at the upper secondary level. Based on the analysis of the SGH and SSH high schools, several practical insights can be drawn to inform and enhance the evolving Chinese context.

(1) Emphasizing program continuity and long-term engagement

Japanese leadership development programs are typically designed to run throughout the full years of upper secondary education, offering students continuous exposure to interdisciplinary learning, research, and leadership practice. This sustained structure allows students to integrate knowledge across subjects and apply what they've learned over time, leading to deeper cognitive engagement and more cohesive project development. For China, promoting longer-term project frameworks could help students move beyond fragmented or short-term experiences, enabling more meaningful learning and leadership cultivation.

(2) Creating stable collaborative groups and providing structured opportunities for teamwork

In China, students often have the freedom to join short-term interest-based activities and choose among diverse project themes. While this flexibility is valuable, it may limit continuity and deep group cohesion. In contrast, Japanese students typically form stable groups under a consistent project theme, which encourages them to engage in sustained interdisciplinary collaboration. This structure not only supports deeper exploration of the subject matter but also helps students build essential teamwork skills, such as effective communication, role-sharing, and collective problem-solving. China may consider incorporating more structured group formats into its programs to support long-term collaborative learning.

(3) Developing a more comprehensive understanding of leadership

From the Chinese interviews, it was observed that students often equated leadership with occupying a position of power or being in charge. This suggests a somewhat narrow view of leadership, focused on hierarchical control rather than collaborative influence. In comparison, Japanese participants demonstrated a more nuanced understanding, recognizing leadership as the ability to coordinate, support, and integrate others' perspectives in pursuit of shared goals. To deepen Chinese students' leadership development, there is a need to introduce broader leadership concepts, emphasizing communication, empathy, adaptability, and team-based responsibility as key elements.

Chapter 8 Research Conclusion and Future Challenge

This research centers on the main question: What is the educational significance of global leadership development initiatives implemented in Japanese high schools in an increasingly globalized society? Through a combination of literature review and interview approaches' investigation, the research explores how students who participated in government-led programs such as SGH (Super Global High School) and SSH (Super Science High School) perceived their leadership development experiences during high school and how these experiences influenced their subsequent university life and career development. By conducting qualitative interviews with program graduates, and incorporating policy analysis and theoretical frameworks, this research aims to reexamine the actual value and long-term impact of global leadership development practices in Japanese high schools from the perspective of the participants themselves.

(1) Findings of the research

First, this research defines global leadership as a dynamic and cultivable competency process. It not only requires individuals to possess cross-cultural collaboration skills and a strong sense of social responsibility, but also emphasizes the importance of applying situation-awareness and self-awareness to influence others, lead team cooperation, and achieve shared goals in complex and diverse societal contexts. This definition incorporates key elements from transformative leadership (Burns, 1978) and authentic leadership (Walumbwa, 2008), while also responding to the increasing global attention to global competence advocated by organizations such as the OECD.

Second, based on interviews and case studies from SGH and SSH designated schools in Japan, the research identifies three typical models of leadership development programs at the high school level: the "Overseas Fieldwork Type," the "Community-Based Collaboration Type," and the "Science and Technology Type." Each model corresponds to distinct educational goals and implementation strategies. The first emphasizes cross-cultural communication and global adaptability; the second focuses on social responsibility and local issue awareness; and the third prioritizes interdisciplinary integration and problem-solving capacity. This classification not only highlights the diversified transformation pathways of Japanese high school education under globalization but also provides a theoretical tool for the evaluation and improvement of future leadership programs.

Third, the empirical findings from the interviews indicate that many graduates identified positive outcomes of these leadership programs, such as enhanced self-awareness, improved understanding of social issues, and the development of cross-disciplinary collaboration skills. Some participants stated that although they may not have fully realized the significance of these experiences during high school, they gradually came to appreciate their value in university and professional life. These findings suggest that leadership development programs leave lasting imprints not only on students' knowledge acquisition but more importantly on their personal growth.

Fourth, this research points out that current initiatives such as SGH and SSH face several structural challenges, including overreliance on designated schools and uneven distribution of educational resources, which result in significant disparities in students' access to quality leadership development opportunities. Additionally, in promoting global education, how to foster

diversity and coexistence without requiring overseas experience has emerged as a crucial issue for Japan's future educational reforms.

(2) Contributions of the research

This research contributes to the existing field in the following four ways:

First, it proposes a conceptual model of global leadership centered on situation-awareness and self-awareness, and verifies its applicability and manifestation in Japanese high school leadership programs through empirical investigation.

Second, it systematically categorizes the three main pathways of leadership development practices in Japanese high schools and establishes a comparative analytical framework across cases and programs, providing a theoretical reference for policy analysis and school implementation.

Third, through semi-structured interviews, the research uncovers how learners construct meaning from their educational experiences and highlights the potential long-term impact of such programs, thereby addressing the gap in existing research that often focuses only on short-term outcomes.

Last, by foregrounding learner agency, the research advocates for greater emphasis on student reflection and the integration of educational resources beyond designated schools, with the ultimate goal of realizing leadership development opportunities that benefit all students.

(3) Challenging

Despite the theoretical and practical contributions and significance of this research, several limitations remain. Future research may further develop the following areas.

First, the current sample primarily includes graduates from designated schools. Future researches should extend to include students from non-designated schools, other regions, and diverse backgrounds in order to improve generalizability and representativeness.

Second, while this research focuses on learners, future research could incorporate perspectives from school administrators, teachers, and parents to build a more comprehensive, multidimensional analysis.

Third, the comparison of Japan and China's global talent development policies remains at an exploratory stage in this research. Further comparative researches can systematically investigate differences in educational culture, institutional design, and student engagement mechanisms between the two countries.

Last, although this research reveals the preliminary long-term impact of leadership programs on students' academic and professional development, further longitudinal research is needed to examine deeper, sustained effects over time.

The essence of education lies not only in the transmission of knowledge but also in the nurturing of individuals and the shaping of society. Through the investigation and analysis of global leadership development programs at the high school level in Japan, this research seeks to reveal the profound impact that education can have on the future members of society. It is hoped that the findings of this research will offer theoretical insight and practical inspiration for educational reform not only in Japan, but across the broader East Asian region, jointly fostering future global talents capable of collaboration, co-creation, and global leadership on the world stage.

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