

Promotion of Global Leadership at SIT: International High School Internship Program



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The Best Internships for High School Students: The Ambitious Guide

- 1) Bank of America's Student Leaders Program (Washington, D.C)
- 2) Microsoft (Western Washington state area)
- 3) NASA (Houston area) STEM**
- 4) Student Research Internship Program at the Scripps Translational Science Institute (San Diego's life sciences cluster)
- 5) Aristotle Circle Marketing and Communications Internship (Boston area)
- 6) Hutton Junior Fisheries Biology Program (American Fisheries Society)
- 7) The Smithsonian (Washington, D.C)
- 8) The Constitutional Rights Foundation (Los Angeles area)
- 9) South Middlesex Opportunity Council (Massachusetts, USA)
- 10) New York Historical Society (New York area)
- 11) Adler Planetarium (Chicago area) STEM**
- 12) Heartspring (USA)
- 13) Maryland State Archives (Maryland area)
- 14) Global Internship Program for Unemployed Youth (Wichita, USA)
- 15) Studio Museum in Harlem Internship (New York City)
- 16) Projects Abroad (USA)
- 17) Shibaura Institute of Technology (Tokyo area) STEM**
- 18) Young Innovators Program (North Carolina area)
- 19) Kokosing Construction Company (Ohio area)
- 20) MassMutual (USA)



INTRODUCTION

TRADITIONAL VS MODERN EDUCATION



How to prepare the students for future

New mindset

Open , Flexible & Creative

New mindset => New results

New Teaching and Learning => New mindset

Education – Changing !

Society – Changing!

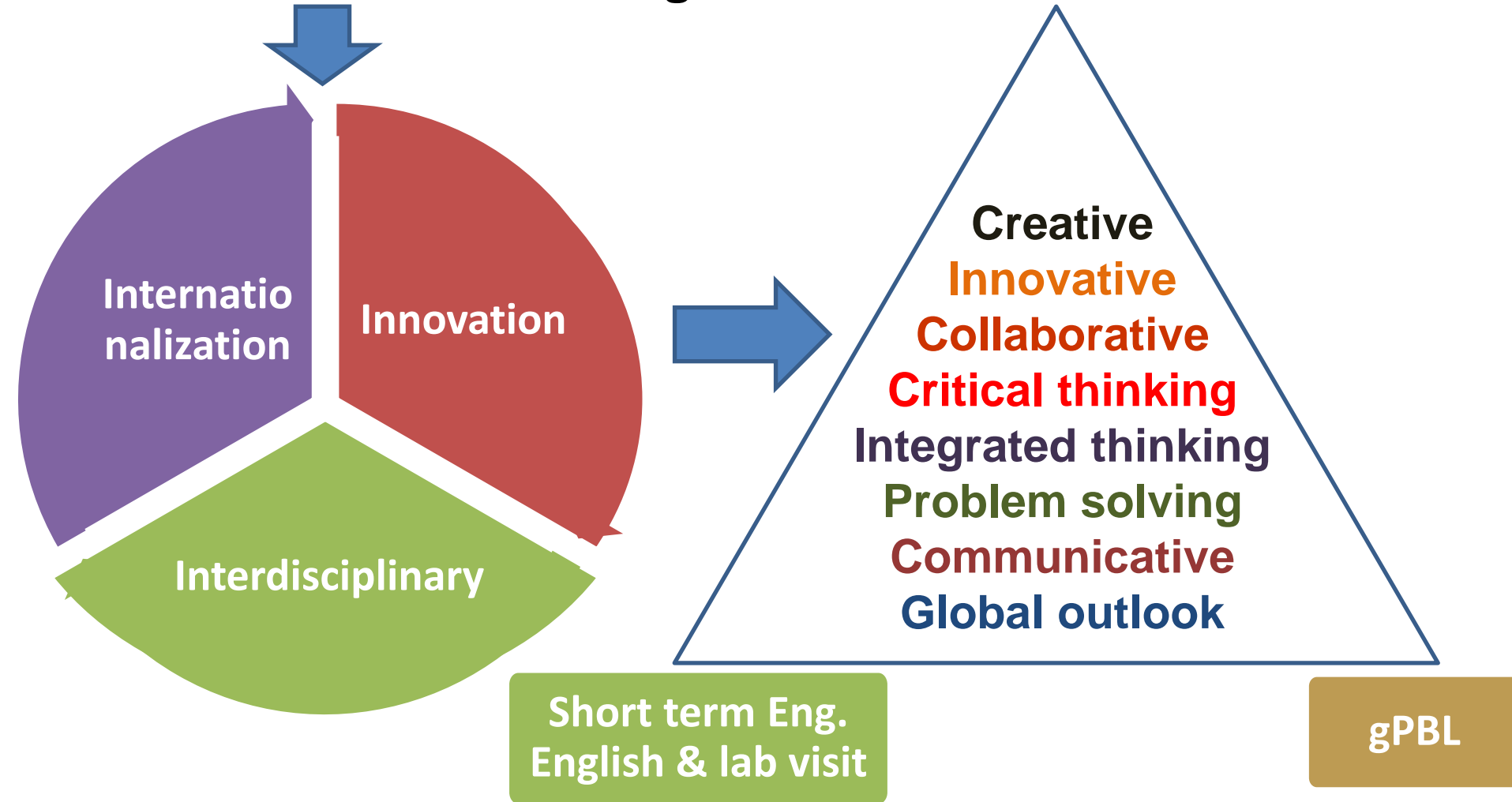
Students – Need to change & adapt !!



芝浦工業大學

SHIBAURA INSTITUTE OF TECHNOLOGY

New Teaching and Learning should include the following !!



International High School Internship Program, SIT

Objective of the program

- To enable research opportunities for school students.
- To promote the globalization in Japanese universities and students.
- To expand student`s learning experiences beyond the traditional classroom routine.
- Seed program for new English programs at SIT (example: IGP)



**GLOBAL VISION
FOR
HIGH SCHOOL STUDENTS**

The mission of the summer internship

The mission of the summer internship for the Shibaura Institute of Technology Bachelor and Master students is to


“Encourage the exchange of research experiences with interns to become the global leaders”

This activity covers the following objectives:

- **The promotion of confidence on English skills.**
- **The promotion of global leadership qualities.**
- **The promotion of learning other diverse cultures.**
- **The strengthening of their relationship with multi-national students.**

Enhance Student's English Communication Skills

An example of language acquisition of a baby

- 
- Baby starts with copying words which were spoken by the mother or the guardian
 - Children, who have not frequently spoken by parents, cannot speak well
 - It is thus important for students to be **exposed to a much more *listening environment* than a simple reading and writing**

With the purpose for Japanese students to increase the chances to communicate in English, we started to organize **short-term Internship & English program** and **summer internship program** to invite international high school students pursuing International Baccalaureate diploma in Tokyo area

Students' English Communication Skills Enhancement

Nurturing SIT students as Global Leaders

**Internship
Departments**



Departments

- Materials Science & Eng.
- Electrical Eng.
- Chemical Eng.
- Biomedical Eng.
- Mechanics

**International
High Schools
Around Tokyo Area
and Overseas**



Schools

- American School in Japan
- St. Mary's International School
- Seisen International School
- Overseas Primary School, Singapore
- West Carleton Secondary High School, Canada

International High School Internship Program

Impact

=

Activities

+

Students

GLOBAL LEADERSHIP MINDS
ENGLISH COMMUNICATION SKILLS

Welcome and
Introductory Presentations

Welcome Party

Laboratory Activity

Final Presentations

Team-building activities

An Award Ceremony

SIT Students + International High School Students



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Welcome and Introductory Presentations

Encourage SIT students to interact with international students by sharing and teaching their research activities

- welcome message by SIT President
- welcome remarks by program director
- self-introduction of high school students
- international students' introductory talks
- self-introduction of tutors and mentors
- Japanese SIT students guide international students to labs



We noticed that all SIT students were amazed with the presentation skills and English speaking abilities of international students

Welcome Party

To enhance the chances of interaction between SIT students and international high school students

- ❑ attended by interested teaching staff
- ❑ **attended by all internship students**
- ❑ attended by SIT students and tutors
- ❑ attended by **academic and administrative staffs**



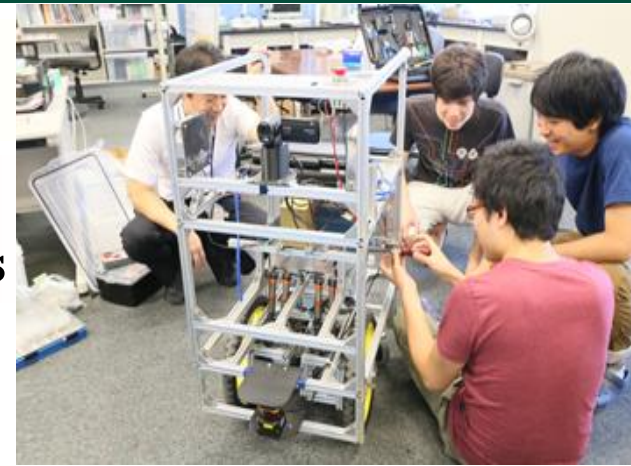
This is the first chance for SIT students to interact closely with various international high school students

Laboratory Activity

During the two week program, students will spend at various departments according to their interested topics

In this program,

- Japanese students co-work closely with international students as tutors
- teach lab activities in English
- teach experimental procedures in English
- prepare daily teaching materials in English
- collecting the data
- analyzing the data



This helps the students to promote confidence in English skills. Further, the students learn the English terminology and are prepared with talking in an international community.

Enhance Students' English Communication Skills

Studying Scientific Concepts at Meetings & Seminars

Meetings:

Japanese students, International High School Students, and mentors will meet often to discuss the research problem related topics

Seminars:

Japanese students will explain basics in English to International students by preparing and presenting the intermediate ppt presentation on their topics

The students were given ample opportunity to interact with international students to discuss their presentations, which will help Japanese students to enhance their English Communication Skills



Interaction with Nobel Prize Winner and Experts in Science (Lecture & Experiment)



Lecture & Experiment by Prof. Shirakawa - Nobel Prize Winner: Chemistry. This was an intriguing experience to comprehend scientific developments (see Fig., middle).

All internship students had enjoyed a lecture given by an expert in specific field. For example, Prof. M. S. Ramachandra Rao (IITM, Chennai, India) (see left figure). His two hour lecture covered systematic information on basic sciences of materials, properties of low temperature cryogenics, crystal structures, nanoscience, scope and applications etc.,.

Team-building activities

The motivation and attitudes towards learning English are crucial for Japanese university students



Team-building activities

- ✓ lunch time discussions
- ✓ sports activity
- ✓ parties
- ✓ extra-curriculum activities



We find that team-building activities; for example, lunch time discussions and sports activity were **very helpful** in motivating students to **improve their English abilities**

Final Presentation

In the program, the key element and most important activity is the final presentation

- two week research activities were presented by international students
- **tutor students will present their experiences**
- tutor students will guide the high school students for the preparation of scientific presentations
- **tutors will learn essential scientific terminology in English**



We find that both international students and SIT tutor students work hard together to prepare the presentation materials, which indeed improved the performance of engineering students in oral as well as written English communication skills.

Award Ceremony

An award ceremony (certificates distribution) for the internship program was held on the final day

- ❑ President had given the final talk to the students
- ❑ Received their certificates from the President
- ❑ International students talked about their impression of this program
- ❑ Final remarks by program director
- ❑ Group Photos

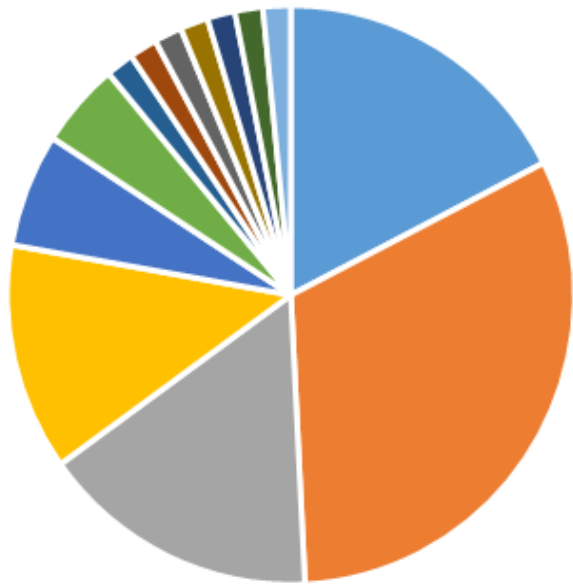


Students were very happy to be involved in such an exciting program to experience real advanced research activities in extremely unique and enjoyable style



- This year we have students from various origins and geographic locations with a total of 63 students.

IHIP 2019 - Student Distribution

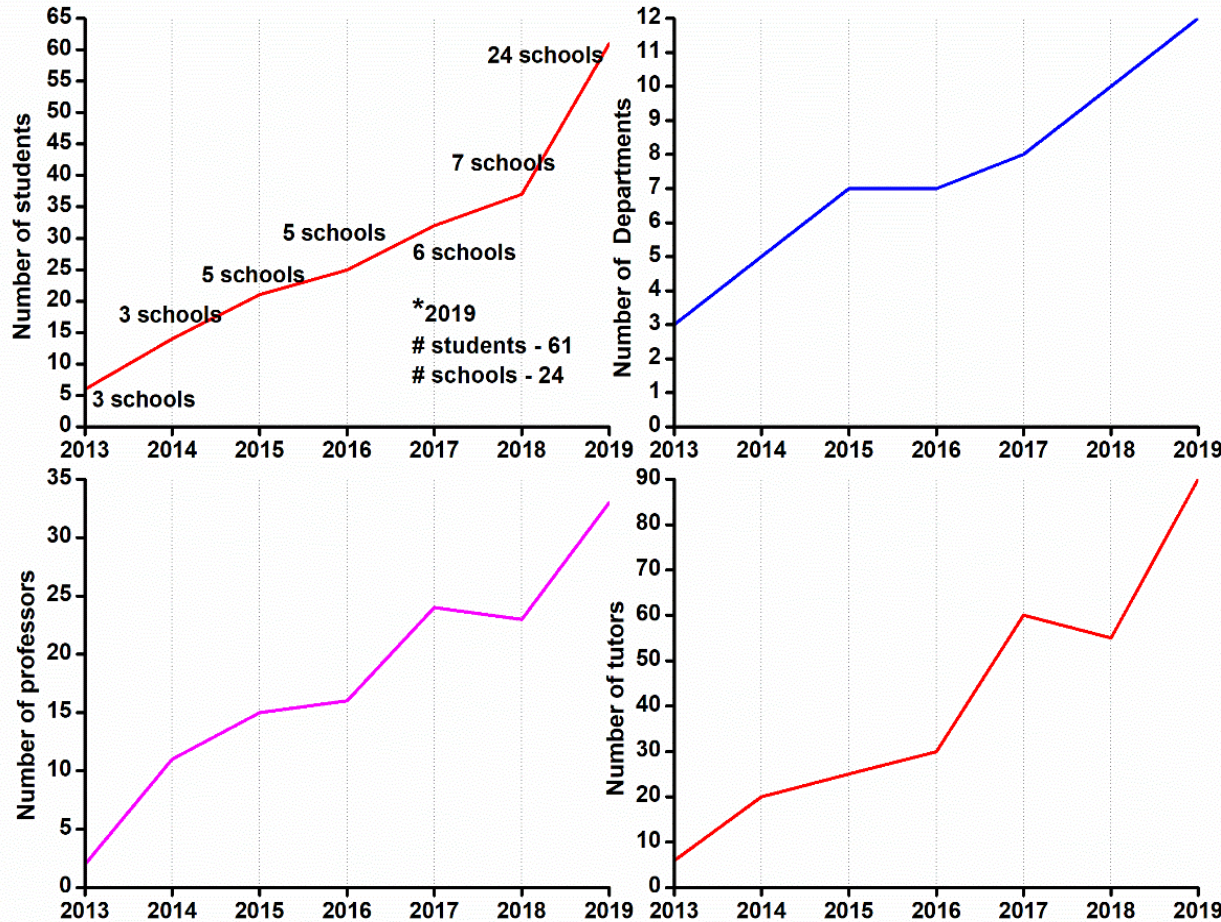


■ 1 ■ 2 ■ 3 ■ 4 ■ 5 ■ 6 ■ 7 ■ 8 ■ 9 ■ 10 ■ 11 ■ 12 ■ 13

Number	Country
1	US
2	India
3	Japan
4	South Africa
5	South Korea
6	Philippines
7	Bangladesh
8	Russia
9	Pakistan
10	Singapore
11	Kazakhstan
12	Canada
13	Italy

Journey of IHIP

Since 7 years, the beginning of this program, there was always improvement.



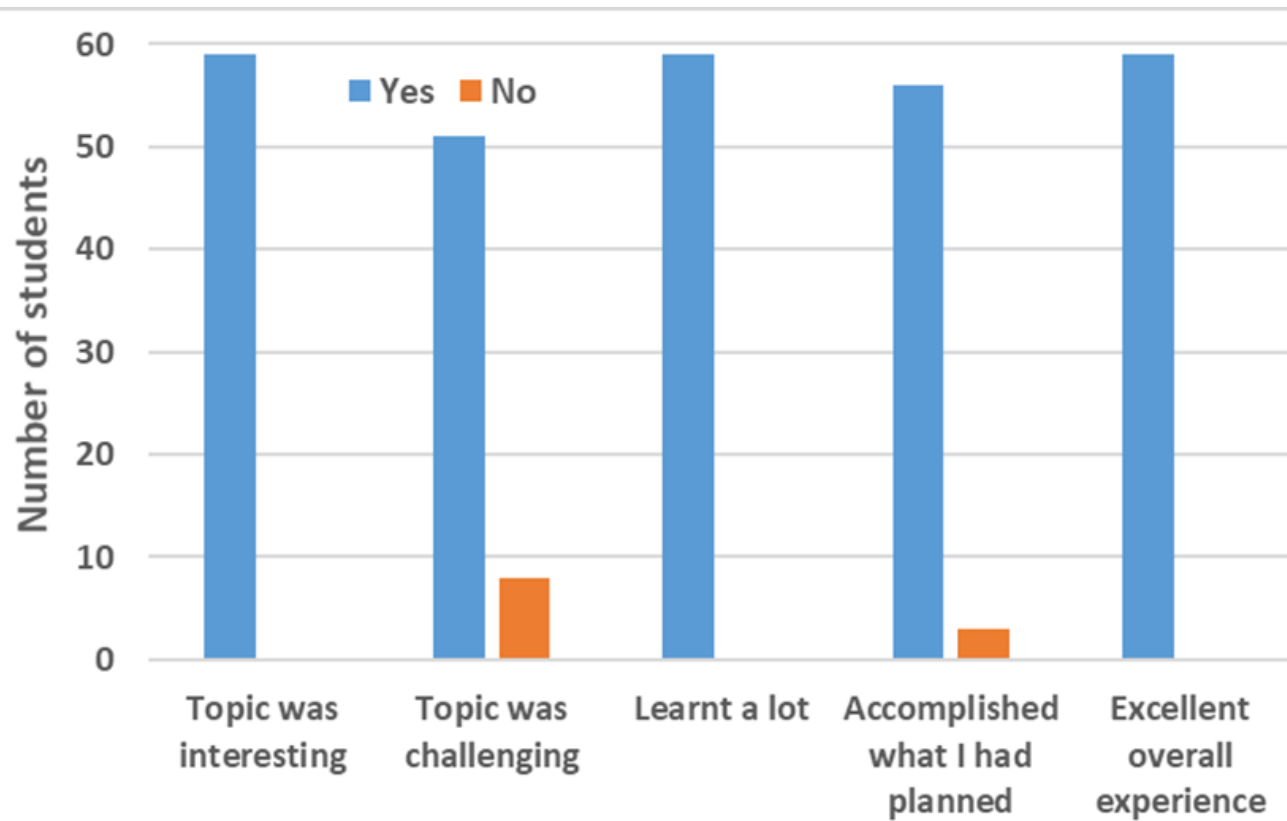
Schools Participated – National

- IISJ
- ASIJ
- St. Mary's IS in Tokyo
- Seisen International School
- K-International School
- Saint Maur IS
- International School of Sacred Heart
- Gyosei International school

International schools

- West Carleton Secondary School, Canada
- Kaelakehe High school, Hawaii
- Morrison Academy, Taiwan
- Overseas Family School, Singapore

Statistics



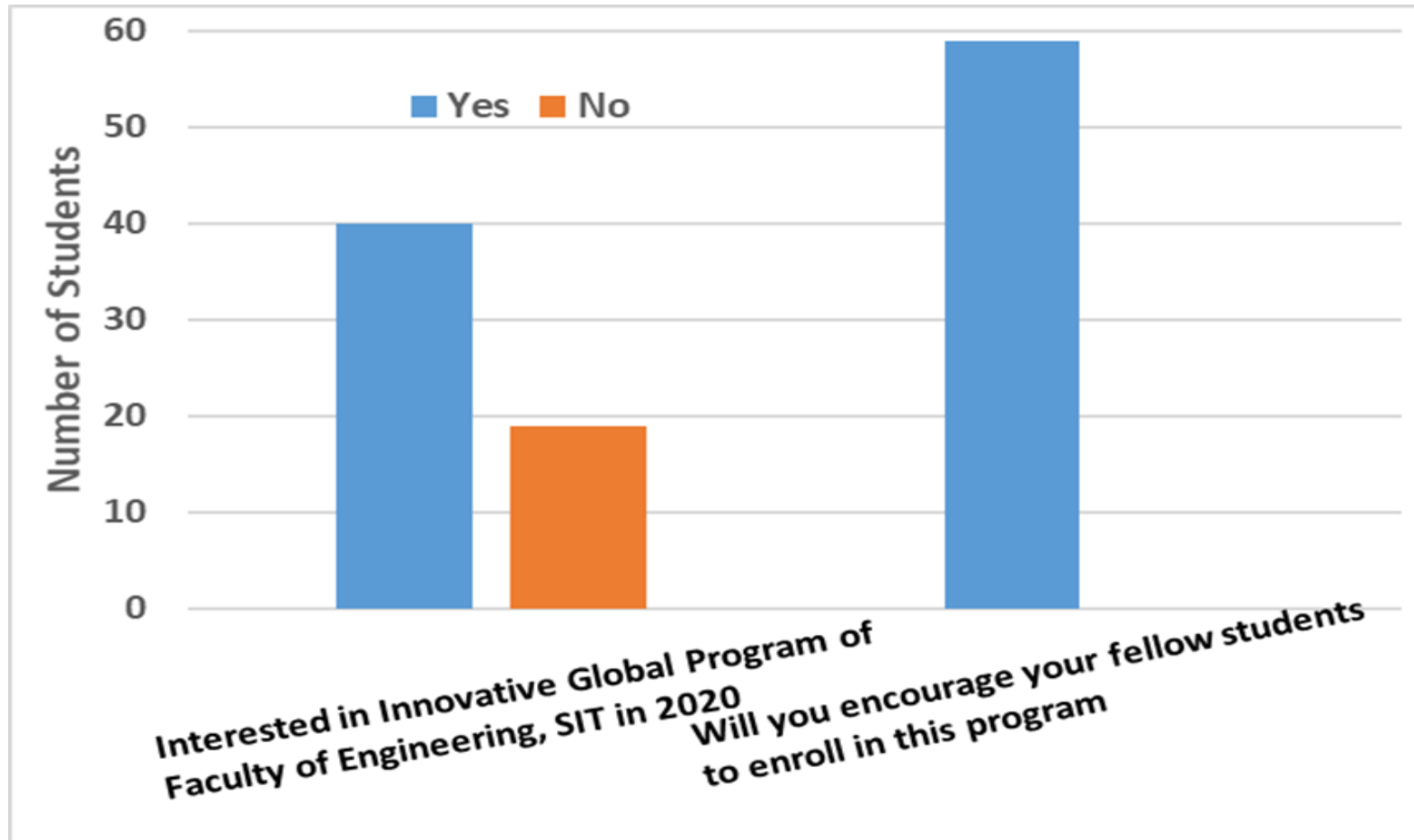
ほぼ全員の生徒から
プログラムに対する
好評価を得た

インターンシップの実績
が評価された生徒たち:

1. Lisa Lowe, 科学技術フェア2位 (米国)
2. Yoko Ashley Smith, SGH 高校フォーラム- ポスター(日本)
3. Sushma M, ASC 2018 (米国) – Oral & ISS 2017-(日本) Oral

Almost all students gave positive reviews on the program

Statistics



Reviews from Tutors

- IHIPのチューターとして働いてみて海外の高校生に自分が行っている研究について教えることに苦労しました。日本語で教えるだけでも難しいことを英語にて説明することは今まであまり経験が無く初めはうまく伝えることができませんでした。しかし高校生たちは好奇心旺盛で疑問に思ったことについて積極的に質問をしてくれそれにこたえる形で少しずつ研究について教えることができました。最終的に高校生たちはしっかりと理解してくれとても良いプレゼンテーションを行ってくれた時はとても嬉しかったです。IHIPを通して英語でのコミュニケーションの重要性と教えることの大変さを学び、普段日本ではできない経験をするのができとても良かったです。（所属・学年、女子学生）
- 自分は語学力に自信がある方ではなかったので、始まる前は少し緊張していましたがしかし、学生たちは皆非常に熱心かつ協力的で、積極的に課題に取り組み、自分の話を理解しようと努めてくれたため、こちらも落ち着いて話すことができました。そのおかげで上手く意思の疎通をとることができ、以前よりも自信を持って英語でのコミュニケーションを行えるようになったのではないかと思います。また、彼らのアイデアはどれも独創的で興味深く、指導する立場としても非常に楽しい経験でした。（所属・学年、男子学生）
- 高校生の計算スキルと化学物質に関する知識が思っていたよりもはるかに高かったので驚きました。研究では原理や実験道具などについて英語で話す良い機会でした。（所属・学年、男子学生）

Take away points

- This IHIP is a easy platform to improve English communication skills, mainly for non-English speaking countries.
- Involving students (the future of country) with programs like these will make them step up into a new globalized era of Japan.
- In Japan, especially at SIT, it seems to be working exceptionally in nurturing student`s English communication skills via IHIP.

“Diversification and globalization are the keys to the future”
-Fujio Mitarai

“Language is `the infinite use of finite means”
-Wilhelm von Humboldt

Special Guests (FY 2019)



H. E. Mr. Raj Kumar Srivastava
Deputy Chief of Mission
Embassy of India, Tokyo



Mr. Garvey McIntosh
NASA, Asia Representative
U.S. Embassy, Tokyo

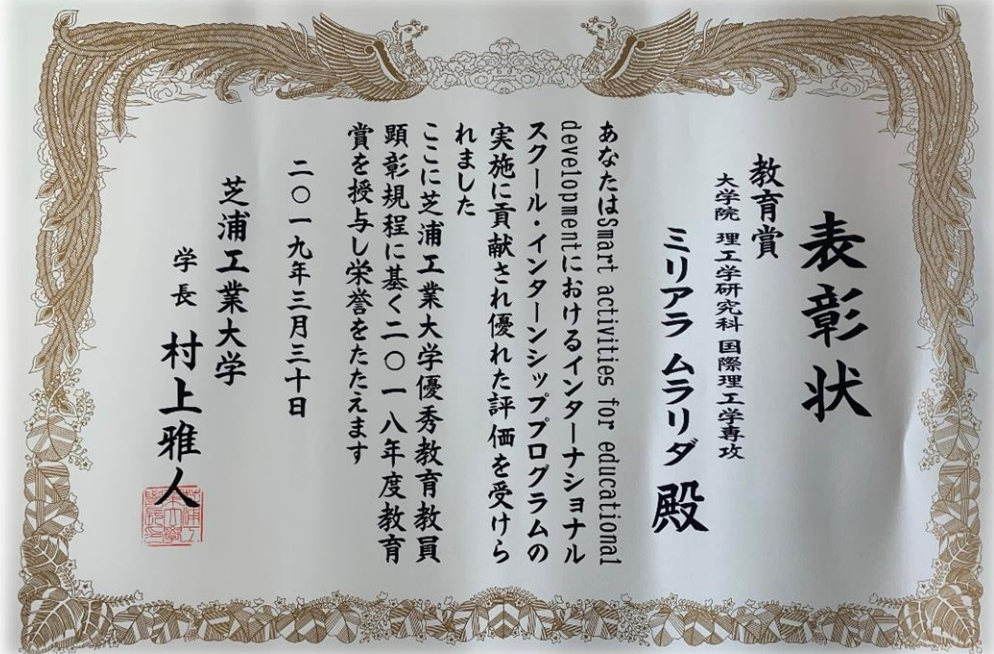


Mr. Daisuke Tanaka
Science & Technology Officer
Embassy of South Africa, Tokyo

❖ IHIP has received lot of attention and recognition in past few years.

❖ Received recognition from “KANTO SOCIETY FOR ENGINEERING EDUCATION” and “EXCELLENT EDUCATION AWARD” from SIT’s President.

❖ This year there were more than 100 applicants. Almost 35% are from abroad.



Summary

- **The International High School Internship makes SIT students more confident in speaking English and learning diverse cultures.**
- **Involving global community and creating innovative invitation techniques are important parts of technical exchange program to improve Japanese students' English skills and understanding foreign cultures.**
- **The program is unique and will be very helpful for Japanese students to become global engineers and leaders in 21st century.**

“With hard work, learning English, and getting involved, there is no limit on what you can achieve”

-Arnold Schwarzenegger

Thank You

for your attention