Japan Education Forum XIII

Collaboration toward Self-Reliant Educational Development-

Background and Objectives

The Dakar Framework for Action 'Education for All' was adopted in 2000 and the relevant stakeholders from government, civil society, international community have made concerted efforts by providing technical and financial support to countries in need.

Progress for some of the goals of EFA has accelerated, however, still much of the broad EFA agenda remains unfinished. Incheon Declaration, a pledge for inclusive and equitable quality education and lifelong learning for all, was adopted in May 2015 in Incheon, South Korea and the Education 2030 Framework for Action was ratified in November 2015. Unattained EFA agenda will continue to be addressed with reaffirming education as a fundamental human right, and learning improvement encompassing early childhood development, care and education to higher education will be emphasized in the post-2015 agenda.

Japan has been committed to promote EFA through bilateral cooperation as well as international organizations such as UNESCO and GPE and at multilateral fora such as the G8 Summits and the Tokyo International Conferences on African Development (TICAD). With a view to the adoption of the 2030 Agenda for Sustainable Development, Japan announce its new strategy on education cooperation, "Learning Strategy for Peace and Growth", which serves as a foundation for building peace and resilient nations. Based on a new strategy's three pillars, (1) education cooperation to achieve inclusive, equitable and quality learning (2) education cooperation for industrial, science & technology human resource development and sustainable socio economic development (3) establishment and expansion of international/ regional network for education cooperation, Japan will continue to make contributions in education sector to achieve quality education through mutual learning.

The 13th JEF, which takes place shortly after Education 2030 being adopted, will look back on educational cooperation of Japan, initiatives taken by Japan to achieve EFA goals, its achievement, and remaining challenges from the viewpoint of Japan, aid recipient country, and the international community. It will also focus on possible future direction of Japan's international educational cooperation in order to contribute to the achievement of post-2015 education goals.

The Japan Education Forum (JEF) is an annual international forum established in March 2004 through governmental and academic collaboration as part of Japan's educational cooperation. Its purpose is to provide an opportunity for open and frank exchanges of opinions and ideas by officials in the public sector, practitioners of international development and NGOs, and scholars on ways of promoting self-efforts of developing countries toward sustainable educational development and of effective international cooperation in education. The forum also offers an opportunity to present Japan's own experiences in educational development and its international cooperation in practice.

Program

Theme: "Japan's Initiatives to Achieve the Goals of the EFA and Possible Future Direction of International Education Cooperation to Achieve Education 2030 Goals"

Date: Wednesday, February 24, 2016

Venue: Conference room, National Center of Science Building
(2-1-2 Hitotsubashi,Chiyoda, Tokyo, Japan)

Organized by: Ministry of Education, Culture, Sports, Science and Technology (MEXT)
Ministry of Foreign Affairs (MOFA)
Hiroshima University
University of Tsukuba

Supported by: Japan International Cooperation Agency (JICA)
*Languages: English-Japanese simultaneous interpretations

Schedule

9:30- Registration

10:00-10:20 Opening Session
Opening Address: Ministry of Education, Culture, Sports, Science and Technology, Japan
Opening Address: Ministry of Foreign Affairs, Japan

10:20-10:50 Keynote Speech:
Mabel Imbuga
Vice Chancellor, Jomo Kenyatta University of Agriculture and Technology, Kenya
Board Chair of RUFORUM Network
"The Role of University Education towards Self-Reliant Development and SDGs
- A Case Study of Africa-"

10:50-11:20 Keynote Speech:
Hiromitsu Muta
Professor Emeritus, Tokyo Institute of Technology, Japan
"Evaluation of Japan's Education Cooperation Policy 2011-2015 and its Future Perspectives
-What Japan's Education Cooperation has Aimed and Achieved-"

11:20-12:00 Questions and Answers with Keynote Speakers

12:00-13:30 Lunch Break

13:30-14:45 Panel Session
"What Roles Japan Has Played in Archiving the Goal of the EFA in Education Cooperation"
"How Japan can Contribute in Education Cooperation after the 2015"

Panelists:
Kazuhiro Yoshida (panel session moderator)
Director, Center for the Study of International Cooperation in Education(CICE), Hiroshima University, Japan
Shyamal Kanti Ghosh
Secretary, Ministry of Agriculture, Government of Bangladesh
Soledad A. Ulep
Director, University of the Philippines National Institute for Science and Mathematics Education Development, Philippines
Nobuko Kayashima
Senior Advisor, Japan International Cooperation Agency (JICA)

14:45-15:15 Break

15:15-16:15 Open Floor Discussions, Questions and Answers
16:15-17:00 Concluding Discussions by Keynote Speakers and Panelists with Moderator

17:00 Closing
(Moderator: Riho Sakurai, Associate Professor, CICE, Hiroshima University, Japan)

Opening Session

Opening Address by Yoshiie Hiroyuki, State Minister Ministry of Education, Culture, Sports, Science and Technology, Japan

Thank you very much for making time to attend the 13th Japan Education Forum today. On behalf of the Ministry of Education, Culture, Sports, Science and Technology (MEXT), I would like to offer a few words of greeting.

This forum, jointly organized by the Ministry of Foreign Affairs (MOFA), Hiroshima University, the University of Tsukuba and the MEXT, has been held annually since 2004 to promote free and frank discussion among various people, including administrators in charge of educational cooperation, representatives of cooperation organizations and NGOs as well as researchers, on how international cooperation in education can support the self-reliant educational development and the initiatives of developing countries.

One of the themes of this year's forum is "Japan's initiatives to achieve the goals of EFA." In order to achieve the goals of the EFA Dakar Framework of Action, the MEXT has been promoting various activities such as providing assistance through UNESCO projects and establishing systems to dispatch volunteer schoolteachers in order to advance EFA.

In the field of higher education, we have invited Ms. Mabel Imbuga, Vice Chancellor of Jomo Kenyatta University of Agriculture and Technology, to be a keynote speaker today. Kyoto University, Okayama University, Tottori University and other universities have been providing assistance to Jomo Kenyatta University of Agriculture and Technology for many years since its establishment by sending experts there and accepting trainees through JICA projects. In Japan, they are known as the "samurais who built a university in Africa."

The cooperation for human resource development promoted by universities and research institutes in Japan has gained a certain recognition in developing countries and others. In this regard, another keynote speaker, Mr. Hiromitsu Muta, Professor Emeritus of the Tokyo Institute of Technology, will give an overview of Japan's educational cooperation.

Another theme of today's forum is "Japan's role in achieving Education 2030 goals." The 2030 Agenda for Sustainable Development was adopted by the United Nations' General Assembly in September of last year. "Education 2030" was adopted to achieve the Agenda's Goal 4 of strengthening the efforts to improve education and to promote ESD widely, from preschool to higher education.

The MEXT will host a G7 Education Ministers' meeting on "Innovation in Education" in May of this year. In order to share best practices, the G7 countries will discuss topics such as the role of education in confronting global challenges and in building peaceful, prosperous and sustainable societies; and the qualities and capabilities required in this new era in which coexistence and cooperation with people from various different backgrounds are becoming increasingly important. Japan would also like to lead the discussion on how to achieve the goals of "Education 2030," such as what each country should do to support improvement of learning and of acquiring vocational skills in developing countries.

Recently, leaders of developing countries are very interested in Japan's education and have high hopes for Japan's cooperation. The MEXT is planning to implement educational cooperation to introduce methods of Japanese education that meet the needs of each country, working with the MOFA and other relevant ministries, JICA and the private sector in the field of education. We will endeavour to further improve our educational cooperation, responding to the needs of emerging and developing nations.

Many events are scheduled to take place this year, including G7, TICAD VI, and ASEAN and APEC education ministers' meetings. Through these dialogues, the MEXT will strengthen its endeavours to improve its educational cooperation and human resource development for a sustainable future.

I hope that this forum will contribute to sharing each country's knowledge through the lectures and discussions and produce results that will improve the quality of education. In closing, I would like to thank all of those who gave

their time and effort to organize this forum. I hope today's forum will provide insights that are meaningful for your future endeavours.

Opening Address by Koichi Aiboshi, Ambassador, Assistant Vice- Minister, Director-General for Global Issues, Ministry of Foreign Affairs, Japan

1. Introduction

Ladies and gentlemen,

On behalf of the Ministry of Foreign Affairs (MOFA), one of the co-hosting organizations, it is my great pleasure to welcome you to the Japan Education Forum 13.

2. Steady implementation of SDG4 and Education 2030

Last year was a milestone for international cooperation in education sector. In May, the World Education Forum 2015 adopted the Incheon Declaration, a political commitment on education through 2030. In September, the 2030 Agenda for Sustainable Development was adopted at the United Nations summit. It clarified the educational goal as the Sustainable Development Goal 4 (SDG4): "Ensure inclusive and quality education for all and promote lifelong learning." In November, the Education 2030 Framework for Action was adopted at the Education 2030 High-Level Meeting for achieving the SDG-4.

3. Formulation of the Learning Strategy for Peace and Growth

Against this backdrop, the Cabinet of Japan adopted the Official Cooperation Charter in February of last year and decided to formulate policies for each area to address development issues including education.

With regard to the new development policy in education sector, the "Learning Strategy for Peace and Growth" was developed based on contributions not only from related ministries and organizations but also from experts and civil society. In last September, Prime Minister Shinzo Abe announced the strategy at the United Nations summit, at which the 2030 Agenda for Sustainable Development was adopted. The new policy has three guiding principles.

The first is educational cooperation for marginalized children who are deprived of access to quality education, something the Millennium Development Goals were unable to achieve. According to a UNESCO report, the number of illiterate people in the world 15 years old or older was estimated at 750 million in 2013. About two thirds of them are women. Malala Yousafzai, a Nobel Peace Prize laureate, has repeatedly stressed the importance of girls' education. Japan will also continue to actively support girls' education. The number of child soldiers under 18 is estimated at 800,000. Education in conflict-torn nations and regions is also in serious condition. Japan will support education for these marginalized children by collaborating with international organizations and others.

The second guiding principle is to cooperate on education for human resource development to provide a foundation for "Quality Growth" as well as for sustainable social economic development. Japan will provide educational cooperation so that people who receive an education can find satisfying jobs. For example, projects in the Philippines jointly conducted with Japanese corporations support local vocational schools. Japan will support initiatives that promote "Quality Growth" in developing countries, using its expertise. Japan will also conduct educational cooperation in the field of disaster prevention and environment, in which Japan has

experience and knowledge. Japan has conducted the School-based Disaster Education Project in Turkey, an earthquake-prone country like Japan.

The third guiding principle is to establish and expand international and regional networks for educational cooperation. Today, actors in the field of educational cooperation are not limited to governments and international organizations but are expanding to various actors including private sector and civil society. In implementing the new strategy, Japan will strengthen collaboration with diverse actors to promote educational cooperation.

The G7 Ise-Shima Summit will take place in May and TICAD VI in Kenya in August of this year. Japan will take these opportunities to make its new educational cooperation policies widely known.

4. Conclusion

It is important to review past achievements and to discuss future challenges once again at this forum, which provides an important opportunity for experts in educational cooperation from Japan and abroad to gather. I hope that lively discussions will take place and that today's forum will be a productive one at which we give further thought to future educational cooperation and the promotion of efforts to achieve the SDG4. Thank you.

Executive Summary

Outline of the Forum

The Japan Education Forum (JEF) is an annual international forum established in March 2004 through governmental and academic collaboration as part of Japan's educational cooperation. Its purpose is to provide an opportunity for open and frank exchanges of opinions and ideas by officials in the public sector, practitioners of international development and NGOs, and scholars on ways of promoting self-efforts of developing countries toward sustainable educational development and of effective international cooperation in education. The forum also offers an opportunity to present Japan's own experiences in educational development and its international cooperation in practice. This year's main theme comprised of two questions. Firstly, "what roles Japan has played in achieving the goal of the EFA in educational cooperation" and secondly, "how Japan can contribute in educational cooperation within the post-2015 education agenda (Education 2030)." The forum is jointly organized by the Ministry of Education, Culture, Sports, Science and Technology (MEXT), the Ministry of Foreign Affairs (MOFA), Hiroshima University and the University of Tsukuba. This event is also supported by the Japan International Cooperation Agency (JICA).

This year, JEF XIII was held at the conference room of the National Center of Science Building on February 24th 2016 in Tokyo. This year's forum which took place shortly after the agenda of Education 2030 being adopted in November 2015, focused on looking back at educational cooperation of Japan including initiatives and achievements taken by Japan to achieve the EFA goals from different perspectives involving the viewpoint of Japan, aid recipient countries and the international community. At the same time, the forum has laid insights on possible future directions of Japan's international educational cooperation in order to contribute to the achievement of the post-2015 education goals. In the morning session, two featured keynote speakers delivered presentations to the audience. The first keynote speaker, Mabel Imbuga, Vice Chancellor of Jomo Kenyatta University of Agriculture and Technology, Kenya and also Board Chair of RUFORUM Network was followed by a keynote speech from Hiromitsu Muta, Professor Emeritus of Tokyo Institute of Technology, Japan. A question and answer session followed, where numerous questions and comments were raised by the audience and the floor could discuss diverse issues freely with the keynote speakers. The afternoon session featured a panel session amongst four panelists who presented multiple viewpoints on "what roles Japan has played in achieving the goal of the EFA in education cooperation" and "how Japan can contribute in education cooperation after the 2015." The panel session was followed by an open floor discussion with questions, comments and answers involving the floor and the panelists. The entire forum came to a close after concluding remarks were addressed by the keynote speakers and the panelists. In total, more than 120 people participated in the forum including diplomats from many foreign embassies, various ministry officials, development cooperation agency representatives, university faculty members and students, NGO/NPOs, and the general public.

Keynote Speech by Mabel Imbuga (Vice Chancellor, Jomo Kenyatta University of Agriculture and Technology, Kenya and Board Chair of RUFORUM Network)

Professor Imbuga delivered a keynote speech entitled, "The Role of University Education towards Self-Reliant Development and SDGs -A Case Study of Africa (Engineering and Science)." Professor Imbuga presented a project which started in 1977 with the support of

the Japanese government through JICA for the development of higher education in the fields of agriculture, science technology and engineering at Jomo Kenyatta University of Agriculture and Technology (JKUAT). Various supports were provided by the GOJ through JICA, ranging from campus infrastructure, technical cooperation such as capacity building through training of staff, joint research activities as well as a variety of academic support including awards given to excellent students and networking with Japanese universities. Professor Imbuga stressed that although support by JICA ended in the year 2000, JKUAT has developed and is continuing to manage its own growth as one of the top-class universities in the fields of engineering and science. The student population growth from inception was slow reaching 2,068 in 1994 and improved attaining the 3,061 mark in the year 2000 and, this number increased to 40,200 in 2015. At the same time, the main disciplines of agriculture, engineering, architecture and science has also grown from 2,068 and eventually to 14,951 in the year 2015. This tremendous growth has overstretched the facilities such as lecture halls, workshops, laboratories, the water capacity and waste treatment. On the other hand, Professor Imbuga also noted some of the challenges lying ahead in engineering and science training. For example, she pointed out that there is a mismatch of curricula with the needs of the industry and it is now self-evident that engineering and science curricula needs to be linked with their practical results through a "hands-on" approach in the form of "lab-based education". On another note, Professor Imbuga strongly stressed the challenge in the lack of policies to implement gender parity in engineering training to tackle gender imbalance. At present, it is reported that the overall percentage of young women pursuing higher education in Africa in the disciplines of science, technology, engineering and mathematics (STEM) is relatively low with only 8% of female in the engineering workforce in Kenya. Having said that, Professor Imbuga stated that taking note of the global impact of women in sustainable development, there is urgent need to address the issue of perception and encourage more women to study engineering since women are well positioned to integrate engineering practice in daily lives and chores of citizens. Moreover, she stressed the need of universities in sub-Saharan Africa to markedly improve the standard of education by inviting in modern infrastructure and lavatories, and updating curriculum to accommodate market demands in order to achieve sustainable industrial growth within the region. JKUAT supported by Japanese partners already has various initiatives that can play a critical role in building the required capacity and linkage with other universities in Africa.

Keynote Speech by Hiromitsu Muta (Professor Emeritus, Tokyo Institute of Technology, Japan)

The second keynote speech delivered by Professor Muta entitled as "Evaluation of Japan's Education Cooperation Policy 2011-2015 and Future Perspectives: What Japan's Education Cooperation has Aimed for and Achieved" presented the overview and trends of Japan's education cooperation policy based on an evaluation of the policy paper of Japan's Education Cooperation Policy 2011-2015. Moreover, Professor Muta presented results of a survey conducted with Japanese foreign diplomatic missions through ODA task forces from 70 countries to assess priority areas of education between recipient countries and those of Japan. In summary of the survey results, Professor Muta addressed three major points. First, although priorities of the recipient countries and those of Japan differed in some areas, Japan made significant contributions in areas such as "safe learning environment", "high quality education" and "receiving international students and promoting exchanges". Second, nearly 40 percent of the countries said that they did not know about the policy positioned as a high-level policy for Japan's educational cooperation. And third, for such a reason, policy of Japan's educational cooperation was not sufficiently communicated to other donors or to the governments of

recipient countries. Professor Muta also presented the overall evaluation of the Japanese policy as a relevant policy in terms of its consistency in relation to Japan's high-level policy and related policies, consistency with development needs in recipient countries and international trends and issues. Also, the policy is considered relevant and consistent with Japan's educational cooperation policy using Japan's experience and technical advantages. The policy paper was also considered significant in the way that the policy clarified Japan's role in promoting inclusive education and basic education schools open to the communities as well as providing educational support to countries affected by conflict and disasters. Towards the end of the speech, Professor Muta stressed some of the underlying challenges in need for consideration throughout the process of policy formulation. For instance, he pointed out that that the policy should have been made known to relevant people in Japan before it was implemented and that efforts should have been made to obtain support from other aid organizations and from developing countries. Moreover, in term of monitoring and evaluation, it was noted that if mid-term evaluation had been conducted to check progress and clarify inhibiting factors, necessary measures could have been taken, and practical lessons could have been learned for formulating the new policy. In conclusion, Professor Muta addressed that in terms of Japan's new educational cooperation policy, "Learning Strategy for Peace and Growth" which was announced at the UN summit in September 2015, this new policy should be effectively communicated in Japan and abroad at the implementation stage to make it widely known. As such, this new policy will play an important role to obtain deeper understanding, support and promote closer ties both within Japan and abroad.

After the two keynote speeches were delivered, a question and answer session was held with the audience. Numerous questions were raised from the floor, especially those from universities in Japan, UK and South Korea. Main topics ranged from the success and failure factors of the Jomo Kenyatta University of Agriculture and Technology project and what the Japanese experts learned and gained from the project. Also, questions were addressed to Professor Muta on the details of the conducted survey including the methodology and the significance and relevance of the obtained quantitative data.

Panel Session

A panel session was held in the afternoon under the themes of "what roles Japan has played in achieving the goal of the EFA in education cooperation" and "how Japan can contribute in education cooperation after the 2015". Kazuhiro Yoshida, Director of the Center for the Study of International Cooperation in Education (CICE), Hiroshima University served as a moderator for this session. Four panelists provided the audience with perspectives and insights to the two themes touching upon the overall international trends of EFA to SDGs to concrete examples of JICA projects and programs at the national level, one from the Philippines and another from Bangladesh. The panelists represented Japan International Cooperation Agency (JICA), University of the Philippines, Ministry of Agriculture from the government of Bangladesh and Hiroshima University, Japan.

Kazuhiro Yoshida, Director of the Center for the Study of International Cooperation in Education, Hiroshima University, began the session by re-examining and re-confirming what the international community has aimed to achieve, by looking back at the EFA targets and the Dakar EFA Framework for Action which reaffirmed the Jomtien commitment and adopted 6 goals. Furthermore, Professor Yoshida explored the Education 2030 agenda in linkage with SDG Goal 4, to "ensure inclusive and equitable quality education and promote learning opportunities for all" and clarified the changing and constant emphasis on some areas of

education such as secondary education, numeracy, employment, decent work, university and sustainable development which have been additionally highlighted at Incheon and SDG 4. Professor Yoshida continued to raise issues for exploration by addressing four key points to the panel and the audience. Firstly, by comparing the changing agenda from EFA to SDG 4, is there a changing focus from access to quality with an emphasis on learning outcomes? Secondly, will the consistent emphasis on the right-based education have enough room to align itself within the SDGs framework vis-à-vis post-basic education and other skills? Thirdly, the question of the changing context in which educational development is pursued for poverty reduction and lastly, Professor Yoshida also questioned the role of education among an ever-broadening development agenda in terms of having a bigger role or holding a smaller space within the SDGs framework. Towards the end of the presentation, Professor Yoshida also discussed the trends of international education cooperation addressing the program-based approach, emphasis on results and expanded partnership in mind with Japan's contribution based on the country's comparative advantages.

Shyamal Kanti Ghosh, Secretary of the Ministry of Agriculture and Former Director General, Directorate of Primary Education of the government of Bangladesh was the second presenter, addressing his presentation in two parts. The first part of his presentation primarily focused on Bangladesh in terms of how the country has undertaken a number of measures to improve primary education since its independence and has made major progress in achieving access and gender equity. However, Mr. Shyamal pointed out that when it comes to quality education, student's learning achievement and reduction of dropouts, the government of Bangladesh has made a remarkable progress but still it is not at the expected level. The second part of the presentation consisted of a particular project involving JICA's cooperation named as the Primary Education Development Program (PEDP) integrating a sub-sector wide program with a view to improve the quality of primary education since 2005. Currently, PEDP III is running for the period of 2011-2017 to improve the quality of education at all levels of the primary education sub-sector after implementation of PEDP II. In relation to the EFA goals, Mr. Shyamal pointed out that JICA has been supporting as a technical assistant for primary education specially in achieving goal 2 (provide free and compulsory primary education for all) and goal 6 (improve the quality of education) in particular. Having said that, he noted that remarkable progress has been recorded in the enrolment rate, reached 97 percent in 2013 and comparing with the situation in 2008. Drop-out rate also came down to 20 percent in 2013 instead of 49.5 in 2008, which are vital indicators of universal primary education. On the other hand, Mr. Shyamal also addressed some of the remaining major challenges in dropouts and grade repetition resulting in over one-fifth of students who do not complete the five-year primary cycle. In terms of goal 6, Mr. Shyamal raised various combination of problematic factors which remain in the country, such as the pupil-teacher ratio and 80 percent of schools running double shifts which restrict learning time of students to generally improve the quality of education. In summary, Mr. Shyamal also noted that it is not merely a matter of accelerating current efforts but substantial rethinking is required for priorities in action in the immediate future and beyond 2015. He raised the need for review and assessment in PEDP III, implementation of skill development strategies and designing actions regarding the comprehensive ECD policy to offer new opportunities.

Soledad A. Ulep, Director of the University of the Philippines National Institute for Science and Mathematics Education Development (UP NISMED) continued the panel session by presenting examples of Japan's initiative on providing quality education for all through teacher professional development and curriculum development. She presented the project named as the Science and Mathematics Education Manpower Development Project (SMEMDP) which was implemented from 1994 to 1999. SMEMDP's goal was to enhance and upgrade the capabilities of science and mathematics teachers in the elementary and secondary schools

throughout the Philippines that would lead to the effective learning of science and mathematics. And this would be achieved through the training provided by teacher trainers trained at the UP NISMED Science Teacher Training Center (STTC). Activities of the project included dispatch of Japanese experts, technical training in Japan of UP NISMED staff, provision of equipment and materials needed for technical transfer. Other activities involved the conduct of national training programs for teacher trainers and the development of instructional materials by UP NISMED teacher educators using the knowledge and skills acquired through the technical transfer and training in Japan. The teacher trainers, in turn, trained teachers at the regional training programs. After SMEMDP, UP NISMED continued to develop instructional materials and conducted teacher training programs for countries such as Ghana, Kenya, Pakistan, and Nepal as well as from various parts of the country using the materials developed under SMEMDP. Dr. Ulep presented next, the involvement of UP NISMED in the APEC Lesson Study Project since 2006 through which, it has introduced lesson study in some schools and teacher education institutions to promote teaching mathematics through problem solving and teaching science through inquiry. She stressed that this Japanese professional development model, overcomes many of the limitations of the usual teacher training programs in deepening teachers' content and pedagogical content knowledge. Dr. Ulep pointed out that to empower teachers for the current Philippine K to 12 curriculum reform particularly in science and mathematics education through teacher professional development and curriculum development, it is important that future international education cooperation with Japan should focus on sustaining and scaling up lesson study. She also noted the need for joint research to explore what the teachers are learning through the lesson study.

The final presentation of the panel session was delivered by Nobuko Kayashima, Senior Adviser of Japan International Cooperation Agency (JICA) on "JICA's Education Cooperation –Providing More Opportunities for Learning Continuity-" Ms. Kayashima first of all presented an outline of the trends of JICA's educational cooperation from 2000 to 2015 in pointing out the increasing demand for quality basic education as well as the diversifying types of interventions in education extending to higher education and science, technology and innovations (STI). The presentation continued with Ms. Kayashima's address in exploring the changes observed from MDGs to SDGs at three levels. First of all, changes in the global environment with rising complexity of development issues and globalization as well as growth of emerging countries and disparities among developing countries. Second, she noted the changes in educational cooperation needs with growing demands for quality education, secondary and tertiary education. Third and in terms of Japan's context, she pointed out the changes in the ODA environment, especially with regard to the severe financial situation and ODA budget reduction. The latter half of the presentation consisted of introducing JICA's Education Position Paper 2015, illustrating JICA's four focus areas in education for the next five years. Ms. Kayashima in particular presented focus areas three and four which focused on education for knowledge co-creation in society and education for building inclusive and peaceful societies. Having said that, she stressed JICA's efforts to support higher education through rapid expansion of projects and programs to develop capacity of core universities and international collaboration. Moreover, support to the most marginalized and disadvantaged populations and post-conflict and disaster reconstruction in the education sector. In her concluding remarks, Ms. Kayashima addressed the greater proximity between international cooperation and Japan's own issues by introducing commonalities in development issues between developing countries and Japan. With regard to globalization, she pointed out that international cooperation conducted by Japan has actually brought positive impacts on the globalization of the Japanese society.

After the panel session finished with four presentations, Professor Yoshida moderated the session and opened up the floor for discussions, questions and comments with the panelists.

Series of questions and comments were received from the participants representing scholars as wells as students in Japan and abroad. Many of the topics focused on non-formal education and inclusive education in terms of how and why they were included in the SDGs formation process as well as assessment and issues of concern in Japan needing immediate consideration.

At the very end of the afternoon session, Professor Sakurai from Hiroshima University moderated the concluding discussion and kindly asked the keynote speakers and the panelists to summarize their reflections of the one day forum. Right after the concluding discussion, Professor Sakurai made the concluding remarks by quoting a proverb by William Arthur Ward as follows. “The mediocre teacher tells, the good teacher explains. The superior teacher demonstrates, the great teacher inspires.” She addressed to all the participants that this quote may provide new insights to reflect upon the theme of the forum on quality education and sustainable development.

The Role of University Education towards Self-Reliant Development and SDGs

- A Case Study of Africa (Engineering and Science) -

By Prof. Mabel Imbuga
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24th FEB 2016

JKUAT is ISO 9001:2008 certified

**********JKUAT Vision**********

To be a University of Global Excellence in Training, Research and Innovation for Development

**********JKUAT Mission**********

To offer Accessible Quality University Education, Training, Research and Innovation in order to Produce Leaders In the Fields of Agriculture, Engineering, Technology, Enterprise Development, Health and other Applied Sciences to Suit the Needs of a Dynamic World

**********JKUAT Slogan(Motto)**********

Setting Trends in Higher Education, Research and Innovation

Overview of JKCAT, JKUCAT and JKUAT

1977: Start of the Plan

1981 — **Middle Level College (JKCAT)**
First Intake of Students (Agriculture: Diploma Technology: Technician)

1988 — **University College (JKUCAT)**
Promoted to University (Degree of KU)

Japan's Cooperation

1994 — **Full Fledged University (JKUAT)**
Start of Graduate School (Master, Doctor of JKUAT)

2000

After — **At Present** — **2016**

Developed into one of the top-class universities in the fields of Agriculture, Science and Engineering in Kenya

Support by Japanese Government through JICA

with Deep Appreciation

Campus Infrastructure such as
- Construction of classrooms and offices
- Installation of modern equipment

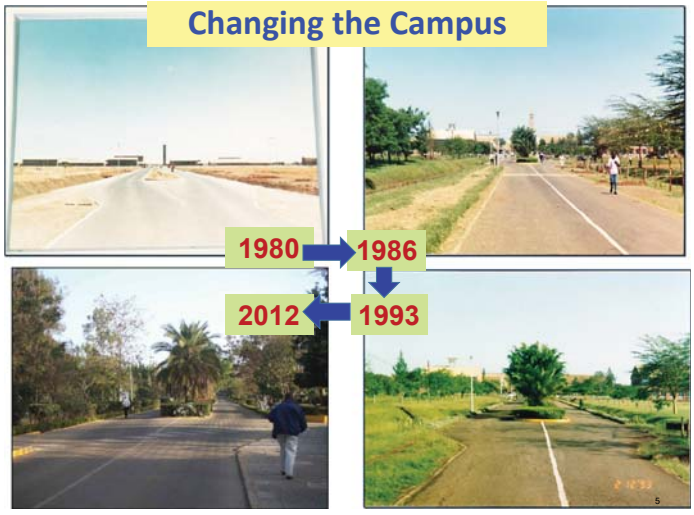
Technical Cooperation such as
- Capacity development of staff
- Joint research activities
- In-country training

A Variety of Academic Supports such as
- Babaroa awards to excellent students now run by the university
- Networking with Japanese Universities.

JICA (On-going)

- Eritrea Higher Education Support under JKUAT
- Socio-economic Empowerment Trainings for Women
- Renewable Energy (**Bright Project**)
- PAU under JKUAT (**AFRICA-*ai*-JAPAN Project**)
- etc.

Changing the Campus



JICA Experts at JKCAT

Experts dispatched by the Government of Japan

A Motto of JKUAT

<an example of JKUAT STUDENT PRACTICE-1 (B.Sc.)>

MONOZUKURI based on Creative Design/Drawing

A Japanese word (2 in one) meaning

Monozukuri

"products" — "process of making or creation"

- Requires **creative minds** and often related to **craftsmanship** evolved through **apprenticeship** rather than structured curricula
- Represents the **Japanese Philosophy;**
  "How to Make Things"

In the ability to;
- ✓ make things,
- ✓ good things,
- ✓ very well

Japanese MONOZUKURI, Design Thinking, Fab.Lab. 5S-KAIZEN,TQM・・・

An Overview of JKUAT (as of Dec.2015)

JKUAT Constituent Colleges (C.C.)

1) Taita Taveta,University College
2) Muranga University college
3) Kirinyaga University College
4) Co-operative University College

Full fledged universities from JKUAT C.C.

1) Mombasa Polytechnic University College
2) Meru University College of Technology (MUCT)
3) The Kenya Multimedia University College.
4) Kimathi University College of Technology (KUCT) in Nyeri.

Campuses outside main campus

1) Karen Campus
2) Westlands Campus
3) Nairobi Central Business District(CBD) Campus
4) Mombasa CBD Campus
5) Nakuru CBD Campus
6) Kitale CBD Campus
7) Kakamega CBD Campus
8) Kisii CBD Campus
9) Kisumu CBD Campus
10) Keiyan Campus
11) Arusha Centre (Tanzania)
12) Kigali Campus (Rwanda)

Juja
-Main campus-

Colleges/Faculties/ Schools

1) **College**
   - Engineering
   - Pure and Applied Science
   - Human Resource Development
   - Health Sciences
2) **Faculties:**
   - Agriculture
3) **Schools:**
   - Architecture and Building Science (SABS)
   - Law
4) **Academic Institutes**
   - Computer and Information Technology (ICSIT)
   - Institute of Tropical Medicine and Infectious Diseases (ITROMID)

Research Institutes and Outreach

1) Institute for Biotechnology Research (IBR)
2) Institute for Energy and Environmental Technology (IEET)
3) Sustainable Materials Research & Technology Centre (SMARTEC)
4) Institute of tropical medicine and infectious disease (ITROMID)
5) Water Research and Resources Center (WARREC)

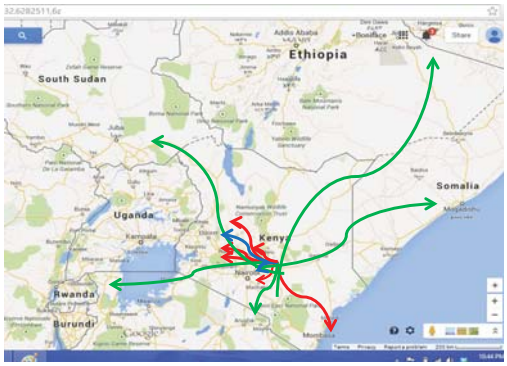
Production and Innovation Centers

1) Food Technology Center (FOTEC)
2) Chemistry Production Center (CPC)
3) Engineering workshops
4) Farm
5) Biotechnology labs

Summary about growth of JKUAT

- The student population growth from inception was slow reaching **2068** in **1994**. The growth improved attaining the **3061** mark in the year **2000** and eventually to **40,200** in the year **2015**.
- The main disciplines of Agriculture, Engineering, Architecture and Science has grown from **2068** in the year **1994** to **3021** in the year **2000** and eventually to **14,951** in the year **2015**.
- This tremendous growth has overstretched the facilities such as lecture halls, workshops, laboratories, the water capacity and waste treatment.
- Quality of Education was implemented by Lab.Based Education through Face to Face Cooperation/Collaboration between Japanese and Kenyan Staff.

Reaching Out Across Kenya and Africa



Relationship with Japan continues….

Japan Has Africa at Heart: JICA President Affirms

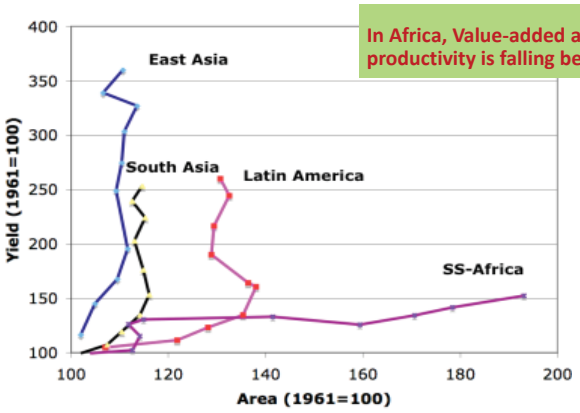
Posted on December 1, 2015 by Corporate Communications Office, JKUAT

Prof. Shinichi Kitaoka interacts with a section of JKUAT engineering students during his visit

Prof. Kitaoka (left) with Prof. Odhiambo (centre) at the modern farming demonstration stations explained by Prof. Shiomi, JICA Expert

1/Dec/2015 at JKUAT

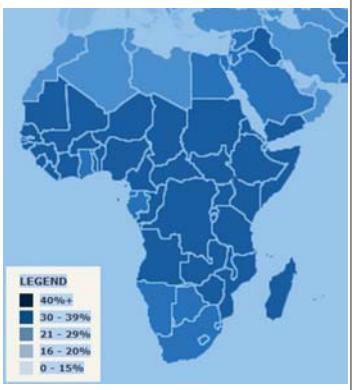
Productivity



In Africa, Value-added and productivity is falling behind …

African Population

- **Africa has more people under 20 years** than anywhere in the world
- Currently, the estimated **median age** in sub-Saharan Africa is **under 19 years**.
- In Sub-Saharan **Africa people aged between 15 and 29 will continue** to constitute about half of the population in most countries for the next 3 to 5 decades.
- Africa has and will continue to have **massive potential work force** that can drive development.



African Population under 15 Years Old
Source: Population Reference Bureau, 2015 World Population Data Sheet [http://www.prb.org]

SUSTAINABLE DEVELOPMENT GOALS

- **For Goal 4 (Quality Education) institutions of higher education and training will play a critical role**
- **Achievement of Goal 4 will contribute to realization of the other 16 goals**

SDG - Goal 4 (Quality Education) Targets

By 2030,:

- Ensure that **all girls and boys complete free, equitable** and **quality primary and secondary education** leading to relevant and effective learning outcomes
- Ensure that **all girls and boys have access to quality early childhood development**, care and pre-primary education so that they are ready for primary education
- Ensure **equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university**
- Substantially **increase the number of youth and adults who have relevant skills**, including technical and vocational skills, for employment, decent jobs and entrepreneurship
- **eliminate gender disparities in education and ensure equal access to all levels of education** and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations
- ensure that **all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy**
- Ensure that **all learners acquire the knowledge and skills needed to promote sustainable development**, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development
- **Build and upgrade education facilities that are child, disability and gender sensitive** and provide safe, non-violent, inclusive and effective learning environments for all
- substantially **increase the supply of qualified teachers, including through international cooperation** for teacher training in developing countries, especially least developed countries and small island developing States

By 2020, substantially **expand globally the number of scholarships available to developing countries**, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries

Engineering and Science

- Engineering and science constitute the engine for sustainable development, especially for Africa.
- Hence the need to enhance engineering and science education in Africa.
- With the youthful population and abundant natural resources that has recently attracted foreign interests, Africa stands at a crossroads in its development trajectory.
- Education and training, buttressed by technological advancements, are necessary tools for the continent to unlock its potential, and to set free the "African giant".

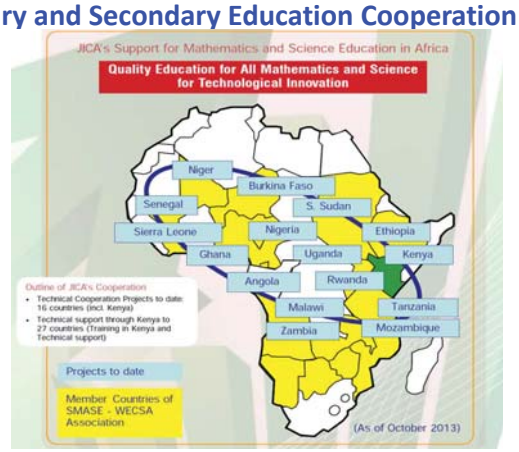
Situation of Engineering in Africa

Situation in Kenya: Case of Registered Engineers

Category	Males	Females	Totals
Registered Consulting Engineers	272 (98.2%)	5 (1.8%)	**277**
Registered Engineers	1298 (96.8%)	43 (3.2%)	**1341**
Registered Graduate Engineers	4974 (92.3%)	413 (7.7%)	**5387**
Graduate Technicians	1128 (98.5%)	17 (1.5%)	**1145**

- Local presence of foreign engineering firms who prefer to import their own skilled labor;
- Reluctance of the graduates to take up poorly paid positions in rural areas; and
- Shortage of engineering technicians who support the professional engineers. Generally, for the effective operation of the engineering industry, the ratio professional engineers to technicians should be of the order of 1:5 or 1:6. In Africa, however, this ratio is more of the order of 1:1 or 1:1.5

Primary and Secondary Education Cooperation by JICA



SMASSE Project (Secondary: 1998-2008):Strengthening of Mathematics and Science in Secondary Education
SMASE Project (Primary: 2009-2013): Strengthening of Mathematics and Science Education in Kenya
SMASE-WECSA (Regional Activity): Western, Eastern, Central and Southern Africa

Source: SMASE-WECSA ASSOCIATION Since 2001

Changing through SMASSE/SMASE Project

【Teacher】
- **Positive changing of teachers' attitude** (preparation of lesson plan/teaching materials, etc.)
- **Focus on more practical aspects** (experiment, hands-on and minds-on activities, group work, etc.)

【Student】
- **Improvement of attendance for classes**
- **Positive attitude and more interests for Math and Science**

【Class】
- Copy from blackboard
  ⇒ **Hands-on and Minds-on Activity by students**
- One way communication from teacher to students
  ⇒ **Participatory classes (student-centered)**
- Focusing on only theory
  ⇒ **More practical aspect with experiment**
- Ready-made equipment ⇒ **Improvisation, Localization**

Source: KENYA SMASSE/SMASE PROJECT (1998-2013)

Need for Engineering and Science Capacity

Africa is in dire need to expand her engineering and science capacity and capability:

- ⊛ for its infrastructural development in tandem with her growth trajectory;
- ⊛ for accelerating its industrial development, especially in manufacturing;
- ⊛ for producing its ever-increasing needs in terms of renewable energy to overcome the acute power shortages;
- ⊛ for empowering Africa to take control of the extraction industry of its rich natural resources; and
- ⊛ for sustaining agricultural productivity and the need for food security base;
- ⊛ for water harvesting in order to curb the challenges faced as a result of lack of water.

Challenges in Engineering and Science Training

- Insufficient output from the engineering and science training institutions to meet the countries' requirements;
- Lack of practical experience and skills of the graduates produced;
- Outdated equipment for training,
- Limited opportunities for industrial attachment and internship for engineering and science students and graduates,
- Mismatch of curricula with the needs of the industry
- It is now self evident that engineering and science curricula need to be linked with their practical results through a "hands on" approach in the form of "lab. based education"
- Lab. based education and Project based learning" which are common in Japan, that showcases the roles engineers play in developing solutions for contemporary issues.

Special features for SMASE/SMASSE

Continuous learning process by teachers through INSET to improve classes with the concepts of;

- **Participatory classes by students (student-centered)**
- **Practical-oriented (Experiment)**
- **Hands-on and Minds-on Activities**
- **Practice of ASEI-PDSI**

ASEI:
Activity (more focus on student activity)
Student-centered (to make student think)
Experience (including experiment)
Improvisation (develop teaching materials with utilizing of items around us)
PDSI:
Plan (Plan of Lessons)
Do (Practice of lessons)
See (Observation of lessons)
Improve

Engineering and Gender

- **Gender imbalance in engineering training**
- **With regard to gender imbalance, it is reported that the overall percentage of young women pursuing higher education in Africa in the disciplines of science, technology, engineering and mathematics (STEM) is relatively low, for example only 10% of the engineering workforce is female in South Africa and 8% in Kenya.**
- **Taking note of the global impact of women in sustainable development, there is urgent need to address the issue of perception and encourage more women to study engineering since women are well positioned to integrate engineering practice in daily lives and chores of citizens.**
- **There is also the challenge of lack of policies to implement gender parity**

Addressing the Engineering/ Science Education in Africa challenges

The future of engineering and science education in Africa lies heavily on strategic decisions evolved by the African people themselves within the African context. For a bright future, African governments/universities will have to:

- invest in modern infrastructure and laboratories
- update curricula to accommodate industry demands, while at the same time seeking to rationalize the requirements for accreditation of engineering/science programs by the regulating bodies
- re-orient teaching styles in engineering/science faculty from the current magisterial or masterly mode to the Project-Based Learning approach
- Closely linked to improving teaching methodology in engineering/science faculty is the need for pedagogical training of engineering lecturers as well as short-term attachment in industry to keep pace with advancements in technology and design.
- The faculty and study also require extensive use of state-of-the-art ICT in engineering/science education and training.

Addressing the Engineering/ Science Education in Africa challenges - University-industry linkages

- To keep pace with ongoing foreign investments in Africa, university-industry linkages is now paramount.
- These linkages may adopt several formats such as
  - involving industry in advising on curricula reform
  - inviting representatives or professional practicing engineers to serve as adjunct professors
  - provision of practical training to the students during industrial attachments and post-graduation internship
  - ensuring that final year projects are always laboratory or industry based.
- A collaborative approach and joint efforts by African governments, engineering/science education institutions and representatives is required to address the challenges
- To precede the above mentioned steps, African countries/universities will need to undertake a national assessment of both engineering/science capacity and needs. At some stage, joint accreditation of programs may be necessary.

Initiatives for improving Engineering Education in Africa

- **Tuning Africa Project (2012)** for curricula reform, involving over 20 African Engineering Faculties;
- **Africa-UK Engineering partnership (2010)** to promote collaboration among African-UK engineers e.g. in curricula reform;
- **UNESCO Engineering Initiative (2011)** to address major challenges in engineering education e.g. curricula reform, QA, accreditation;
- **African Engineering Education Association (2006)** to promote networking among engineering educators,
- **The Federation of African Engineering Organisations (2012)** to act as an umbrella body for all African engineers,
- AU funded **Pan African University of STI** at JKUAT,
- **African Women in Science and Engineering**, and
- **Nelson Mandela**

Promoting Digital Literacy (Examples of Initiatives)

❶ Government laptop project

- The Government of Kenya will provide primary school pupils with laptops at a cost of KSh 17 billion.
- Eight firms tendered to the Information and Communication Technology (ICT) Authority.

❷ JKUAT Contribution

- JKUAT designed a locally assembled laptop.
- JKUAT is one of the firms that tendered to supply laptops to schools

❸ Avallain digital learning programme

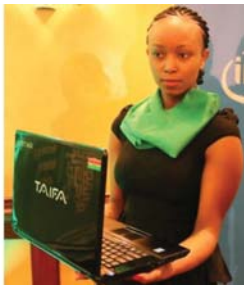
- 10,000 children in 200 schools across the country have so far been enrolled to an interactive digital content platform.
- The project aims at supplementing the government's efforts to promote digital content at the primary school level.
- Public schools and non-formal schools in urban and slum-based areas are target beneficiaries of the project dubbed a-Academy.
- The programme has so far seen the production of Science and English for primary school children.

Pupils in Valley View, Mathare slum, Nairobi, use the a-Academy content during a lesson. Source: The STAR Jan. 12, 2016 **[http://www.the-star.co.ke/news/2016/01/12/10000-kids-in-slums-join-digital-learning-programme_c1274086]**

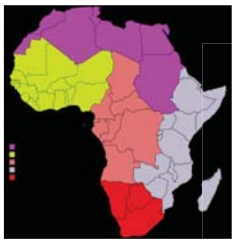
Taifa Laptop – Locally designed and assembled laptop

- JKUAT rolled out Taifa Laptop to the Kenyan market.
- The computing device was conceived and designed by JKUAT
- It was a maiden product of the **Nairobi Industrial and Technology Park (NITP)**

Prof. Mabel Imbuga (second left) takes Dr. Matiang'i through the Taifa Laptop as JKUAT Chancellor, Prof. Maloiy (second right) and Kiambu Deputy Governor, Gerald Githinji (left) follow



A model displays the Taifa Laptop during the event



African Union
a United and Strong Africa

Five themes critical to Africa's development:

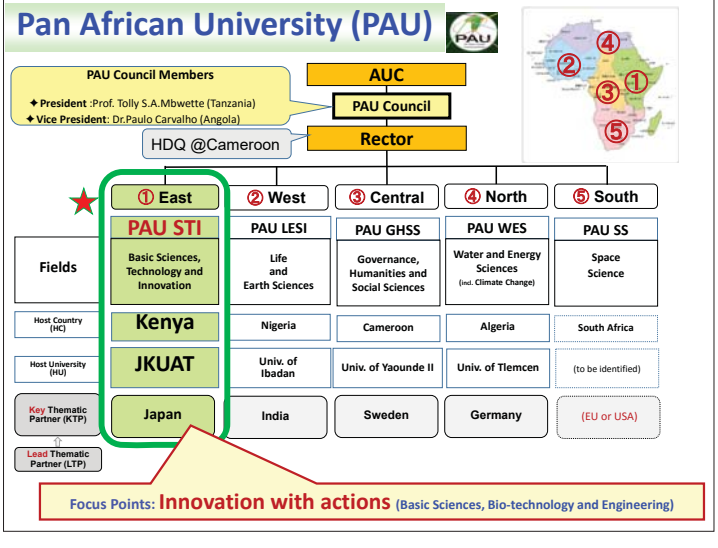
- **Basic Sciences, Technology and Innovation at JKUAT (Civil, Electrical, Maths, Molecular Biology and Biotech.)**
- **Water and Energy Sciences (including Climate Change), Univ. of Tlemcen in Algeria**
- **Governance Humanities and Social Sciences, Univ. of Yaounde II in Cameroon**
- **Life and Earth Sciences, University of Ibadan in Nigeria**
- **Space Sciences at Southern Africa**

PAU PAN African University
Life and Earth Sciences Institute
University of Ibadan

PAN AFRICAN UNIVERSITY
INSTITUTE OF BASIC SCIENCES, TECHNOLOGY AND INNOVATION

❑JKUAT was competitively selected to host PAUSTI. PAUSTI is one of the five institutes that form the Pan African University (PAU). The decision to establish PAU was made by the AU Heads of State and Government Summit in 2010, and the university enrolled its first students in 2012.

Pan African University (PAU)



Admissions

(As of Jan.,2016)

Level	Batch 1			Batch 2			Batch 3 (TBP)			Grand Total		
	F	M	All	F	M	All	F	M	All	F	M	All
MSc	8	48	56	14	32	46	12	43	55	34	123	157
PhD	--	--	---	6	16	22	12	33	45	18	49	67
Total	8	48	56	20	48	68	24	76	100	52	172	224

Batch 1 graduated in Nov. 2014 | Batch 2 : Currently 2nd Year | Batch 3: To be enrolled in 2016

Programmes

- Mathematics
  - Statistics Option
  - Computational Option
  - Financial Option
- Molecular Biology / Biotechnology
- Electrical Engineering
- Civil Engineering

Countries

Algeria	Eritrea	Niger
Benin	Ethiopia	Nigeria
Burkina Faso	Gambia	Rwanda
Burundi	Ghana	Senegal
Cameroon	Kenya	Sudan
Chad	Lesotho	Tanzania
Comoros	Liberia	Togo
Congo	Malawi	Uganda
DRC	Mali	Zambia
Egypt	Namibia	Zimbabwe

Students from 30 countries up to now

Joint Degree

Case of Mr. GULMA, Sadiq Abubakar, M.Sc. Civil Engineering (Environmental & ASAL)

Certificate No. 0035

The Pan African University and Jomo Kenyatta University of Agriculture and Technology

L'Université Panafricaine et Université Jomo Kenyatta d'Agriculture et de Technologie

jointly confer with all rights, privileges and obligations the degree of
conférent conjointement, avec tout les droits et privilèges, le diplôme de

MASTER OF SCIENCE IN CIVIL ENGINEERING (Environmental and ASAL)
MASTER ES SCIENCE EN GENIE CIVILE (Environnement et TASA)

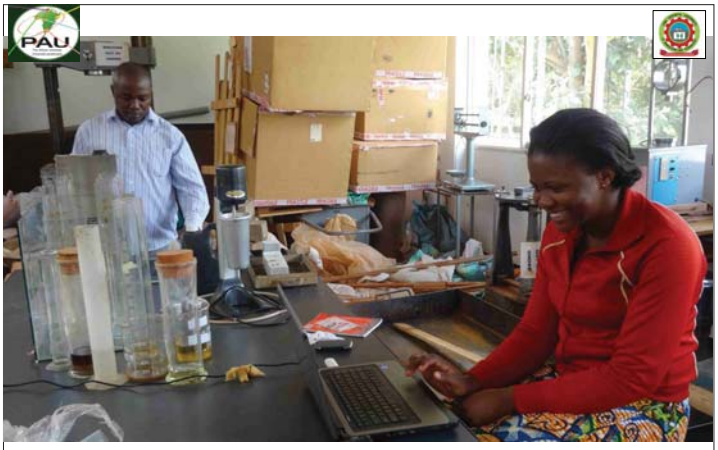
On
A

Sadiq Abubakar Gulma

who has satisfied all requirements for the award of the Degree
qui a satisfait a toutes les exigences requises pour l'obtention du diplome
at a congregation held at Jomo Kenyatta University of Agriculture and Technology on Monday the
lors de l'assemblée réunie à l'Université Jomo Kenyatta d'Agriculture et de Technologie
Twenty Fourth day of November in the year Two thousand and Fourteen
en ce Lundi Vingt-quatre Novembre de l'an Deux mille Quatorze

RECTOR, PAU / RECTEUR, UPA — VICE CHANCELLOR, JKUAT / VICE-CHANCELIER, JKUAT — DEPUTY VICE CHANCELLOR (Academic), JKUAT / VICE-CHANCELIER ADJOINT (Académique), JKUAT

Rector, PAU | VC, JKUAT | DVC(AA), JKUAT



PAUSTI Master Students at Civil Eng.Lab at JKUAT for Research Activities
(left: M2 student from **Uganda**, right: M2 student from **Cameroon**)
<July, 2014>

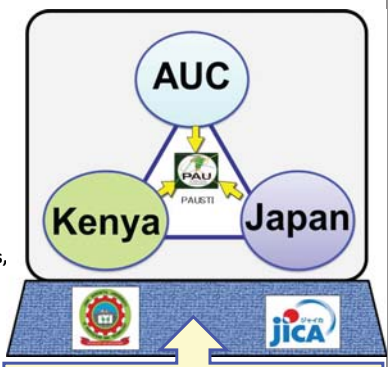
Africa-*ai*- JAPAN Project/JICA

Africa Union-*african innovation* - JKUAT AND PAUSTI Network Project

This project will strengthen the knowledge and skills in the fields of
- ♦agriculture,
- ♦engineering,
- ♦science, and
- ♦biotechnology

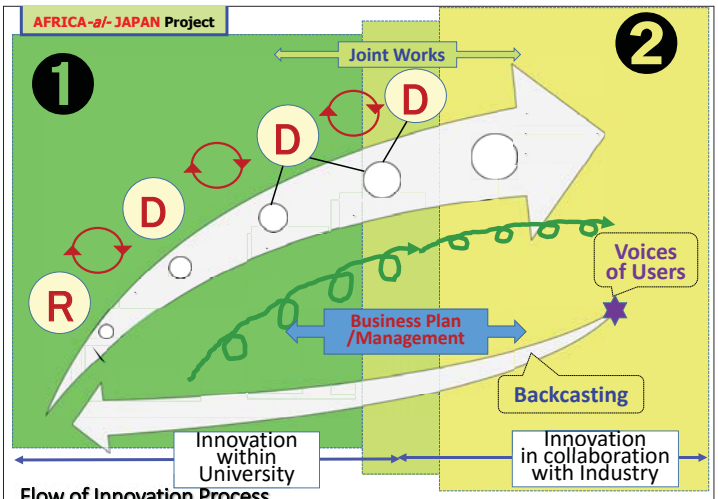
of both PAUSTI and JKUAT students.

"*ai*" is unique since it promotes the full utilization of **local/indigenous knowledge, resources, experiences and wisdom** generated and accumulated in Africa to solve Africa's problems.



AUC: African Union Commission
PAU: Pan African University
PAUSTI: PAU of Institute of Basic Sciences, Technology and Innovation

Stable Foundation of Research and Education towards African Innovation for PAUSTI/JKUAT Students and Staff



Flow of Innovation Process

R(Research) ⇒ D(Development) ⇒ D(Demonstration)⇒ D(Dissemination)

Africa-*ai*- JAPAN

Example of Research & Innovation Outputs

Completion of Motorized Block Press, and improved Manual Press

By Clement Nduati Nganga, Moses Njeru, Peter Ngugi

Addressing the gender disparity

Women's Training for 20 Years

Collaboration and Partnership

Joint Seminar
JKUAT and Okayama Univ. 19/Oct/2015

JKUAT Scientific Conference
Jointly organized with Japanese counterparts

University ⇔ Community(Farmers)

Examples of Innovation Activities at JKUAT

Biotechnology

Tissue-culture *Aloe vera*

Tissue culture banana seedlings

Oyster mushrooms

Engineering Technologies

Electrical Discharge Machine

Micro-hydro Power Generating Plant

"Pick and Place" Robot

Engineering Technologies

Tricycle-trailer

Fruit-pulper

Plant Mill

Screw Briquetting Machine

Value addition for enhanced food security

Addressing the Energy Challenge

BRIGHT Project

There are nine (9) on-going sub-projects for Appropriate Technology in energy:

Solar PV	1		
Small wind energy	2	Small hydro power	2
Biomass generation	3	Hybrid system	1
Total-9			

Portable Flexi-Biogas

Gasifier

Wind Mill & Monitoring Equipment

Small Hydrum

University ⇔ Industry

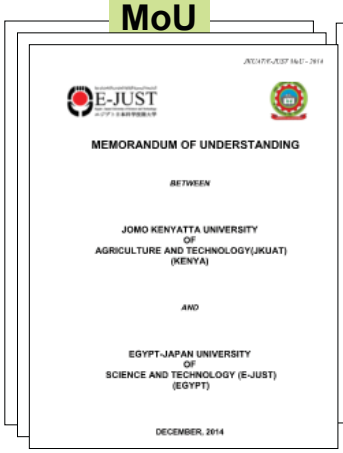
Joint Venture between JKUAT and NISSIN HD (May, 2013)

Kenya Oishii Project /Nisshin Foods Holdings

JKUAT Nissin Foods Limited @ JKUAT

University ⇔ University

MoU



MEMORANDUM OF UNDERSTANDING

BETWEEN

JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY (JKUAT) (KENYA)

AND

EGYPT-JAPAN UNIVERSITY OF SCIENCE AND TECHNOLOGY (E-JUST) (EGYPT)

DECEMBER, 2014

MoA

MEMORANDUM OF AGREEMENT

Findings and Messages/Comments on Japan's International Education in Africa

Merits/Uniqueness;

- Face to Face Cooperation
- Monozukuri and Hitozukuri
- 5S-KAIZEN
- Lab. Based Education
- Approach to encourage creativity towards African Innovation
- Capacity Development
  (System + Human Resources + Teamwork)

Challenges;

- Encouragement of Quality Japanese Approach
- Sustainability of Collaboration/Global Human Network

Concluding Remarks

- Sub-Saharan Africa is experiencing unprecedented economic growth by attracting significant foreign investment especially capital development.
- The foreign investment projects have to be undertaken by foreign skilled labor due to the acute shortage of domestic skilled labor especially in the areas of engineering and technology.
- Therefore there is a dire need for engineers in Africa.
- Concerted efforts need to be geared towards engineering and science education, training and practice.
- Universities in sub-Saharan Africa must markedly improve the standard of education if the region is to move beyond the stage of assembling products and achieve sustainable industrial growth.
- Engineering and science education and training, buttressed by technological advancements, are necessary tools for the continent to unlock its potential, and to set free the "African giant".
- With support from Japan, JKUAT is playing a role in addressing the challenge but we still need more institutions to meet the targets.

Thank you

Evaluation of Japan's Education Cooperation Policy 2011-2015 and Future Perspectives:
What Japan's Education Cooperation has Aimed for and Achieved

Hiromitsu Muta
Professor Emeritus, Tokyo Institute of Technology

2016.02.24

Japan's Education Cooperation

Roles of Japan's Coopera-tion in Education

Vision: Japan's contribution to international goals and remaining challenges
Cooperation with holistic vision of education
Achieving human security
Integrated approach including human rights, development and peace
Target: Japan will provide US$3.5 billion over five years from 2011 to create a quality educational environment for at least 7 million children (total of approximately 25 million children).

To maximize effectiveness
① Maximize Japan's comparative advantages on the ground
② Participate in policy-making process and provide medium- to long-term support
③Strategically apply aid resources
④Strengthen partnerships with the international community
⑤Link with other development sectors
⑥South-south and triangular cooperation
⑦ Strengthen results-oriented approach
⑧ Forge partnerships with actors in Japan
Monitoring and evaluation

Priority Areas

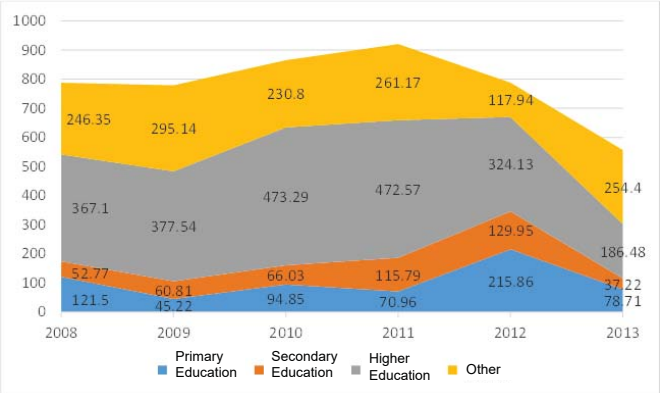
Quality Education for All		Knowledge-based Society	Education for Peace and Security
Improving the comprehensive learning environment • Quality education • Safe learning environment - School-based management • Openness to the community • Inclusive education (basic education)	Strengthening support for the fast-track initiative (current Global Partnership (GPE)) (basic education)	Promoting centers for vocational training and networks for higher education (post-basic education)	Educational support for countries affected by conflicts and disasters

Guiding Principles: 1) Support self-help and sustainable development, 2) Answer needs of marginalized populations, 3) Respect cultural diversity and promote mutual understanding

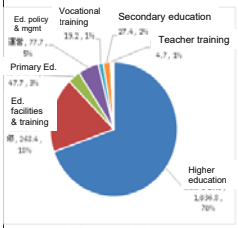
Related Japanese policies

- Former ODA Charter (2003), Development Cooperation Charter (2015)
- TICAD IV (2008), TICAD V (2013)
- 300,000 International Students Plan (2008)
- New Strategy to Counter the Threat of Terrorism (2009)
- Gender-related Initiatives
  - Initiative on Gender and Development (GAD) (2005)
  - Policy to support women in developing countries (2013)
  - The United States and Japan – Collaborating to Advance Girls Education Around the World (2015)
- Disaster Reduction Initiatives
  - Hyogo Framework for Action (2005),
  - Sendai Framework for Disaster Risk Reduction (2015)
  - Sendai Cooperation Initiative for Disaster Risk Reduction (2015)

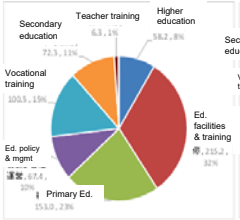
Japan's Cooperation in Education by Subsector (US$1 million)



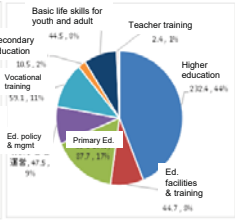
Japan's Bilateral Cooperation in Education from Fiscal 2011 to 2014
(US$1 million)



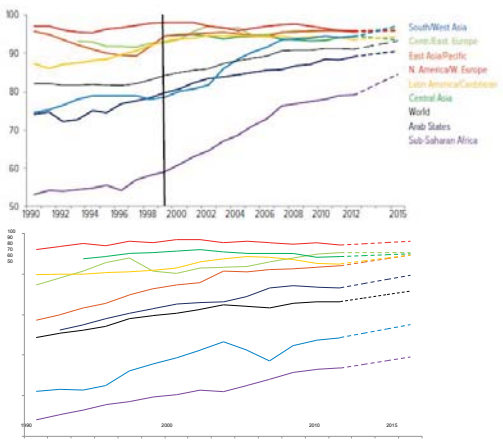
East Asia



Sub-Saharan Africa



South & Central Asia



Net primary enrolment rate by region

Net secondary enrolment rate by region

Cooperation in Basic Education

- High-quality education
  - Science and math education, curriculum reform
- Improving school management
  - Project to support school management, Schools for All
- Education open to the community
  - Literacy education, non-formal education
- Inclusive education
  - Training of teachers in special needs education,
  - project to promote education with equity and quality

Cooperation for Post-basic Education

- ASEAN University Network/Southeast Asia Engineering Education Development Network
- Development of Malaysia-Japan International Institute of Technology
- Grant Aid for Human Resource Development
- Japanese Government Scholarships
- Technical Education Improvement Project
- Vocational Training Center

9

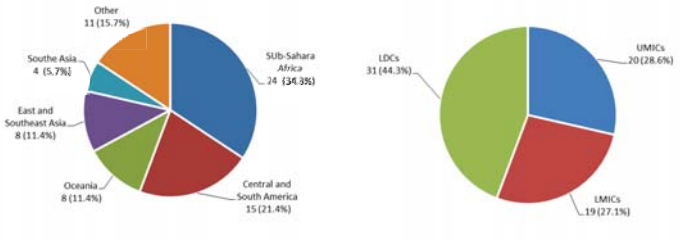
Educational Cooperation for Peace and Security

- Work closely with international organizations and NGOs on recovery assistance to provide an appropriate educational environment and to establish normality at education facilities.
- Support vocational and basic skills training to facilitate the reintegration of and income generation for ex-combatants and the internally displaced.
- Education not only builds a foundation for reconstruction but also prevents future conflicts.
- Implement literacy education and capacity-building of teachers in Afghanistan and other countries in cooperation with UN organizations and NGOs to prevent conflicts.
- Support disaster and mine risk education to empower people so that they can protect themselves from threats.

10

Survey on Japanese Foreign Diplomatic Missions with ODA Task Forces

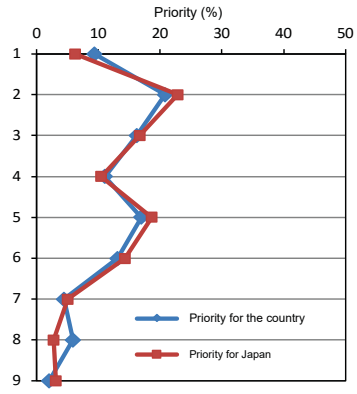
(Responses received from 70 countries. Breakdowns shown by region and income level)



11

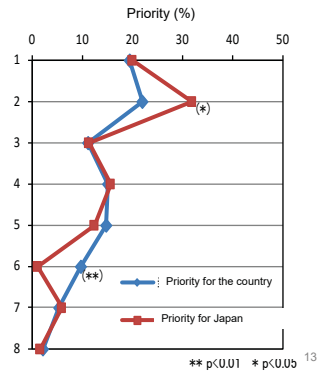
Priorities of Educational Sub-sectors (sample adjusted)

1. Preschool education
2. Primary education
3. Lower secondary education
4. Upper secondary education
5. Technical and vocational education
6. Higher education
7. Adults and non-formal education
8. Literacy education
9. Other



Priorities of Approaches in Basic Education (sample adjusted)

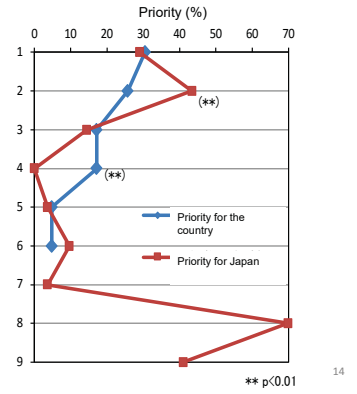
1. Quantitative expansion of basic education
2. Qualitative improvement of basic education
3. Gender parity in basic education
4. Parity other than gender parity (e.g. Urban-rural parity, ethnic parity)
5. Improvement of management in education
6. Strengthening of educational finance
7. Educational support for countries affected by conflicts and disasters
8. Other



13

Priorities of Cooperation Schemes in Basic Education (sample adjusted)

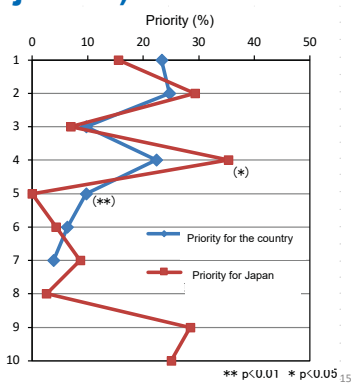
1. Grant aid
2. Technical cooperation/ technical cooperation projects
3. Cooperation through NGOs
4. Financial support
5. Loan aid
6. Other
7. Grassroots technical cooperation
8. Grassroots grant aid
9. Japan Overseas Cooperation Volunteers



14

Priorities of Cooperation Schemes in Post-basic Education (sample adjusted)

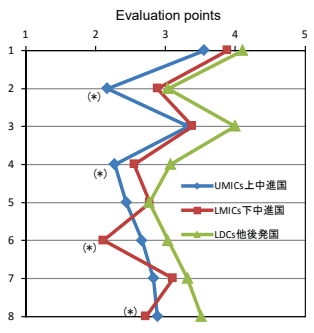
1.Grant aid
2. Technical cooperation/ technical cooperation projects
3. Cooperation through NGOs
4. Long tern training (including studying abroad)
5. Financial support
6. Loan aid
7. Other
8. Grassroots technical cooperation
9. Grassroots grant aid
10. Japan Overseas Cooperation Volunteers



15

Efforts to Improve Effectiveness of Cooperation Based on the Policy (by income level)

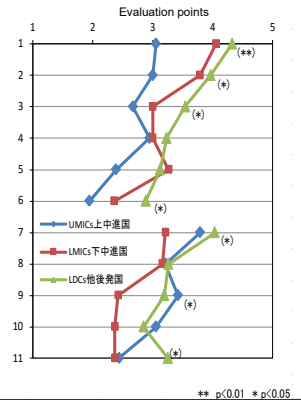
1. Cooperation using Japan's comparative advantages on the ground
2. Participation in the policy-making process and providing medium- to long-term support
3. Ensuring strategic application of aid resources in response to countries' needs
4. Strengthening partnership with various actors in the international community
5. Linking education with other development sectors
6. Promoting south-south cooperation and triangular cooperation
7. Strengthening a results-oriented approach
8. Forging partnerships with actors in Japan



* p<0.05

Japan's Contribution to Improving Education by Priority Area (by income level)

1. Basic education: Safe learning environment
2. Basic education: High-quality education
3. Basic education: Education open to the community
4. Basic education: Improvement of school management
5. Basic education: Inclusive education
6. Basic education: Strengthening support for GPE (former FTI)
7. Post-basic education: Accepting international students, promotion of exchanges
8. Post-basic education: Promoting centers for vocational training
9. Post-basic education: Strengthening key universities
10. Post-basic education: Promoting networks of higher-education institutions
11. Education for peace and security: Educational support for countries affected by conflicts and disasters



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Survey Summary

- Priorities of the recipient countries and those of Japan differed in some areas, but Japan made significant contributions in such areas as "safe learning environment," "high quality education" and "receiving international students and promoting exchanges."
- Nearly 40 percent of the countries said they did not know about the policy positioned as a high-level policy for Japan's educational cooperation. Only 30 percent of the countries said they positioned it as a high-level policy. This should be addressed.
- Probably due to this situation, the policy was not sufficiently communicated to other donors or to the governments of recipient countries.

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Summary of the Evaluation

- Relevance of the policy

  Consistent with Japan's high-level policy and related policies

  Consistent with development needs in recipient countries

  Consistent with international trends and issues

  Relevant as Japan's educational cooperation policy

Promoting educational cooperation using Japan's experience and technical advantages was appropriate.

It was significant that the policy promoted inclusive education and basic education schools open to the community and clarified Japan's resolve to provide educational support in countries affected by conflicts and disasters.

A comprehensive approach was pursued by collaborating with international organizations and NGOs. Assistance was provided through these channels as well.

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Effectiveness of Results

- Japan provided $3.62 billion (actual) in educational cooperation from 2011 to 2014. This already exceeds the $3.5 billion commitment stated in the policy.
- There were 27.86 million recipients as of the end of 2015.
- The amount of educational cooperation, however, decreased from $1.29 billion in 2011 to $570 million in 2014.
- Bilateral cooperation accounted for 93.9% of educational cooperation, while cooperation through international organizations was 6.1%. Effective cooperation was made in priority areas by capitalizing on Japan's strength in educational cooperation based on the policy.

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Basic Education

- Of the total expenditure on educational cooperation from fiscal 2011 to fiscal 2014, 11% was for primary education, 3% for secondary education and 1% for teacher training. In all, a little less than 15% of the total expenditure was for basic education.
- 47% was for high quality education, 20% for safe school environments, and 7% for improving school management.
- Efforts were made to create programs by combining different cooperation tools such as technical cooperation and grant aid.
- Direct financial assistance to the "common basket funds" was also implemented in the field of educational cooperation to address priority issues while enhancing the ownership of developing countries.
- Bangladesh has actively adopted a sector-wide approach.
- Efforts were limited in the area of supporting GPE (FTI), and the amount of assistance was small.

21

Post-basic Education

- Cooperation for higher education amounted to $1.64 billion (48% of the total amount for educational cooperation). Most of it was for supporting international students.
- Most of the projects for higher education were for developing individual universities (45). Four projects were related to promoting university networks. Many projects were for Southeast or East Asia.
- AUN/SEED-Net has had solid results in Asia. Development of other universities was also supported in Asia and Africa so that they will become key centers for university networks.
- Through the "300,000 International Students Plan" and other initiatives such as international student projects using yen loans, JDS and ABE Initiatives, the number of international students has increased. University exchanges were also promoted through the A-A dialogue.

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- $220 million (7%) was provided for vocational training.
- Centers for vocational training were developed, emphasizing local needs and using the expertise and knowhow of Japanese vocational training. Third-country training and south-south cooperation contributed to improving vocational training in the region.
- 25 projects for education for peace and security were implemented during the term of this policy to provide educational assistance to countries and regions affected by conflicts and those in the process of post-conflict peacebuilding.
- A total of 99 projects were implemented for educational cooperation through the Grant Aid for Japanese NGO's Projects and the Japan Platform.
- Large-scale assistance was given to Myanmar for areas destroyed by flood and to Nepal following the earthquake in collaboration with international organizations to provide a safe and secure educational environment to children in the affected areas as soon as possible.

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Appropriateness of the Process

- The policy was formulated through discussions among the MOF, MEXT, JICA and its experts, academia, NGOs, international organizations and others.
- Many said that the policy should have been made known to relevant people in Japan before it was implemented and that efforts should have been made to obtain support from other aid organizations and from developing countries.
- The fact that the policy referred to monitoring and evaluation in the end was highly regarded, but if mid-term evaluation had been conducted to check progress and clarify inhibiting factors, necessary measures could have been taken, and practical lessons could have been learned for formulating the new policy.

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Diplomatic Significance and Impact

- Supporting human resource development in developing countries deepens human exchanges and mutual understanding and contributes to enhancing trust in Japanese education and technology.
- Developing human resources in industry through vocational training and higher education not only helps improve infrastructure needed for economic growth of developing countries but also prepares an environment for Japan to promote its overseas investment. It also helps to invite excellent people to Japan.
- The policy was implemented while the post-2015 development agenda was being discussed. Japan made commitments at international conferences on educational development based on its experience of educational development and the results of past activities. Japan also promoted ESD and hosted an international conference. These activities had boosted Japan's standing in the international community.

New policy

- Japan's new educational cooperation policy, "Learning Strategy for Peace and Growth," was announced at the U.N. summit in September 2015 when the 2030 Agenda for Sustainable Development was adopted.
- The new policy should be effectively communicated in Japan and abroad at the implementation stage to make it widely known. It should play an important role at the policy level to promote closer ties with international organizations, NGOs and other aid organizations and to obtain a deeper understanding and support in Japan from private enterprises, educational institutions and the general public.

26

Questions and Answer Session with Keynote Speakers

Q1.

Kenneth King (Professor Emeritus, University of Edinburgh)

I have a question for the Vice Chancellor. If I was a staff member of JICA, I would be very happy to have heard this speech by Mabel because I think Japan was mentioned in almost every slide of Mabel and some people here might therefore think that JKUAT might mean Japan-Kenya University like Egypt-Japan or Malaysia-Japan, rather than Jomo Kenyatta. So my question to you, Mabel, is what do you think about all the people who have come from Japan to your university including volunteers, professors and people on different trips. What have they gained from Kenya in terms of research expertise and also in terms of globalizing their university back in Kyoto or wherever? Since Japan believes in a mutual collaboration, I wonder what you think they have gained from you and Kenya as opposed to the very nice things that you generously said that you have gained from Japan.

Q2.

Seiji Utsumi (Professor, Kyoto Women's University)

Prof. Imbuga, Prof. Muta, thank you for your wonderful lectures. In Prof. Imbuga's presentation, I was particularly impressed to hear her pay special attention to the increase in women students. The university is a scientific and engineering university, but it is encouraging to hear that the number of women students is increasing. Last year, I went to Kakuma Refugee Camp in Kenya. I am concerned about the very small number of girls at the primary and secondary schools there. I'd like to ask Prof. Muta a question. In your lecture, you did not say much about gender consideration. What do you think about the past evaluation and about the future?

Mabel Imbuga (Vice Chancellor, JKUAT, Kenya /Board ChairRUFORUM Network)

Thank you for those questions. I will start with the question of University of Edinburgh. I'm sure you had a wonderful experience in Nairobi and it is different one from JKUAT. I would like to say that the Japanese experts have benefitted a lot from Kenya and they learned a lot about indigenous knowledge and they identified a lot of research areas so it also empowered them in terms of research they could do and it enriched them because Africa has rich natural resources and also indigenous ideas, so they did benefit. And of course most of all they benefitted from the tourism in Kenya. The wonderful beaches in Mombasa and the animals within their park and of course, their experience of Masai Mara. You need to experience them yourselves. And of course, they got many many friends because Kenya is a very very friendly country. And friendship is always eternal.

And for Prof. Utsumi, what JKUAT is doing to increase the women especially in secondary schools is that we have programs where our students go to secondary schools, especially the girl's schools. We have got boys and girls going to the secondary schools to tell them how they themselves experienced and how they can study hard. The problem is mainly mathematics in those schools. But enrollment is entirely parents issue which needs a government intervention and now the Kenyan government has put measures in place. If any parent is found with a child

at home who should be going to school but is not going to school, then the government speaks with those parents. So in terms of women going to school, it is a government intervention because the government does put in place enough secondary schools and so there is no excuse for girls not to go to schools. And the government is also going further to make primary education free and also secondary education free, so there is no excuse why girls should not get to school.

Hiromitsu Muta (Professor Emeritus, Tokyo Institute of Technology)

With regard to the relationship between educational policies and gender, as I explained in some of the earlier slides, the Education Cooperation Policy includes gender-related initiatives. I don't think there were many projects focused on girls' education, but the evaluation says that girls' education was considered in each project.

Q3.

Mammadova Aida (Kanazawa University International Student Center)

I have two questions and one comment. First, I would like to thank Imbuga Mabel for the very nice presentation from Kenya and I was wondering about the evaluation system of your university. So, after students finish their graduate schools or any kind of field, how you evaluate them, by examinations or they write something? My question also goes to my comment while I am asking this because you asked about the teacher's methodology in Japan. And the score system appears to be useless in our 21st century because students are going in only one-minded direction to get scores in their tests and it's finished. So there was a case study in Shimane prefecture with the Oki islands. The island suffered with a difficult situation so the high school teachers decided to make some reform and renovation in their education system and they decided to create a problem solving education system which is relied only on critical thinking and creative thinking. So you give problem to the students, you don't need any scores and you don't need any evaluation, you just need their creativity and you need their critical thinking methods. And the project was very successful because some of their students even made the small policies and those policies were implemented in their local government. So this was my question and comment.

And my second question is for Muta sensei. Thank you very much for that important information. The number of international students at Kanazawa University has also greatly increased, and the university is accepting many more students from overseas. But the great majority of teachers who teach international students have not had any teacher training at the international level, and they don't know how to teach those students. Are there any such training programs in Japan?

Mabel Imbuga (Vice Chancellor, JKUAT, Kenya /Board ChairRUFORUM Network)

Thank you Aida for your question. You requested about our evaluation system. Our evaluation system is through examinations. But those examinations are very different from what you probably are thinking about because 30 percent of them come from continued assessment tests. We have about three of them in a semester. Their hands-on-experience is also evaluated and added onto that 30 percent. When they go to the industry for academic trips, they have a

notebook where the people in their industry evaluate them and give them a mark. So all of them forms 30 percent. Then 70 percent comes from the actual examination. So the students know that they have to take the practical sessions very well and also when they go out on academic trips, they have to make sure that they take it seriously because they know that they have to write reports and also where they visited, they are also evaluated. Thank you.

Hiromitsu Muta (Professor Emeritus, Tokyo Institute of Technology)

Thank you for your good question. It is rather difficult to answer, but the biggest benefit of inviting international students to Japan is that they understand Japan, acquire knowledge, learn about technology among other things, and go home to contribute to the development of their own countries. But it is also important to recognize that accepting international students also contributes to the internationalization of Japanese students and teachers, which has already been mentioned. I hear that students in Japan tend to be inward-looking and do not want to go abroad. International students help these Japanese students understand that they will have to cope with the internationalized world after graduating. I think this is one of the biggest benefits. Your question was what to do with the teachers who are not internationalized but have to teach these international students. I'm not from the MEXT, so I cannot give you a precise answer, but I am aware of the issue. I think there are various measures in place to internationalize faculty members. One of the simplest measures is to use grant application systems. Recently, universities are trying to obtain various grants for their projects from the national government. Without obtaining grants for special programs, it is difficult for universities to manage. All universities want to get grants to supplement their budgets. In order to apply for these grants, there are conditions, one of which is the ratio of faculty members who have studied overseas for more than one year. If this ratio is low, universities cannot get many grants. They can increase the ratio by increasing international teachers or hiring Japanese teachers who have obtained degrees overseas. They can also hire Japanese teachers who have obtained degrees in Japan but have received training or have done research abroad for one or two years. By using grants as incentives, the MEXT has introduced a system to provide more funds to universities with more faculty members with sufficient international experience. It will take time, but I'm sure the situation will change gradually. It may offend the faculty members if I say this, but I don't think it's easy for older teachers to teach in English even if they are requested to do so. Nowadays when universities hire young teachers, they hire those who can teach in English or who can give appropriate guidance to international students. This is done at every university. It may take time, but in the long run, I believe university faculty members will be internationalized. There are many university teachers here today. I hope what I said was correct.

Q4.

Bong-gun Chung (Research fellow, Instructor, College of Education, Seoul National University/ Visiting Professor, CICE, Hiroshima University)

I'm from Korea, Seoul National University, but currently, I am staying in Hiroshima University for 2 months as a visiting scholar. My questions are in a way foolish or more critical. It's not responses of Hiroshima University but me from Seoul National who raised questions like this.

First of all, about JKUAT, I was impressed and really admired the strenuous effort from Japan and yourself. But my question is, what is the current state of independence in terms of the

revenue structure after the funding from JICA was stopped. And the other one is, how about your graduates? Are graduates all employed or are they still seeking jobs? Because in many cases in higher education, graduates are not in an easy position to find jobs. So my question to Kenya is revenue structure and the employment of graduates.

The other questions about a research methodology are for Professor Muta. First of all, how many respondents are in your research? The number of country is 70, but how many individual respondents are there? Second, what is your rationale for significant test to the subjective responses of the individuals and who is checking questions for Japan's priority. Is it the people in the recipient countries or Japanese government people? It's a methodological question of mine. Thank you.

Mabel Imbuga (Vice Chancellor, JKUAT, Kenya /Board ChairRUFORUM Network)

Thank you for that question. Yes, JICA support ended in the year 2000 and you can see that JKUAT is still there. First of all, because we are a public university, the government gives 27 percent of our funding and the other 73 percent is generated by the university. And because we are the University of Technology and we have very many professionals especially in engineering, electrical, and ICT, we form the consortium. So a lot of our staff also do a lot of consultations and they bring money to the university. For example, for every staff, they are supposed to spend 30 percent teaching, 30 percent research, 30 percent consultancy and community engagement, and 10 percent in other things. So every staff knows that they have to be involved in consultancy. At the same time, we have learned a lot from JICA. They taught how to write fundable proposals. So our researchers do write proposals that are funded and we access funding from all over--Bill Gates Foundation and Inter-University Council of East Africa. So quite a lot of money is also brought in through our staff, through research grants. And then, we have self-sponsored students through fees because in JKUAT, we have both government sponsored students and self-sponsored students. So that brings us quite a bit of funding that makes the university run very well. We are also linking up with industry and to commercialize our innovations. One industry I mentioned, that is the Nissin noodles industry. We are making Nissin noodles. If you go to any supermarket, you find those noodles and see Kenyans picking them, especially the young people. Kenyans have changed their ways of life, they now try to start cooking and they will try picking those noodles and eat. So they are changing their eating habits in Kenya. We are looking forward to linking up with more industries so that we can commercialize our products. And that is why the ai (African innovation) project is very important for us. Through the Bright project, we are making biogas which can also bring in money. We are making solar panels by interacting with the local industry and when we sell, we get a bit of money. So if you have other ideas for us, we are ready to receive and to try and to see how we can have many revenue streams to bring to our university.

The other one was where do our graduates go. Our graduates in fact access the job market in Kenya better than any other. If you have 10 students being interviewed, 8 of them will be taken from JKUAT. So they pick the JKUAT graduates fast because they know that JKUAT graduates have adopted the hard work from the Japanese culture. They are also very intelligent with hands-on experience. I give you only two examples, the current principal secretary of public works is graduate of JKUAT. And you can see that they are in all sorts of areas of leadership. In fact, out of the universities in Kenya, about 15 of them are Vice Chancellors who were students or staffs from JKUAT, which means are accessing the market very well. And they are not taking it for granted but they are taking it a bit further. That is why we are saying that we need to link

up with academia and industry so that now we can improve even the uptake of our students through the student attachments to the industries, through apprenticeship and through the others. And also, our final year students, we given them 2 units in entrepreneurship, so that our students should not just go look for jobs but they should be able to set up their own businesses in their relevant areas and also employ others. So you want them to be job creators rather than job seekers. Thank you.

Hiromitsu Muta (Professor Emeritus, Tokyo Institute of Technology)

I think the question is on the questionnaire sent to the ODA task forces. Responses were received from 70 countries out of 95. We sent the questionnaire to 95 foreign diplomatic missions and received responses from 70, so the response rate was high. ODA task forces have been established at embassies and other foreign diplomatic missions. They are usually composed of staff members of embassies and of JICA. In every ODA task force, at least one person from the embassy and one from JICA are in charge of education. In some cases, two or three more people work with them in the area of education. So, I know that two to five people from a task force jointly answered the questionnaire. Usually this kind of questionnaire is not completed by one person, so the responses were official responses from these task forces jointly given by about two to four people. Therefore, they can be trusted. With regard to priorities, I'm sorry I didn't explain in detail in my presentation. For example, if there were 10 options, we asked which ones they thought had a high priority. We asked them to choose whether these options were of a high priority or not. Then we calculated the ratio. For example, if an ODA task force said that all 10 of the options had a high priority, then the priority ratio of each item was 10 percent. If they chose two, then the priority ratio of each item was 50 percent. In this way we calculated all the responses and came up with these results.

Q5.

Shyamal Kanti Ghosh (Secretary, Ministry of Agriculture, Government of Bangladesh)

My question is to Professor Muta. If you take a look at the third slide, the priority areas of Japan's education cooperation are basic education and post-basic education. Whereas when we look at slide 5 and 6, the more fund goes for higher education and not primary or secondary. And in slide number 6, the figure reflects that proportion of allocation in primary and basic education in East Asia is less than Sub-Saharan Africa and South and Central Asia. What is the reason behind that? Is the allocation raised in primary education because you are trying to target 7 million children out of 25 million? Could you please explain.

Hiromitsu Muta (Professor Emeritus, Tokyo Institute of Technology)

I think the question was why the funding for higher education is much higher than that for basic education. Inviting international students to Japan costs a lot of money. One student stays for two years, so it costs about 10 million yen for each. For 10 international students, it costs about 100 million yen. With that much money, we could implement a small project. As you can see, inviting international students is a very costly project, but it is important, and it must be continued. When we consider the cost benefit, we cannot really say that projects with more funding are better than those with less funding. We must combine various schemes in order to

accommodate the needs of each developing country at the time. As the slides show, the biggest reduction in funding has been made in the area of higher education, which is the most costly. Compared with that, the funding for primary education has not been reduced that much. Particularly, in 2012, the ratio of funding for primary education was significantly increased. So I understand that funds are allocated in line with the policy.

Q6.

Phonedamdeth Souksakhone (International Christian University)

I have one question concerning Professor Muta's presentation. It is about service and deliver. I noticed that the difference is more between recipient countries and their priorities, so some countries may be in line with Japan's priority. And it seems to me that it is more competitive in the recipient countries in the same region. My question is in terms of submitting proposals for ODA. What are ways to screen or evaluate such proposals from those countries in the same region due to certain budget of ODA. Thank you.

Hiromitsu Muta (Professor Emeritus, Tokyo Institute of Technology)

I didn't quite understand your question. Which policies are formulated is based on recipient country's situation which is varied by country to country. Given that, such a figure came out, so I cannot give an appropriate answer to your question.

Q7.

Takako Yuki (Global Link)

Thank you for your presentations. I would like to ask Prof. Muta one question. With regard to educational policy through 2015, I think you said that the funding was determined hastily yet it was good to have such a target. You also gave high marks to the funding for the FTI. I'd like to ask you what you think about the new policy for the next term.

Hiromitsu Muta (Professor Emeritus, Tokyo Institute of Technology)

In light of past experience, I think the new policy is quite well formulated. The policy should not be just words on paper discussed in meetings but be implemented, learning from the lessons of the past. So, how it can be implemented must be considered. For example, in addition to overall goals, specific guidelines are needed. When a project is adopted, there must be a clear explanation of how the project supports the policy, and if it does, which part of the policy it supports. If new projects on educational cooperation are implemented accordingly, I believe the policy will be effective.

FROM EFA TO SDG4

The Changing Agenda and Japan's Contribution

Japan Education Forum 2016
Kazuhiro Yoshida
CICE, Hiroshima University

What have we aimed to achieve?

Jomtien FFA

Meeting Basic Learning Needs

UDHR 1948 "everyone has a right to education"

More than 100 million children have no access to primary schooling

Countries may wish to set their own targets for the 1990s in terms of the following proposed dimensions

1. Expansion of early childhood care and developmental activities, --- *especially* for poor, disadvantaged and disabled children;
2. Universal access to, and completion of, primary education (or --- "basic") by the year 2000;
3. Improvement in learning achievement ---;
4. Reduction of the adult illiteracy rate --- to one-half its 1990 level by the year 2000, with sufficient emphasis on female literacy ---;
5. Expansion of provisions of basic education and training in other essential skills required by youth and adults, --- with program effectiveness assessed in terms of behavioral changes and impacts on health, employment and productivity;
6. Increased acquisition --- of the knowledge, skills and values required for better living and sound and sustainable development, --- with effectiveness assessed in terms of behavioral change.

Dakar FFA

Reaffirmed Jomtien commitment and adopted 6 goals:

Goal 1 Expanding and improving comprehensive early childhood care and education, esp. for the most vulnerable and disadvantaged children.

Goal 2 Ensuring that by 2015 all children, particularly girls, children in difficult circumstances and --- ethnic minorities, have access to, and complete, free and compulsory primary education of good quality.

Goal 3 Ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life-skills programmes.

Goal 4 Achieving a 50 per cent improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults.

Goal 5 Eliminating gender disparities in primary and secondary education by 2005, and achieving gender equality in education by 2015, ---.

Goal 6 Improving all aspects of the quality of education --- so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills.

Education 2030 = SDG4

'Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all'

Target 4.1: By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes

T 4.2: By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education

T 4.3: By 2030, ensure equal access for all women and men to affordable and quality technical, vocational & tertiary education, incl university

T 4.4: By 2030, substantially increase the number of youth and adults who have relevant skills, --- for employment, decent work and entrepreneurship

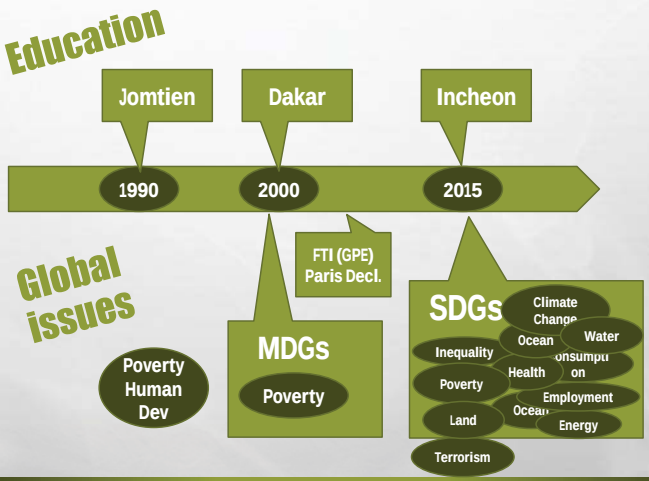
T 4.5: By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training ---

T 4.6: By 2030, ensure that all youth and a substantial proportion of adults, --- achieve literacy and numeracy

T 4.7: By 2030, ensure that all learners acquire knowledge and skills needed to promote sustainable development, --- through ESD ---

Changing (?) or Constant Emphasis

Jomtien Meeting the Basic Learning Needs	Dakar	Incheon SDG4 Inclusive and equitable quality education
1. ECCD	1. ECCE	2. ECDC
2. Primary education universal access, completion	2. Primary education access, completion, free and compulsory	1. Primary & Secondary Ed Complete, free, learning outcomes
	5. Gender parity and equality	5. Gender parity
3. Learning achievement	6. Quality of education, learning outcomes	(included in 1.)
4. Adult literacy	4. Adult literacy	6. Adult literacy and numerary
5. Youth and adults; basic education & skills	3. Young people and adults; learning & life-skills	4. Youth and adults, skills, employment, decent work 3. Tech.voc & University
6. Knowledge, skills & values for sustainable development		7. Knowledge and skills for sustainable development thru ESD

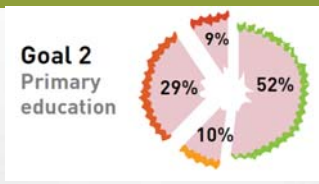


Issues for Exploration (1)

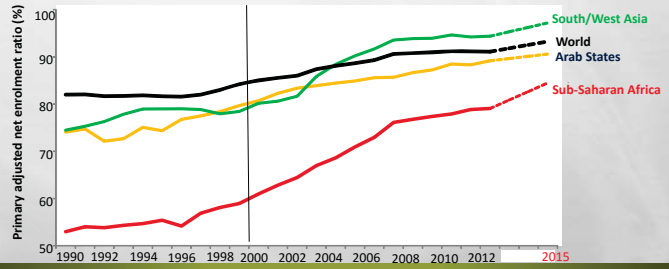
- **Changing Focus from Access to Quality (?)**
  - Remaining equity and inclusiveness vs learning
- **Consistent emphasis on Right-based education**
  - Does this hold in SDGs framework?
    vis-à-vis post-basic and skills
- **Changing context in which educ development is pursued:**
  poverty reduction, → MDGs (8) → SDGs (17)
- **Smaller space (or bigger role) of education among ever-broadening Development Agenda**
  - Is this good or bad?

What have we achieved? and how?

EFA GOAL 2: JUST HALF OF COUNTRIES REACHED THE GOAL



This was the most prominent of the EFA goals
Yet, despite progress, just over half of countries have reached universal primary enrolment

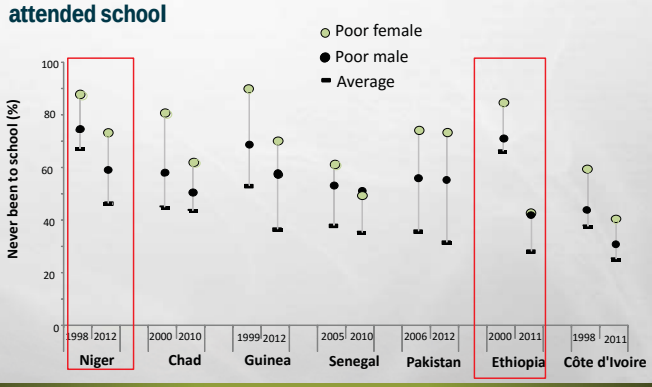


Source: UIS database; Bruneforth (2015).

Source: UNESCO

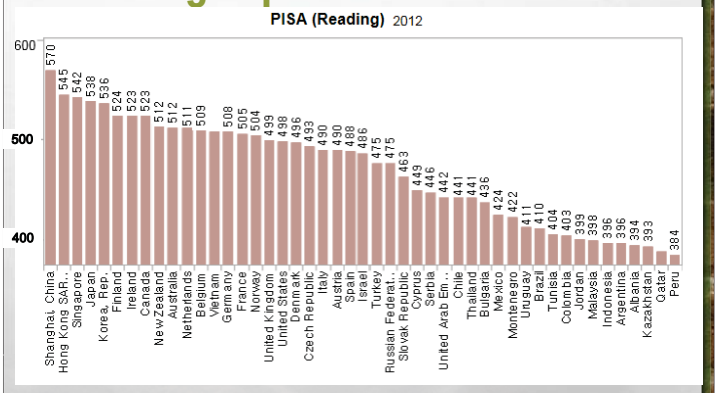
EFA Goal 5: Disadvantages persist and overlap

The poorest girls continue to be most likely never to have attended school



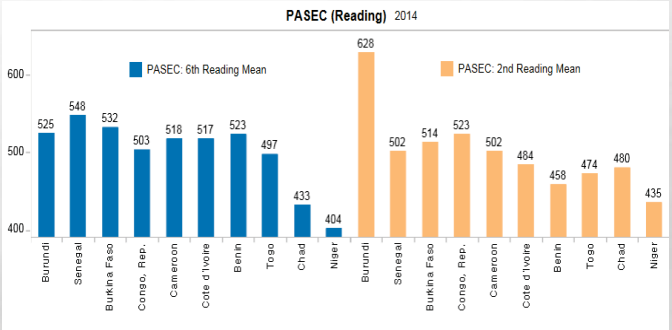
Source: UNESCO

Learning Gap - Global



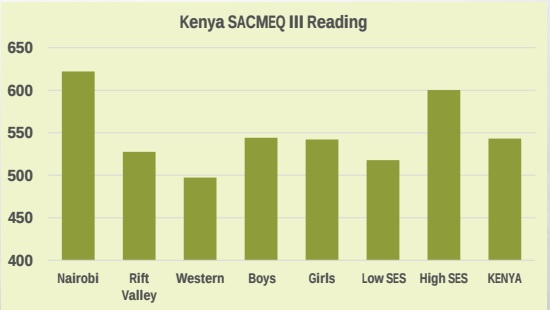
Source: OECD/ World Bank EdStats

Learning Gap 2 – Intra-Region



Source: World Bank EdStats

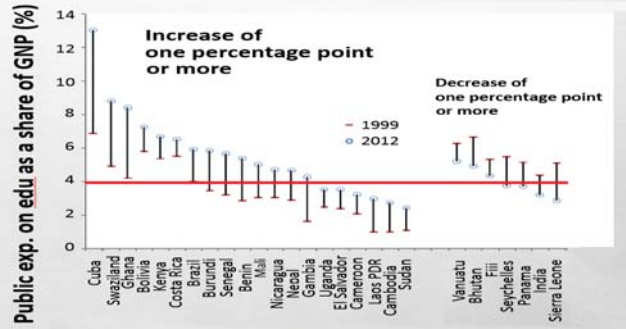
Learning Gap 3 – within a country



Source: World Bank EdStats

DOMESTIC FINANCE: MANY COUNTRIES HAVE INCREASED SPENDING

Many low income countries have increased their spending on education…

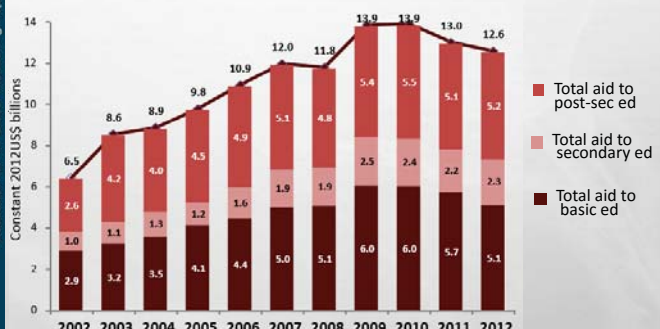


Over half of low income countries spent the minimum recommended amount of 4% of their GNP on education

Source: UNESCO GMR 2015

International Aid: Donors did not keep their promise

Aid to education ~~fell by US$1.3 billion~~ ~~between 2010 and 2012~~ almost doubled between 2002 and 2012, but…



Source: UNESCO GMR2015

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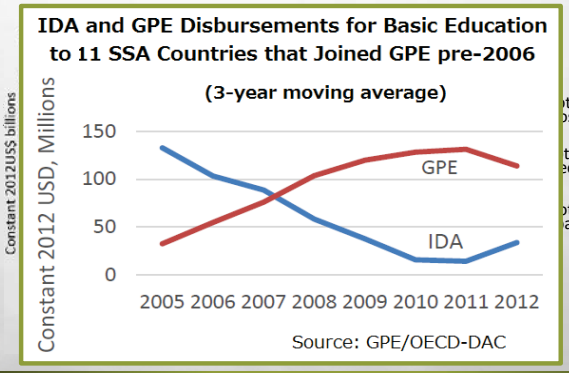

Source: UNESCO GMR2015

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Issues for Exploration (2)

- **How much do we know how to :**
  - **tackle Inequality**
  - **Improve Learning**
- **Finance triggered improvement during EFA era**
  - **New financing mechanism for broader and ambitious targets: possible?**
- **Shifting to assessment culture PISA (for D), SACMEQ, etc.,**
  - **but unclear pathways toward achieving goals**
  - **esp. learning and values (e.g. ESD)**

18

Trend in International Education Cooperation

- **Program-based approach**
  - **Harmonization and alignment**
  - **More budget support, less projects**

⇔ ?

Japan's comparative advantages

- **Emphasis on Results**
  - **How to measure learning (outcomes)**
  - **Results-based financing: which results, choice of indicators**
  - **What do we know how to improve learning**
- **Expanded partnership**
  - **How to engage broader partners**

19

New Education Cooperation Policy of Japan

Learning Strategy for Peace and Growth— Achieving Quality Education through Mutual Learning

Vision: Learning for All, All for Learning

Guiding principle

- Education Cooperation to achieve inclusive, equitable and quality learning
- For industrial, science and technology HRD and sustainable socio-economic development
- Establishment and expansion of global and regional networks for education cooperation

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Thank you!
And Let's Deepen Discussions.

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- Target 5: By 2030, all learners acquire knowledge, skills, values and attitudes to establish sustainable and peaceful societies, including through global citizenship education and education for sustainable development. (Muscat Agreement, 2014)
- Target 4.7: By 2030, ensure that all learners acquire knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development (Education 2030)

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Japan Education Forum XIII

EFA 2015: Achievement of Bangladesh and the Contribution of Japan

Presented by

Shyamal Kanti Ghosh
Secretary, Ministry of Agriculture
Former Director General, Directorate of Primary Education
Government of Bangladesh

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Outline of the Presentation

Part-I :

- Background of Primary Education of Bangladesh
- Introduction and Six Goals of Education for All (EFA)
- Major Policies and Reforms to Achieve EFA
- Achievement so far
- Post-2015 Education Development and Vision

Part-II :

- JICA's Involvement in Education Development (PEDP)
- JICA's Major Activities under PEDP-II & III
- Initiatives to Achieve EFA & Role of External Cooperation
- Challenges and Way Forward in Bangladesh Context

2

PART - I

3

Bangladesh Country Profile

Independence Day	26 March, 1971
Geographical Location	In South Asia, between 20°34' and 26°38' north latitude and 88°01' and 92°41' east longitude
Area	147,570 square km
Capital City	Dhaka
Population	160 Million (approx. according to census 2011)
National Language	Bangla
Administrative Units	Division – 8, District – 64, Upazila – 480
Primary Education Administrative Units	Division – 7, District – 64, Thana/Upazila – 504

Introduction

- Bangladesh is one of the most densely populated countries in the world with total population 160 million [BBS Population Census 2011].
- Sex ratio 105 males per 100 females
- Density of population 1222 people/sq.km

Source: BBS-2011

The Constitutional obligates of Bangladesh

- **….** establishing a uniform, mass oriented and universal system of education and extending free and compulsory education to all children to such stage as may be determined by law **….**
- Relating education to the needs of the society and producing properly trained and motivated citizens to serve these needs; and
- Removing illiteracy within such time as may be determined by law.

Background

The primary education system in Bangladesh is one of the largest systems in the world. The country has undertaken a number of measures to improve primary education since its independence. Commendable progress in access and gender equity is the major achievements of these efforts.

However, quality of students learning achievement and problem of dropout is still a major concern.

7

Background- contd.

The People's Republic of Bangladesh has been working actively toward achieving universal implementation of primary education since the signing of "Education for All (EFA)" declaration in 1990.

With a view to improve the quality of primary education, the Government of Bangladesh has undertaken an integrated sub-sector wide programme known as PEDP (Primary Education Development Programme) since 2004 in assistance with development partners.

Now the Third Primary Education Development Programme (PEDP 3) for 2011-2016 (extended upto 2017) is running to improve the quality at all levels of the primary education sub sector.

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EFA : An Introduction

- **Education For All (EFA)** is a global movement led by UNESCO (United Nation Educational, Scientific and Cultural Organization), aiming to meet the learning needs of all children, youth and adults by 2015.
- UNESCO has been mandated to lead the movement and coordinate the international efforts to reach Education for All. Governments, development agencies, civil society, non-government organizations , media and other partners working toward reaching these goals.
- The EFA goals also contribute to the global pursuit of the eight Millennium Development Goals (MDGs), especially MDG 2 on universal primary education and MDG 3 on gender equality in education, by 2015.

Six Goals of EFA

- Goal 1: Expand early childhood care and education
- Goal 2: Provide free and compulsory primary education for all
- Goal 3: Promote learning and life skills for young people and adults
- Goal 4: Increase adult literacy by 50 percent
- Goal 5: Achieve gender parity by 2005, gender equality by 2015
- Goal 6: Improve the quality of education

-- Among six goals, JICA has been supporting as technical assistant in achieving goal 2 and 6 particularly.

Major Policies, Strategies, and Reform Initiatives to Achieve EFA

- Apart from Article 17 of the Constitution ;

-the following legislative, policy and planning actions have guided basic education development in the country since 1990:

- 1. Compulsory Primary Education Act 1990
- 2. EFA National Plan of Action I and II (1992-2000, 2003-15)
- 3. National Non-Formal Education Policy 2006 and Act 2014
- 4. National Education Policy 2010
- 5. National Skill Development Policy 2011
- 6. The Sixth Five Year Plan 2011-15
- 7. Vision 2021/Perspective Plan 2011-21

- In addition, there are other policies and laws. These include: Comprehensive Early Childhood Care and Development Policy 2013, National Women Development Policy 2011, National Children Policy 2011, and Disabled Persons Rights and Protection Act 2013.

Achievement in Goal 1 – ECCE

- (2004-11) and PEDP III (2011-16), one year of pre-primary education prior to school entry has been supported with every GPS having a pre-primary class.
- More than 80 percent of preschool age children were receiving some form of pre-primary education since 2012.
- An operational framework and GO-NGO collaboration guidelines have been developed to promote pre-primary education with common quality standards.
- A Comprehensive ECD Policy was adopted in 2013.

Achievement in Goal 2 – UPE

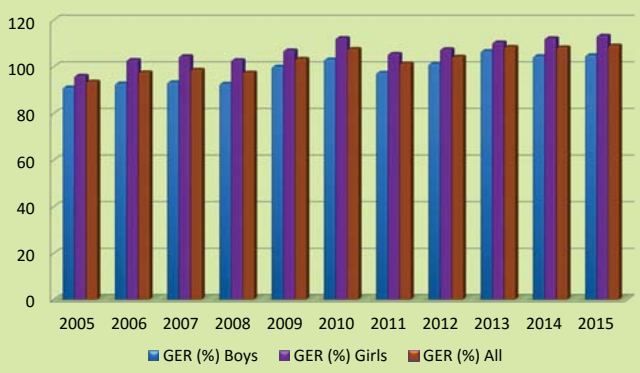
•Goal 2: Provide free and compulsory primary education for all

Year-Wise Gross & Net Enrolment Rate

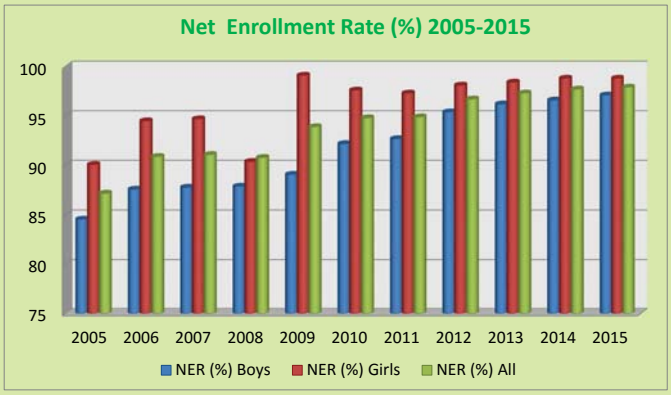
Year	GER (%)			NER (%)		
	Boys	Girls	Total	Boys	Girls	Total
2005	**91.2**	**96.2**	**93.7**	**84.6**	**90.1**	**87.2**
2006	92.9	103.0	97.7	87.6	94.5	90.9
2007	93.4	104.6	98.8	87.8	94.7	91.1
2008	92.8	102.9	97.6	87.9	90.4	90.8
2009	100.1	107.1	103.5	89.1	99.1	93.9
2010	**103.2**	**112.4**	**107.7**	**92.2**	**97.6**	**94.8**
2011	97.5	105.6	101.5	92.7	97.3	94.9
2012	101.3	107.6	104.4	95.4	98.1	96.7
2013	106.8	110.5	108.6	96.2	98.4	97.3
2014	104.6	112.3	108.4	96.6	98.8	97.7
2015	105.0	113.4	109.2	97.1	98.8	97.9

Annual Primary School Census (APSC) – 2015

Gross Enrollment Rate (%) 2005-2015

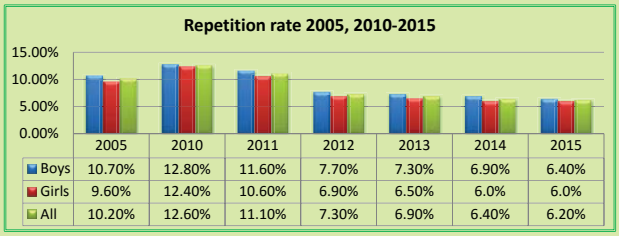


Net Enrollment Rate (%) 2005-2015



Annual Primary School Census (APSC) – 2015

Repetition Rate by Year and Gender



	2005	2010	2011	2012	2013	2014	2015
Boys	10.70%	12.80%	11.60%	7.70%	7.30%	6.90%	6.40%
Girls	9.60%	12.40%	10.60%	6.90%	6.50%	6.0%	6.0%
All	10.20%	12.60%	11.10%	7.30%	6.90%	6.40%	6.20%

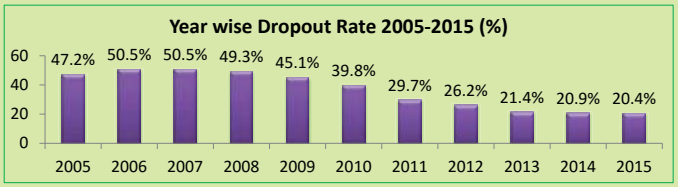
Repetition Rate by Grade and Gender 2015(APSC)

Gender	Grade I	Grade II	Grade III	Grade IV	Grade V	All grade
Boys	8.1	6.3	6.2	7.5	3.1	6.4
Girls	7.8	5.1	6.8	7.9	1.9	6
All	7.9	5.7	6.5	7.7	2.4	6.2

Grade-Wise Dropout Rate 2015

Sex	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	All Grade
Boys	2.3%	4.0%	4.0%	11.8%	2.2%	23.9%
Girls	0.8%	2.5%	3.0%	08.5%	2.0%	17.0%
All	1.6%	3.2%	3.4%	10.1%	2.1%	20.4%

Year wise Dropout Rate, 2005-2015

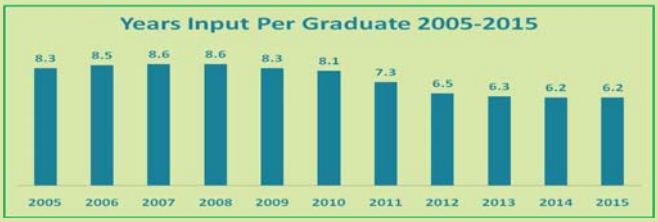


Year wise Coefficient of Efficiency 2005-2015

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Boys	58%	56.6 %	56.5%	57.5%	59.1%	62.8 %	67.7%	75.6 %	77.3 %	77.3 %	77.8 %
Girls	63.2 %	61.3 %	61.1%	59.1%	62.8%	61.8 %	70.5%	79.2 %	82%	82.7 %	82.3 %
All	**60.6 %**	**59%**	**58.8%**	**58.3%**	**61%**	**62.3 %**	**69.1%**	**77.4 %**	**79.7 %**	**80%**	80.1 %

Years Input Per Graduate 2005 -2015

Gender	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Boys	8.6	8.8	8.9	8.7	8.5	8	7.4	6.6	6.5	6.5	6.4
Girls	7.9	8.2	8.2	8.5	8	8.1	7.1	6.3	6.1	6.0	6.1
All	**8.3**	**8.5**	**8.6**	**8.6**	**8.3**	**8.1**	**7.3**	**6.5**	**6.3**	**6.2**	**6.2**



PECE 2009-2014

Year	No. of Inst.	Descriptive Roll (DR)			Appeared in the Exam			Passed in the Exam		
		Boy	Girl	Total	Boy	Girl	Total	Boy	Girl	Total
2009	**81,389**	907,570	1,072,325	1,979,895	830,880	992,585	1,823,465	751,466	868,588	1,620,054
2010	85,891	1,007,066	1,149,655	2,156,721	894,369	1,045,962	1,940,331	829,531	962,120	1,791,651
2011	87832	1066828	1249693	2316521	1000757	1184990	2,185747	975529	1150340	2125869
2012	92328	1206694	1435209	2641903	1125834	1355285	2481119	1098073	1317268	2415341
2013	87,197	1215332	1423713	2639045	1154805	1364227	2519032	1138898	1344244	2483142
2014	89,912	1281218	1508045	2789263	1226936	1456845	2683781	1200876	1427207	2628083

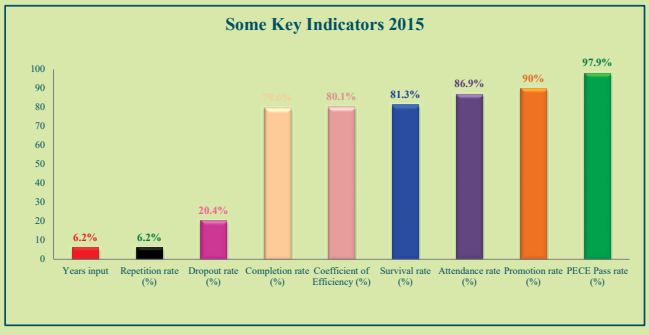
PECE 2009-2014

Year	Number of students participated in PECE	Absent in PECE	Pass Rate in PECE (%)		
			All	Boys	Girls
2009	1,979,895	156,430	88.84	90.44	87.51
2010	2,156,721	216,390	92.34	92.75	91.98
2011	23,16,521	130,774	97.3	97.48	97.08
2012	2,481,119	160,784	97.35	97.53	97.19
2013	2,519,032	120,013	98.58	98.62	98.54
2014	**2,683,781**	**105,4821**	**97.93**	**97.74**	**97.97**

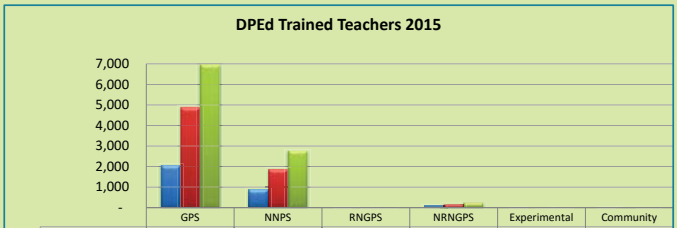
EECE 2010-2014

Year	Numbr of stdnparticipated in EECE	Absent in EECE	Pass Rate in EECE (%)		
			All	Boys	Girls
2010	264,866	66,	83.93	86.19	82.01
2011	272,171	48,989	91.28	92.51	90.23
2012	276,373	53,396	94.33	94.88	93.77
2013	273,979	48,213	95.80	96.18	95.44
2014	**265,974**	**40,084**	**95.98**	**96.11**	**95.84**

Some Key Indicators 2015



DPEd Trained Teachers in 2015



	GPS	NNPS	RNGPS	NRNGPS	Experimental	Community
Total DPEd Male	2,073	896	6	90	4	1
Total DPEd Female	4,907	1,880	11	164	5	17
Total DPEd Total	6,980	2,776	17	254	9	18

Achievement in Goal 3

- Less than half of children aged 11-15 years are enrolled in school.
- And High dropout at the secondary level results in less than a third of the age group completing the secondary school certificate at that time but the scenario has recently changed radically.
- Only around 11 percent of out-of-school youth participate in formal or non-formal work-related training, with informal apprenticeship counting for more than half.
- The Education Policy 2010 proposes raising compulsory primary education up-to grade 8 by 2018 and expanding vocational/technical training. More than 10% students are already in the technical vocational education.

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Achievement in Goal 4 – AL

- Adult literacy rate reached 59.8% in 2010 (2010 Literacy Survey).
- A recently approved literacy project (February 2014) will be the first major adult literacy project since 2003 and is expected to serve 4.5 million young adults in 3 years.

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Achievement in Goal 5 – G&E

- Bangladesh has overcome gender disparity in access to primary and secondary education over the last two decades.
- Female enrolment and completion rates in fact surpass males, raising a concern about disadvantage of adolescent boys who may be drawn into child labour to support their families.
- The gender gap in adult literacy and in vocational-technical education and training, though improving, still persists.

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Achievement in Goal 6 – EQ

- Education quality is a continuing concern, especially in respect of achievement of essential competencies by learners.
- Pupil-teacher ratio remains short of the interim target of 40:1.
- 80 percent of the schools run double shifts with learning time
- These factors combine to limit effective contact hours.
- Efforts are continuing to establish competency-based assessment of learning and improve the skills and professionalism of teachers.
- For improving the quality of classroom teaching, a pilot project entitled *"Shikhbe Protiti Shishu"("Each Child Learns")* – which is being implemented in selected schools in parts *of* the country.
- Professional Development of Primary School Teachers and SMC Members

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Contact Hours in DPE Managed Schools 2015

Grade	Contact Hours for Classroom Teaching			
	Double Shift School		Single shift school	
I and II	150m X 240 days	600 hours	240m X 199 days 180mX41 days	920 Hours
III,IV and V	210X199 days 135mX41 days	810 Hours	315X199 days 270mX41 days	1230 Hours

Annual Primary School Census (APSC) – 2015

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Review of All Goals

- This summation indicates challenges in ensuring better learning outcomes.
- It is not merely a matter of accelerating current efforts and plans up to 2015. Substantial rethinking is required regarding priorities for action in the immediate future and beyond 2015 agenda.
- Review and assessment in current programs, such as PEDP III, implementation of skill development strategies, and designing actions regarding the comprehensive ECD policy may offer new opportunities.

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Some Key Lessons

- The discussion on the six EFA goals indicating progress and constraints as well as other recent analyses suggest a few key general policy and operational lessons.
- These lessons, among others, which merit special attention, relate to coping with economic and poverty effect on school participation, late enrolment of children, area-based planning and management of education access and participation, and disadvantages of children in urban slums.
- The priorities in the immediate future and the post-2015 agenda have to take these into account.

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PART – II
JICA'S CONTRIBUTION

MAJOR ACTIVITIES UNDER PEDP-II & III

INITIATIVES TO ACHIEVE EFA & ROLE OF EXTERNAL COOPERATION

CHALLENGES AND WAY FORWARD IN BANGLADESH CONTEXT

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PART – II
JICA'S CONTRIBUTION

JICA's Major Activities under PEDP-II & III

Initiatives to Achieve EFA & Role of External Cooperation

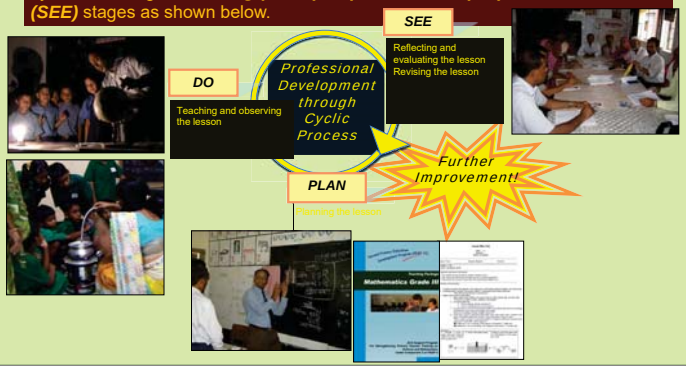
Challenges and Way Forward in Bangladesh Context

JICA Support Programme *(Teachers' Guide Math & Science Development)*

- Developed Teachers' Guide with the following features:
  - Lesson planning based on the analysis of contents of learning
  - Particular attention and consideration to students' learning processes
  - Detailed instruction with a help of visual explanations
  - Frequent use of open-ended questions
  - Facilitation of interaction between students
  - Assessment and evaluation of every lesson from various angles
- Employed Lesson Study method during the development stage in collaboration with the piloting schools
  - Teachers' Guide in Quality Teaching Cycle
  - Field verification and Feedback mechanism
- The Government approved the use of Teachers' Guide
- Conducted training for the dissemination
- Distributed to the all primary schools

Quality Teaching Cycle (QTC)

The establishment of ***"Quality Teaching Cycle (QTC)"*** is a key for sustainable and self-reliant improvement of education. Quality Teaching Cycle is a virtuous cycle consisting of ***Planning (PLAN)***, ***Implementation (DO)*** and ***Evaluation (SEE)*** stages as shown below.



Help students develop and improve Science Process Skills!

Skills development of students is one of the main concerns.

Teachers' Guide Development through Lesson Study process

- Usability of Teachers' Guide are improved through the process
- Primary teachers participated in development stage
- Primary teachers' commitment to Teachers' Guide is strengthened
- Students find Math and Science lessons interesting
- Practitioners discussed with curriculum developers

JICA Program supports the improvement of Quality of Primary Education in Bangladesh under PEDP-3

1. Training system and contents of teacher training curriculum
Assist the primary teacher training curriculum revision and integrate mathematics and science teacher's reference manuals - "Teaching Package" in Diploma in Education(DPEd) for pre-service teacher training
Assist Primary Curriculum and Textbook revision.

2. Strengthen the Professional capacity of Primary Training Institute (PTI) for Quality Teacher Training by developing Primary Teacher support network
Develop collaborative network among Primary Training Institute (PTI)s through Study Group Activities (SGA)
Develop collaborative network among PTIs, Upazila Resource Center (URC), Sub-Cluster and Primary Schools through Study Workshops (SW)

3. **Teaching techniques in Primary Schools**
Assist to improve teaching techniques recommended by Teaching Packages through Study Group Activities (SGA) and Study Workshops (SW)

Assess the success of the activities by conducting survey before and after the program's intervention.

PEDP-II: JICA's Involvement

The Government of Bangladesh (GOB) started the Second Primary Education Development Program (PEDP II) from 2004 as the second phase of the PEDP I under the cooperation of eleven donor organizations. PEDP II aims to improve the quality of education, and includes four major components, namely
1) organizational reform,
2) improvement of educational quality in schools and in classrooms,
3) improvement of infrastructure and
4) improvement of access.

Among them, regarding component **(2)** the GoB requested technical assistance to the Government of Japan on the improvement of educational quality at the classroom level.

JICA's Major Activity under PEDP II

- **Year 1 (2004-05):**
- Introductory Seminar on Primary Science and Mathematics
- Overseas Training in Japan for Education Administrators from MOPME and DPE, and Math & Science Experts from NAPE and PTI organized at Hiroshima

- **Year 2 (2005-06):**
- Teaching Package Development (G1-2 Math, G3 Science)
- Overseas Training in Japan for Math & Science Subject at Hiroshima
- Technical Exchange Training in Philippines from NAPE and PTIs organized at Department of Education and NISMED at University of Philippines

- **Year 3 (2006-07):**
- Teaching Package Development (G1-2 Math, G3 Science, G3-4 Math, G4 Science)
- PTI Superintendent Training at NAPE

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JICA's Major Activity under PEDP II

- **Year 4 (2007-08):**
- Teaching Package Development (G3-5 Math, G4-5 Science)
- PEDP II distributed TP to all Government Schools (15,000,000 Taka)

- **Year 5 (2008-09):**
- Teaching Package Development (G5 Math, G5 Science)
- PTI Monitoring and its Superintendent and Instructor Training
- Teaching Package Development (G5 Math, G5 Science)
- PEDP II distributed TP to all Government Schools (15,000,000 Taka)

- **Year 6 (2009-10):**
- Math & Science Curriculum and Textbooks Analysis conducted
- Curriculum Seminar and PTI Superintendent and Instructor Training
- PEDP II distributed TP to all Government Schools (12,000,000 Taka)

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JICA's Major Activity under PEDP III

- **Year 0 (2010-11):**
- DPEd Resource Material revision (Math & Science) (JICA Experts attended workshops)
- PTI Cluster Activity Introductory Training (9-10 Jan) for 57 PTI Superintendents at NAPE (Study Workshop & Study Group Activity were introduced)
- PTI Cluster Activity Introductory Training
- PTI Cluster Activity Manual (Lesson Study) developed and distributed to all PTIs
- TV Drama "RupantarKotha" developed

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JICA's Major Activity under PEDP III

- **Year 1 (2011-12):**
- DPEd Resource Material revision (Math & Science)
- Primary Curriculum Workshop and Seminar
- Overseas Training in Japan for Curriculum Experts from NCTB organised at Hiroshima University
- Quality Learning Workshop jointly organised by UNICEF (ECL)
- Sample Textbooks (Math & Science) developed
- Teaching Package Booklet & Leaflet were developed and distributed to all primary schools (60,000) and teachers (300,000)
- TV Drama "RupantarKotha" telecasted and distributed to all PTIs and URCs

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JICA's Major Activity under PEDP III

- **Year 2 (2012-13):**
- DPEd Resource Material revision (Math & Science) (JICA Experts attended workshops)
- Primary Curriculum Seminar
- Overseas Training in Japan for Curriculum Experts from NCTB and IER organised at Hiroshima University
- Small Scale Tryout of revised textbook was implemented
- Subject based Training Manual (Math & Science) developed
- Teacher Support Network through Lesson Study was assisted
- TV Drama "RupantarKotha 2" developed
- School Diary and Community Radio piloted

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JICA's Major Activity under PEDP III

- **Year 3 (2013-14):**
- DPEd Resource Material revision (Math & Science) (JICA Experts and Consultants attended workshops and revised materials)
- Review of revised textbook of math and science was done and report was submitted
- Large Scale Tryout of revised textbook (JICA Expert team assisted NCTB to refine science and math textbook from G1 to G3)
- Teachers' edition refinement (JICA Expert team assisted NCTB to refine science and math teachers' edition from G1 to G3)
- Lesson Study Banner was developed and distributed
- Overseas Training in Japan for Curriculum Experts from NCTB and IER organised at Hiroshima University

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JICA's Major Activity under PEDP III

- **Year 4 (2014-15):**
- Teachers' edition refinement (JICA is assisting NCTB to refine science and math teachers' edition from G1 to G3)
- TV Drama "RupantarKotha 3" has been developed and distributed, and later monitored
- Large Scale Tryout of revised textbook
- Leadership Training for Head Teachers training manual is being reviewed

- **Year 5 (2015-16):**
- Video Lesson Evaluation
- TV Drama "RupantarKotha 4" is nearly completed (Theme: Head Teachers' Leadership Quality)
- Refinement of Science and Math Textbook
- JICA Team completed refinement of Teachers' Edition of Science and Math

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Promising Initiatives for Achieving EFA

A few of the salient policy and program measures which have contributed to the positive results, as listed below

- -- A sub-sector-wide program approach for primary education pursued since 2004.
- -- Conditional cash transfer to children from poor families
- -- Distribution of free textbooks
- -- Use of ICT in education
- -- The pre-primary education initiative
- -- The School-level Improvement Plan (SLIP) Initiative
- -- Co-curricular activities – sports and student councils
- -- School feeding and school meal piloting

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External Cooperation Needed

- Cooperation among the nations is necessary;-
- a) International,
- b) Regional,
- C) Sub-regional and also bi-lateral,

in the form of

1) Technical Cooperation

2) Financial Support

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Challenges and Way Forward

- Commitment from the highest level of the government,
- Involvement of all stakeholder towards common goal
- Planning & management
- Monitoring ,evaluation & assessment in all level
- Accountability
- Quality curriculum and text
- Teacher's knowledge and motivation
- Continuous up gradation of knowledge and skills
- Community participation
- Decentralisation
- Resources and it's distribution
- Parental motivation and involvement
- Reward and punishment

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Activities are not outputs

Completed activities are NOT short term results or outputs

Thank You for Your Attention
Goseicho Arigato Gozaimashita

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Providing Quality Education for All through Teacher Professional Development and Curriculum Development

Soledad A. Ulep
University of the Philippines
National Institute for Science and Mathematics Education Development (UP NISMED)

Coverage of the Presentation

- Goals on quality education of *Education for All (EFA, 2000 - 2015), Education 2030, and UP NISMED*
- Examples of Japan's initiative on quality education for all through teacher professional development and curriculum development
  - Past: The Science and Mathematics Education Manpower Development Project
  - Present: The APEC Lesson Study Project led by University of Tsukuba, Japan and Khon Kaen University, Thailand
- Future international education cooperation: Lesson Study
  - Sustainability
  - Scalability
  - Joint research

Goal on Quality Education

- Goal 6 of EFA: Improve all aspects of the quality of education
- Overarching goal/theme of Education 2030: Towards inclusive and equitable quality education and lifelong learning for all
- UP NISMED serves as the national center in the Philippines for the improvement and reform of science and mathematics education at the basic and teacher education levels.
  - Main functions: research, curriculum development, and teacher professional development

The Science and Mathematics Education Manpower Development Project (SMEMDP, 1994-1999)

- A technical cooperation project between JICA and the University of the Philippines Diliman, Department of Education, Culture, and Sports (now DepEd), Department of Science and Technology, and the Commission on Higher Education with UP ISMED (now UP NISMED) as the main implementing agency.
- Project goal: The capabilities of the science and mathematics teachers in the elementary and secondary schools throughout the Philippines would be enhanced and upgraded through the training provided by teacher trainers trained at UP NISMED.

The Science and Mathematics Education Manpower Development Project (SMEMDP, 1994-1999)

- Project purpose: UP NISMED shall become a highly competent institute to train science and mathematics teacher trainers in the elementary and secondary levels who could play a leading role in the planning and management of teacher training courses that are focused on laboratory experiments and other practical work and in the development of instructional methods and materials.

Major Activities of SMEMDP

- Dispatch of and technical transfer from Japanese experts to UP NISMED staff
- Technical training in Japan of counterpart UP NISMED staff
- Provision of needed equipment and books
- Development of instructional materials and methods utilizing practical work
- Conduct of national training of teacher trainers to enable UP NISMED teacher educators to apply acquired knowledge and skills and use developed instructional materials
- Follow-through of teacher trainers in the different regions

Dispatch of Japanese Experts

GROUP \ YEAR	NUMBER OF JICA EXPERTS 1994 L	1994 S	1994 T	1995 L	1995 S	1995 T	1996 L	1996 S	1996 T	1997 L	1997 S	1997 T	1998 L	1998 S	1998 T	1999 L	1999 S	1999 T	TOTAL L	TOTAL S	TOTAL T
Team Leader	1*		1	*			*			*			*			*			1		1
Coordinator	1**		1	**			**			1**		1	**			**			2		2
ES Science		1	1		1	1	1	1	2	1		1							2	3	5
ES Mathematics	1		1				1		1			1							2	1	3
HS Earth Science		2	2		1	1	1		1		1	1							1	4	5
HS Biology	1		1		1	1	1*	1	2	*			*			*			2	2	4
HS Chemistry		1	1	1*	1	2	*	1	1	*	1	1	*			*			1	4	5
HS Physics					1	1	2		1	1	1*	1	*			*			2	2	4
HS Mathematics					1		1		3	3	1*	1	*			*			2	3	5
Research & Evaluation						1	1					1*	1		1*	*				2	2
TOTAL	4	4	8	3	6	9	4	7	11	4	4	8	6	1	7	5		5	15	21	36

1*Same person 1** Different persons L - Long-term Expert S - Short-term Expert

The long term and short term Japanese experts assigned at UP NISMED

Counterpart UP NISMED Staff Trained in Japan

Month/Year \ Group	Number of Counterparts ESS	ESM	HSES	HSB	HSC	HSP	HSM	R&E	TOTAL
June 1994-March 1995	1 (1)	1 (1)	1 (1.5)	1 (1)					4
April 1995-March 1996			1 (2)		1 (2)	1 (3)	1 (2)	1 (3)	5
Nov. 1995-Oct. 1996	1 (2)	1 (3)	1 (6)	1 (3)				1 (1.5)	5
April 1997-Sept. 1998	1 (2)				1 (3)	1 (2)	1 (3)		4
TOTAL	3	2	3	2	2	2	2	2	18

(No. in parenthesis is no. of months in Japan.)

Counterpart UP NISMED Staff Trained in Japan

- June 1994-March 1995

Duration	Subject Area	Venue/University
1 month	HS* Biology	University of Tsukuba
1.5 months	HS Earth Science	National Institute for Educational Research
1 month	ES** Science	Naruto University
1 month	ES Mathematics	University of Tsukuba

- April 1995-March 1996

Duration	Subject Area	Venue/University
3 months	HS Physics	Kyoto University
2 months	HS Mathematics	University of Tsukuba
2 months	HS Chemistry	Hiroshima University
2 months	HS Earth Science	Shiga University
3 months	Research and Evaluation	Tokyo Institute of Technology

HS* – High School
ES** – Elementary School

Counterpart UP NISMED Staff Trained in Japan

- November 1995-October 1996

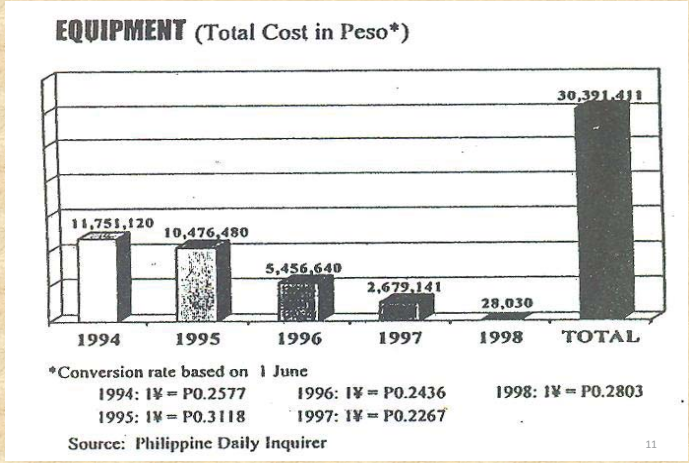
Duration	Subject Area	Venue/University
2 months	ES* Science	Okayama Prefectural Education Center
1.5 months	Research and Evaluation	National Institute for Educational Research
3 months	ES Mathematics	University of Tsukuba
6 months	HS ** Earth Science	Kobe University
3 months	HS Biology	Shiga University

- April 1997-September 1998

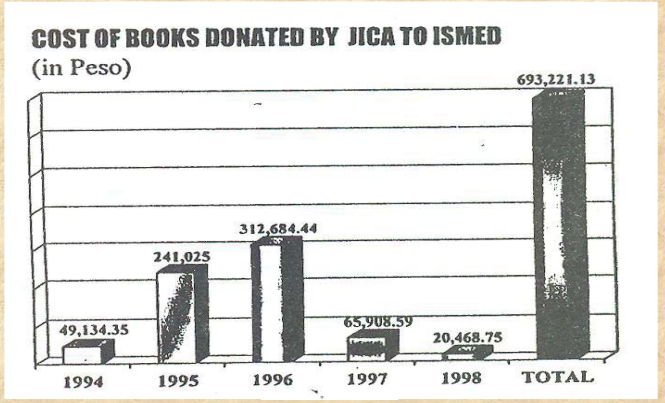
Duration	Subject Area	Venue/University
3 months	HS Chemistry	Hiroshima University
2 months	HS Physics	Tokyo Gakugei University
3 months	HS Mathematics	University of Tsukuba
2 months	ES Science	Aichi Prefectural Education Center

ES* – Elementary School
HS** – High School

Equipment Donated by Japan



Books Donated by Japan



(493 books)

Training Scheme

Cascade model (applying the multiplier effect)

National Training Program (NTP) → Regional Training Program (RTP)

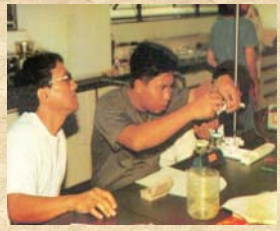
National Training Programs at UP NISMED

Teacher trainer-participants pose during the closing ceremonies of the 1996 NTP.

Teacher trainer-participants make and play with parachutes as part of the Elementary School Science activities during the 1999 NTP.

National Training Programs at UP NISMED

Teacher trainer-participants detect metals in leaves during the 1996 NTP in High School Chemistry while a JICA expert looks on.



Teacher trainer-participants perform an experiment on magnetic fields and forces during the 1996 NTP in High School Physics.

National Training Programs at UP NISMED

Year / Group	Number of Teacher Trainers Trained					TOTAL
	1995	1996	1997	1998	1999	
ESS	60		55		34	149
ESM	60		55			115
HSES	60		54			114
HSB	57		54			111
HSC		59		58		117
HSP		55		62		117
HSM 1 and 2		57		63		120
HSM 3 and 4		58		62		120
TOTAL	237	229	218	245	34	**963**

Total: 17 NTP, 33 batches, 963 teacher trainers trained
17 national training curricula
2 NTP per subject area (except for ESS), 2 batches per NTP

National Training Programs at UP NISMED

The NTPs were conducted at the Science Teacher Training Center (STTC). The teacher trainer-participants were accommodated at the Hostel. The STTC and Hostel were donated to UP NISMED by Japan.

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National Training Programs at UP NISMED

The NTP teacher-trainer participants came from all the 14 regions of the Philippines.

Instructional Materials Developed

- 8 final editions of sourcebooks for teacher trainers, volume 1 (ESM, ESS, HSM 1 and 2, HSM 3 and 4, HSES, HSB, HSC, HSP)
- 8 final editions of sourcebooks for teacher trainers, volume 2 (ESM, ESS, HSM 1 and 2, HSM 3 and 4, HSES, HSB, HSC, HSP)
- 68 improvised equipment/devices
- 22 video lessons
- 20 posters
- 7 charts
- 5 software programs
- 2 sets of slides

Instructional Materials Developed

JICA expert explains the SMEMDP to the Japan's Imperial Highnesses during their visit to UP NISMED on 18 June 1998.

Prince and Princess Akishino of Japan look at the improvised model of the circulatory system.

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Follow Through in the Different Regions

Regional Training Programs

Teacher trainers, teacher-participants, UP NISMED teacher educators, and JICA experts pose during the 1996 RTP in Elementary School Mathematics in Region VI.

Teacher-participants in High School Earth Science perform an activity on water filtration during the 1996 RTP in Region X.

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Follow Through in the Different Regions

Teacher-participants in High School Biology measure water turbidity and depth during the 1996 RTP in Region

Teacher-participants in Elementary School Science perform an activity on sounds using musical bottles during the 1996 RTP in Region X.

Teacher-participants in High School Physics perform the "telescope" activity in optics during the 1997 RTP in Region V.

A total of 2,919 teacher-participants were observed during the Regional Training Programs.

After SMEMDP: Using the Gains and Outputs

JICA Counterpart Training Programs at UP NISMED

Mr. Agyare (Ghananian Fellow in High School Biology, 1999)

Ms. Lynette Kisaka (Kenyan Fellow in High School Biology, 2002)

Mr. Daniel Matiri (Kenyan Fellow in High School Chemistry, 2003)

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After SMEMDP: Using the Gains and Outputs

Overseas Fellowship Program of the ADB-Assisted Middle School Project of Pakistan

Year	Subject Areas	Number of Participants
2001	Achievement Testing	3
	Training of Trainers	6
	Study Visit	31
	Curriculum Development	18
	Textbook Writing	7
	TOTAL	**65**

Participants try out an improvised lung model.

Participants interact with community leaders and members.

After SMEMDP: Using the Gains and Outputs

JICA Third Country Indiviual Training Programs for Secondary Mathematics and Science Education for Kenyan INSET (In-service Training) Trainers

Year	Subject Areas (5 or 10 participants/subject area)	Total Number of Participants
2004	HS Biology, HS Chemistry, HS Physics, HS Mathematics	20
2005	HS Biology, HS Chemistry, HS Physics, HS Mathematics	20
2006	HS Biology, HS Chemistry, HS Physics, HS Mathematics	40
2007	HS Biology, HS Chemistry, HS Physics, HS Mathematics	40
2008	HS Biology, HS Chemistry, HS Physics, HS Mathematics	40

After SMEMDP: Using the Gains and Outputs

Developing a Core of Master Trainers for Improving the Quality of Science Education in Nepal

2, 4, 9, 11, and 13 June 2008
22 participants

Participants perform various practical work activities in science.

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After SMEMDP: Using the Gains and Outputs

Local Teacher Training Programs

Paranaque school principals perform activities using the circulatory system model during the 1999 Elementary School Science Course: Revisiting Science and Mathematics.

Training participants measure distance using the trundle wheel during an outdoor activity called Mathematics Trail (EQuALLS, 2008).

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After SMEMDP: Using the Gains and Outputs

Local Teacher Training Programs

2015 Teacher Training Caravan participants from Region VIII show their copies of the High School Mathematics Sourcebook on Practical Work for Classroom Use.

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Lesson Study: Curriculum Development and Teacher Professional Development

The Asia-Pacific Economic Cooperation (APEC) Lesson Study Project

- It aims to develop human resources through lesson study.
- Using lesson study, it introduces innovative mathematics teaching and learning practices in classrooms.
- It is led by the University of Tsukuba in Japan and Khon Kaen University in Thailand and includes APEC economies such as the Philippines which is represented by UP NISMED.

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Lesson Study: Curriculum Development and Teacher Professional Development

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Lesson Study: Curriculum Development and Teacher Professional Development

UP NISMED's Collaborative Lesson Research and Development (CLRD) Project

- It familiarizes schools and teacher education institutions with lesson study.
- It uses lesson study to promote teaching and learning
  - mathematics through problem solving and
  - science through inquiry

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Lesson Study: Curriculum Development and Teacher Professional Development

The Context

School: Sta. Lucia High School (SLHS), Pasig City

Goal of the Lesson Study Teams in SLHS:

- Long-term goal: To develop students' mathematical thinking through problem solving
- Sub-goals: To enable students to:
  - represent real-life and mathematical situations
  - give meaning to these representations
  - solve problems in different ways

Lesson Study Team:

- 3 fourth year High School Mathematics teachers and Mathematics coordinator
- 1 UP NISMED High School Mathematics staff
- 1 UP NISMED High School Earth and Environmental Science staff

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Lesson Study: Curriculum Development and Teacher Professional Development

Example of a Research Lesson based on the APEC Lesson Study Project

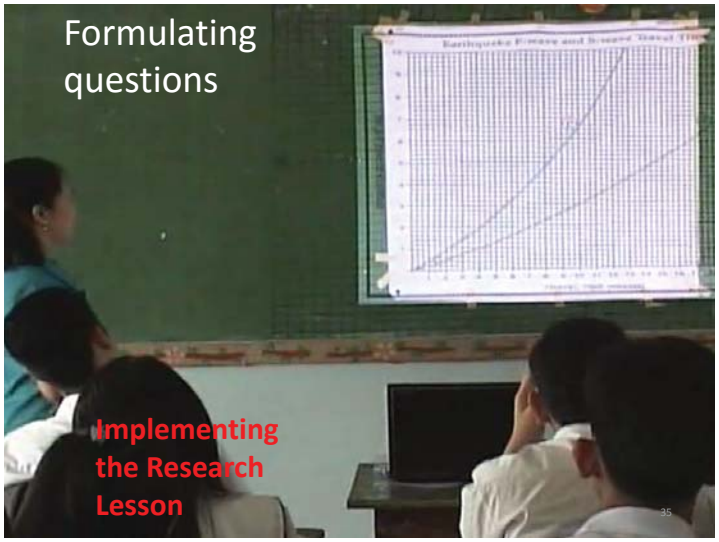
Theme: Innovation of Mathematics Education through Lesson Study - Challenges to Emergency Preparedness for Mathematics: Earthquake and Tsunami

Topic: Interpreting the graphs of functions

Objective of the lesson: To formulate questions whose answers can be found on the distance-time graph of p-wave and s-wave which are produced when an earthquake occurs

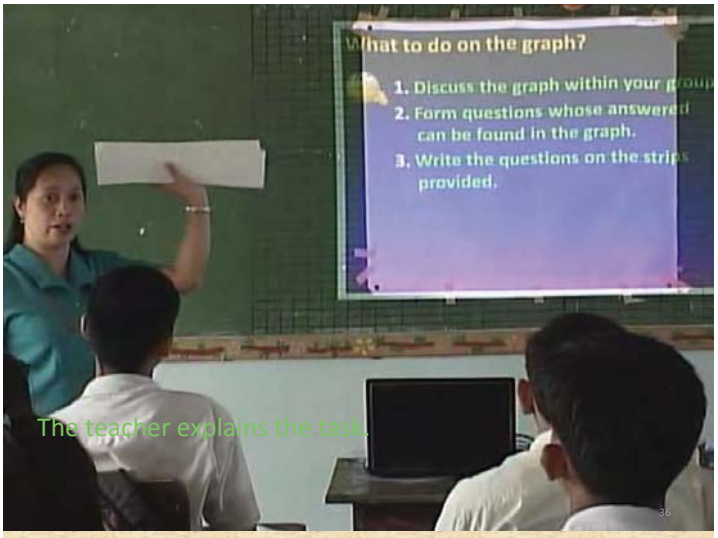
The lesson study team plan the research lesson at the Mathematics Faculty Room of SLHS. A major concern of the teachers was "the students are not used to asking questions."

Planning the Research Lesson

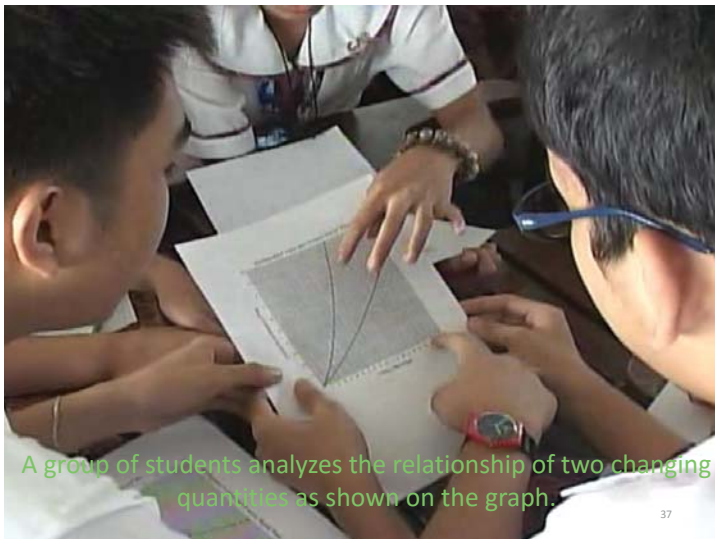


Formulating questions

Implementing the Research Lesson

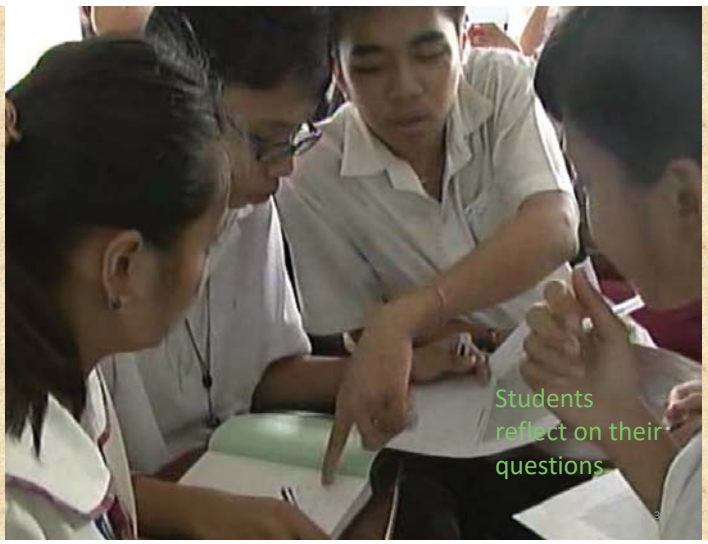


The teacher explains the task.

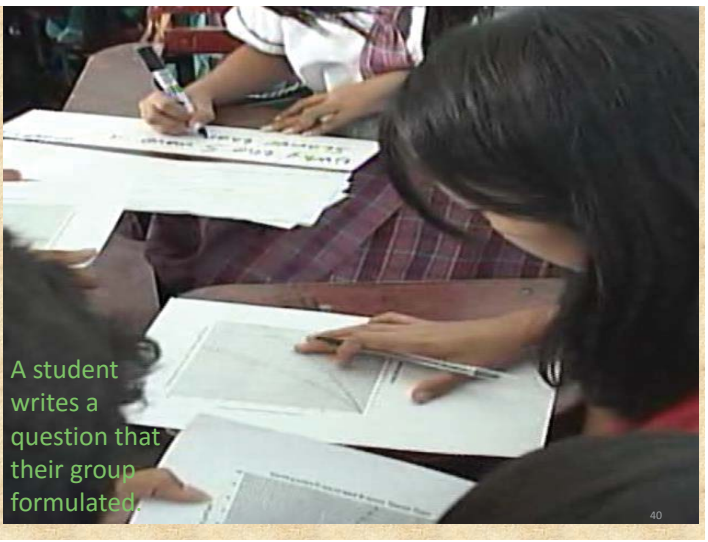


A group of students analyzes the relationship of two changing quantities as shown on the graph.

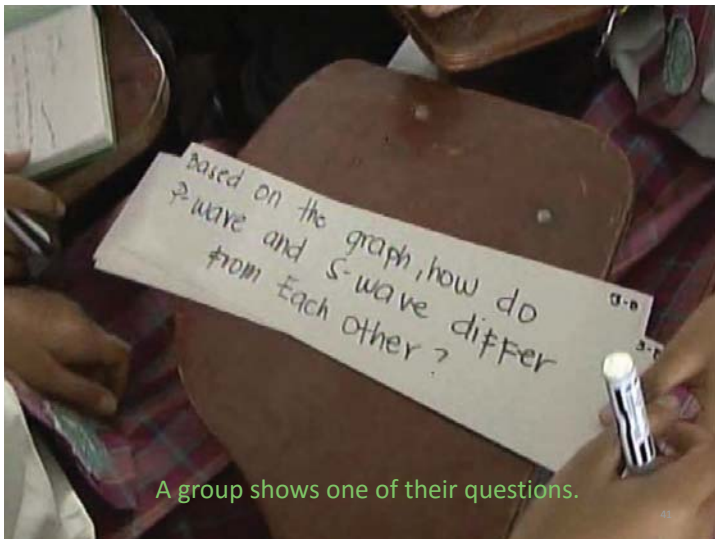
Students listen as one of their group mates discuss the questions.



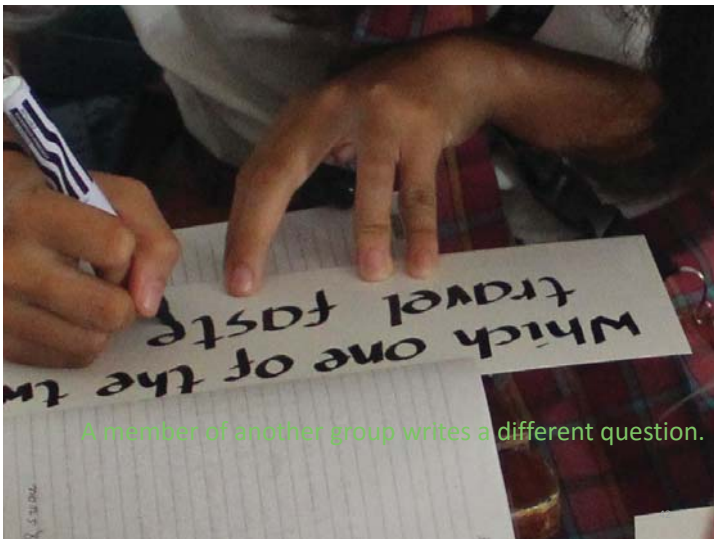
Students reflect on their questions



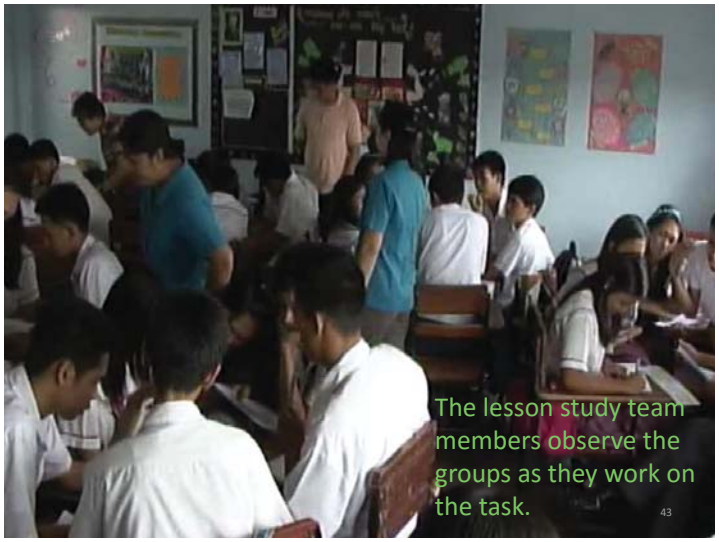
A student writes a question that their group formulated.



A group shows one of their questions.

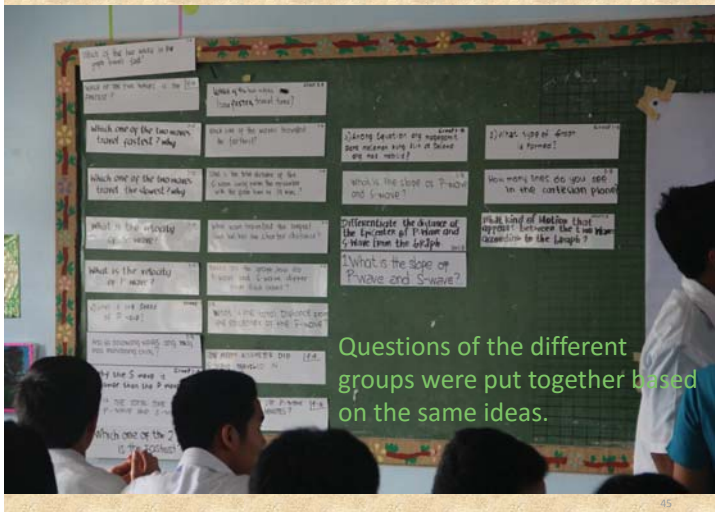


A member of another group writes a different question.



The lesson study team members observe the groups as they work on the task.

Groups post their work on the board.



Questions of the different groups were put together based on the same ideas.

Lesson Study: Curriculum Development and Teacher Professional Development

Post-lesson Reflection and Discussion

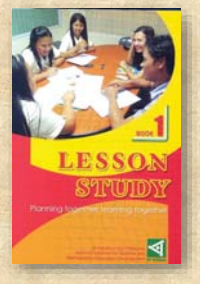
"I was overwhelmed by the enormity of their questions."

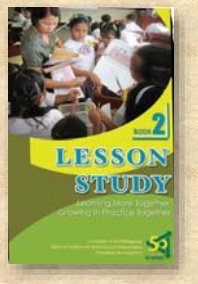
"I found out that they know how to observe a graph."

"They also really think."

Lesson Study: Curriculum Development and Teacher Professional Development

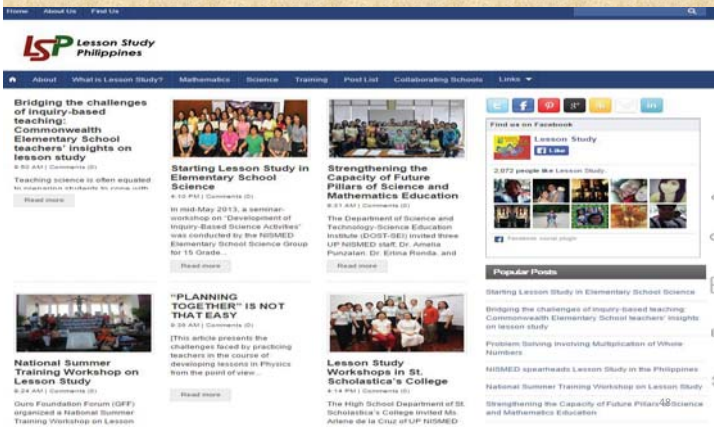
UP NISMED's Lesson Study Publications





Lesson Study: Curriculum Development and Teacher Professional Development

http://lessonstudy.nismed.upd.edu.ph/



Future International Education Cooperation: Lesson Study

Lesson study to empower teachers for the Philippine K to 12 curriculum reform

- Sustainability
- Scalability
- Joint research

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Thank you.

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Japan Education Forum XIII
24 February 2016

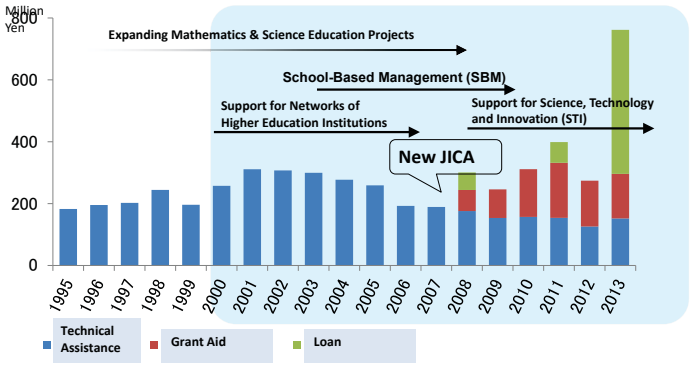
JICA's Education Cooperation

- Providing More Opportunities for Learning Continuity -

Nobuko Kayashima
Senior Advisor
Japan International Cooperation Agency (JICA)

JICA's Education Cooperation (2000-2015)

EFA/MDGs period (2000-2015) ⇒ Diversifying types of interventions in education & Expanding support to basic education in JICA



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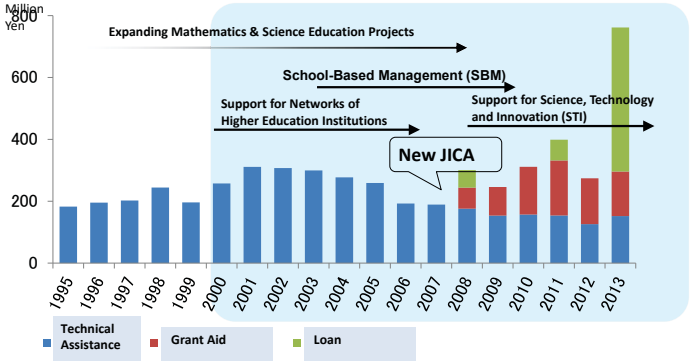


JICA's Education Cooperation (2000-2015)

Increasing demand for quality basic education

Expanding Mathematics & Science Education Projects

School-Based Management (SBM)

Support for Networks of Higher Education Institutions

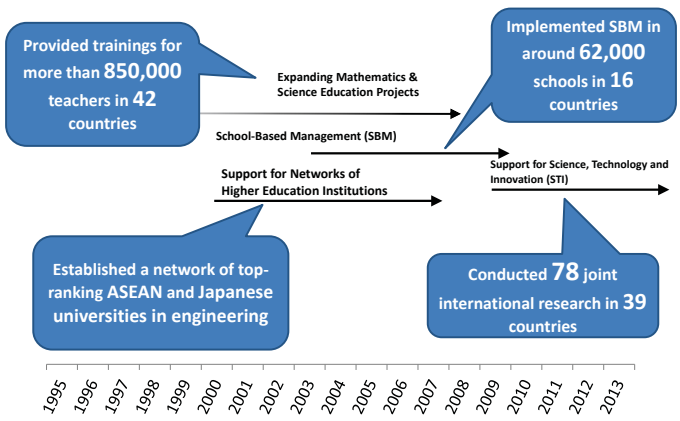
Support for Science, Technology and Innovation (STI)

Emerging Trends: Globalization in Higher Education & STI development

Programme-based approach
Alignment with education sector plans & SWAP
Synergies between TA and Grants/Loans
Collaboration with NGOs
PPP

1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013

JICA's Education Cooperation (2000-2015)



2015 : From MDGs to SDGs

Changes in Global Environment
- Complexity of the development issues & Globalization
- Growth in emerging countries and NIES & disparities among developing countries
- Interdependence and interface between countries and among issues
- Increasing roles of private sectors

Changes in Education Cooperation Needs
- Quality of basic education & reducing remaining disparities
- Growing needs in secondary and tertiary education
- Response to the knowledge-based society and globalization

Changes in ODA environment in Japan
- Advent of a mature society and its social issues
- Changes in economic status at the international community
- Severe financial situation and ODA budget reduction

SDG4 (Education):
Agenda to promote lifelong learning, covering from pre-primary to higher education, applied for both developing and developed countries

JICA's Education Cooperation in the Next 5 Years (2015-2020)

JICA Education Position Paper 2015

VISION

To ensure Learning Continuity :

(1) Cover from pre-primary to higher education comprehensively
(2) Support from emergency to medium- and long-term development
(3) Maximize cross-sector synergies, linking education with other SDGs as an enabler

GUIDING PRINCIPLES

Trust among Stakeholders | Mutual Learning for Knowledge Creation | Equity and Inclusion

APPROACHES

(1) Linkage between Policy and Practice
(2) Evidence-based Policy Recommendations and Implementation
(3) Partnerships with Various Actors
(4) Synergistic Effect through a Cross-sector Approach

JICA's Education Cooperation in the Next 5 Years (2015-2020)

FOCUS AREAS

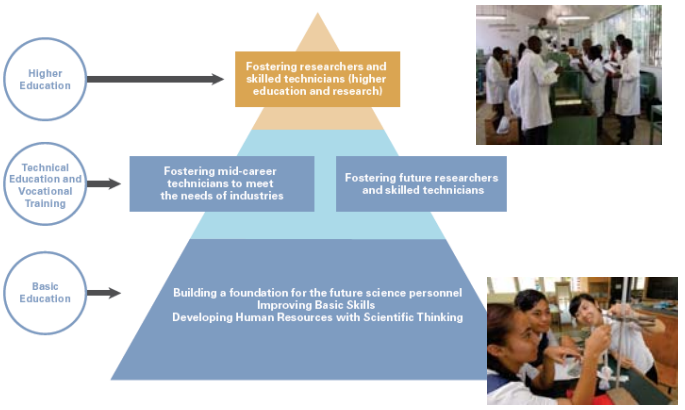
1. Quality Education for Learning Improvement
- Learning Cycle approach
- Global and regional mutual learning
- Education to respond to global issues as global citizens
- Quality Assurance/ Assessment

2. Education for Fostering Equitable and Sustainable Growth
- TVET necessary for decent work
- Industry-Academia collaboration for industrial human resource development
- Capacity development of gov't officials & leaders for nation-building

3. Education for Knowledge Co-creation in Society
- Human resource development for STI (seamless support from primary math and science to engineering at the tertiary level)
- Knowledge networking among universities
- International students

4. Education for Building Inclusive and Peaceful Societies
- Education for vulnerable & disadvantaged populations
- Education for conflict and disaster affected populations
- Education for nation-building and peace-building

Focus Area 4 : Education for Knowledge Co-creation in Society



Focus Area 4 : Education for Building Inclusive and Peaceful Societies

JICA's Education Cooperation in the Next 5 years: Future Direction

- **Responding to the Diversified Needs in Education Cooperation**
  - Improve quality of Education
  - Develop capacity of core universities and international collaboration ← Rapid expansion of the projects and programmes
  - Support to the most marginalized and disadvantaged populations (e.g. girls and women, people with disabilities)
  - Support to post-conflict and disaster reconstruction in education sector
- **Enhancing Collaboration and Coordination with Divers Partners**
  - International organizations and NGOs
  - Private sector ←applying resources and expertise from the private sector
- **Addressing a Greater Proximity between International Cooperation and Japan's own Issues**
  - Enhanced commonality in development challenges in developing countries and Japan
  - Demand of the globalization ←in the area of industry, universities, local cities, human resources in Japan
  - Cross-national mutual learning (e.g. International conferences, academic conferences)

Greater Proximity between International Cooperation and Japan's Own Issues

Increasing number of cases:

- Japan and developing countries jointly tackle common development issues
- International cooperation brings positive impacts on the globalization of the Japanese society

In higher education:

Assigned more than 5,000 professors from around 200 universities in Japan to universities in developing countries as JICA experts (1990-2013), which in turn contributed to the internationalization of the Japanese universities.

In JOCV programme:

Assigned more than 1,000 primary and secondary teachers in Japan to developing countries as JICA volunteers (2002-2015), which in turn contributed to the globalization of the Japanese schools (e.g. international exchange, international understanding, support to international students).

Open Floor Discussions, Questions and Answers

Kazuhiro Yoshida (Director, CICE, Hiroshima University)

So the time allocated for this session is up to quarter past four, about 55 minutes or one hour and I would like to propose that the first part of this session, we look at the other panelists faces and try to raise the issues that the you have come up with and throw it to each other, one or two rounds. And if you feel like the keynote speakers, you are also invited to chip in in our discussion or unexpectedly some bombardments may come to you, so please be prepared for that. And after a while, I will open the floor to invite contributions, comments, questions, criticisms from the floor, so please take good notes of what you would like to say later. And that will be the way this session will be handled. So, among ourselves, is anybody ready to raise some issues or responses?

Shyamal Kanti Ghosh (Secretary, Ministry of Agriculture, Government of Bangladesh)

Thank you, Professor Yoshida. You presented very well. You explained everything. Can you give us suggestion for an assessment which can be the international standard for global citizen? If you want to make global citizens, what are the criteria for the assessment at the primary level?

Kazuhiro Yoshida (Director, CICE, Hiroshima University)

In my presentation, I stressed that the culture of student assessment is really expanding and becoming more and more influential. At the same time, what we measure is also becoming an important issue. Throughout today's discussion, we say that not only student's enrollment or participation but what they learn is very important. And putting it in today's context of sustainable development, we also agreed in the new Framework for Action Education 2030 that we would like to promote sustainable development through for example, promoting education for sustainable development, global citizenship education by nurturing the mind of peace and respect the diversity of culture and try to mitigate the conflict situations. So our totality of knowledge is being tested and then we would need to put it into the framework of new concept of shared values and then we are expected to change our attitudinal behavior. So all those are part of stated and adopted targets under the new Education 2030 framework. This gives enormous challenge for us and in the global context as far as I know, the international community is trying to pick up just one global indicator to measure the achievement of that particular new target 4.7. But obviously, it is not enough to be applicable to each and every country that faces different types of problems. So what kind of assessment and the perspectives of assessment would be most relevant to individual countries becomes more important question than what kind of global indicator we are going to have. Of course, that kind of global indicator is, will be a useful one, but I personally believe that the process and efforts that each individual country will make towards identifying the shared vision and the way of assessing the achievement of that shared vision will be more important. That's my quick response and comment.

Any? any? Not limited to the question related to this topic? Any other contribution from that other side of the table?

Nobuko Kayashima (Senior Advisor, JICA)

I also believe that assessment is really important, but there are also other important things such as what is actually taught, what the curriculum is intended to teach, how textbooks are used to teach it, and whether the teachers are able to teach it. When we assess students' academic abilities, we have to consider these questions. Since the quality of education is often discussed, people pay a lot of attention to assessment, but we must not be satisfied with looking into assessment methods and cooperating only with conducting assessments. Based on the assessments, we must continue to do various other things in order to actually improve the quality of education. JICA has conducted teacher-training projects and those on science and math education for many years, but recently, we have seen a rapid increase in requests for projects to improve textbooks and curricula. For about 15 years, we have conducted projects to train teachers in many countries, and we are now addressing the next issue, which is improving textbooks and curricula. As the content of education is closely related to assessment of learning achievement, these two must be dealt with together.

Kazuhiro Yoshida (Director, CICE, Hiroshima University)

I would like to bring us back to the original departure point, session title goes, "What Roles Japan has played in Achieving the Goal of the EFA in Education Cooperation". And from the keynote speakers, Imbuga sensei and Muta sensei talked about Japan's international cooperation in the area of education. And it has been somehow difficult to capture the lessons that we should have learned, not all the beautiful things. But what we could have done differently or from the country's side, we are very happy to hear the voice of appreciation. But we also would like hear different views in comparative sense, for example Japan's unique way of working with you is perceived rather positively but other players are working with you in a different way, so in such comparative context, do you have any suggestions to make so that the Japanese contribution working together in the future can be a more useful one for you. May I invite Imbuga sensei to give some idea about it?

Mabel Imbuga (Vice Chancellor, JKUAT, Kenya /Board Chair, RUFORUM Network)

I think I can start with an example of a case study of JKUAT. In the beginning, it was very difficult to adopt to the hard work that was being shown by the Japanese experts. But with time, we learned how to copy and paste it but at first, you know Kenyans like working 8am to 5pm, but the Japanese experts will go from 6am to probably 8pm. So it was not easy at the beginning but eventually it worked out. But, apart from sending the technical experts, we would also like to have some Japanese students coming to our university to interact with the youngsters. We usually get volunteers coming but they are not many. So we would like to have concerted efforts to have Japanese students coming over to have the classroom experience in Africa. That is the only change I can add there but everything else was really perfect.

Hiromitsu Muta (Professor Emeritus, Tokyo Institute of Technology)

Today I heard many presentations, and it was mentioned that the projects inKenya and the Philippines were very effective. On the other hand, I often hear that Japanese projects go well

during the projects but that sustainability afterwards is often an issue. I think Kenya and the Philippines have been successful because Japanese assistance has been repeated in different forms and continued over the years. This is not always possible. Many successful methods have failed as soon as people leave, asking the local people to continue. We must seriously consider how good projects take root and grow. Continuing collaboration in different forms as in Kenya and the Philippines is one way. Another way is to position Japanese assistance projects in the medium- to long-term plans of the partner countries. The biggest issue concerning sustainability is a lack of funding although we know how to continue. Funding is, in a way, determined by priorities. Securing enough funds is important. We need to expand projects to include some sort of financial support and to make it possible to use funds from international organizations and other donors. Today success stories were shown. It's nice to hear about them, but there have been many other projects that could have gone well if they had been continued.

Nobuko Kayashima (Senior Advisor, JICA)

Today we heard about the UP NISMED in the Philippines, Jomo Kenyatta University, and the PEDP in Bangladesh. Thank you for saying many positive things about Japanese assistance. As Prof. Imbuga talked about Japanese assistance, may I say something in relation to that question? When I was listening to the story of Jomo Kenyatta University, I had a different impression. I honestly think the project succeeded not so much because Japanese assistance was great but because Jomo Kenyatta University in Kenya is great. The JICA project to support Jomo Kenyatta started a little before 1980, and for about 20 years, a large amount of money including grant aid as well as human resources were invested in this project. So a lot of input had been made, and they thought it was high time to terminate the project, which ended around 2000. The university had grown to provide high-quality education to a small group of select students. The number of students was about 3,000 then. Now it has grown to about 40,000. Sometime after the end of the project, Japanese experts who had participated in the project visited Jomo Kenyatta University again and were astonished to see how big the university had become. They all said they were concerned about the quality of education. They had devoted their time and effort to developing the university, so they could not help but be concerned about the quality of education with 40,000 students. But I realized that with this number of students, the university had created a financial base that enabled the diverse activities conducted today. I understood that people in Kenya had nurtured the seeds planted by Japan. If Japanese experts had stayed, this might not have been possible because there might have been a lot of discussion of the quality of education and the size of the university. But after Japan left in 2000, Kenya created an excellent university in its own way. People in Kenya managed their own university by determining its quality of education. What Japan can do is give a small push at the beginning. Local people continue what has been begun. They don't have to keep on doing the same thing. They can localize it and adapt it to their context. They make it their own and grow on their own. It would be wonderful if Japan could plant a seed to grow in that way. This was discussed in the morning session, too, but I think it's true that the significance of a project is not determined by the amount of funding. Now Jomo Kenyatta University is supporting universities in South Sudan and Eritrea. As a matter of fact, the UP NISMED is conducting training for science and math teachers from Africa in JICA's project. When we sent our counterparts from Kenya to the UP NISMED in the Philippines for training, some people asked why we didn't send them to Japan. But the surveys we have conducted show that the training in the Philippines is more effective as people in the Philippines can speak better English. This is also related to what was discussed earlier. There is now only a small gap between Japan and developing countries. Japan and developing countries are not divided. The Philippines and Kenya are both truly amazing. I hope that Bangladesh will come up with great results, too. I believe it will.

Kazuhiro Yoshida (Director, CICE, Hiroshima University)

Thank you, I will stop the interactive discussion among ourselves here and would like to invite contributions, comments, questions from the floor.

Q1.

Masato Noda (Associate Professor, Ibaraki University, Visiting Fellow, CICE, Hiroshima University. Visiting Fellow, CRICED, University of Tsukuba)

Thank you Prof. Yoshida and the presenters. My question is about the inclusive education under the globalization in the 21st century. In the 1990s, there was a lot of discussion of using Japanese development experience in developing countries. The use of Japanese experience in education in developing countries was discussed, too. But I think in the process of globalization, the situation has changed. First, Japan now faces the issue of poverty. One out of six children in Japan is living in relative poverty. This is a new issue we face in the process of globalization. Poverty is becoming a serious issue in Japan. Another issue is multi-ethnicity and, the multicultural society in Japan. I used to live in Aichi Prefecture. In Homi Danchi housing estate in Toyota City, for example, half of the elementary school children were Brazilians. Japan has children's poverty and the issue of multi-ethnicity. How can Japan use these experiences in international assistance to overseas? How can Japan also learn from the experiences of developing countries that have tried to overcome the issues of poverty and multi-ethnicity? Ms. Kayashima was explaining inclusive education, so may I ask her these questions? And if possible, I'd like to appreciate comments on these issues from other speakers, too. Thank you.

Kazuhiro Yoshida (Director, CICE, Hiroshima University)

I would like to collect some more questions or comments from the floor first before we turn over to the speakers. I will take a couple of turns so if you could be patient.

Q2.

Arisa Oishi (Master's course, Graduate School of Asia-Pacific Studies, Waseda University)

Thank you for your presentations. Today we discussed about the mainly formal education, but I would like to think about the non-formal sector because the word of literacy still exists in the SDGs, as Yoshida sensei mentioned. Or life-long learning or adult learning declaration or something. So, I have two questions for, the first one is mainly for Yoshida-sensei. You explained "literacy" remaining in the SDGs clearly and concisely. Although it was marginalized in the EFA, it has been included in the SDGs. Did UNESCO and the international community include literacy in a proactive manner? Or was it included in line with UNESCO's tradition? I'd like to ask Prof. Yoshida the background as I'm sure he is familiar with the situation.

My second question is about the new financial mechanism, and I'd like to ask not only the panelists but other participants as well. Considering the new financial mechanism in the sector

of non-formal education, the World Bank, for example, their expenditure to the sector was very small during EFA period. I understand it was partly because of the difficulty of assessing and conducting quantitative research. I'd like to ask you whether there are any key factors or ways to increase financial assistance for non-formal education.

Kazuhiro Yoshida (Director, CICE, Hiroshima University)

Thank you very much. We still have around half an hour so I will stop taking questions for now and then give ourselves a chance to respond to some of the questions, comments raised among ourselves, panelists. If you are ready to or should I myself respond?

The question was about the background in which literacy and numeracy were once again highlighted in the process of formulating the SDG 4 by UNESCO and others. As you know, in the Dakar Framework for Action, the progress toward achieving the global target to improve literacy was actually disappointingly less than expected, but the international community is not giving enough warning about it. I don't think the international community is aware that we are overlooking something important. When we refer to "literacy," it does not just mean the ability to read words and understand what they mean. For quite some time, people have been paying more attention to "functional literacy," which means the ability to utilize the information gained by reading words and to turn it into knowledge that is useful in daily life. In this way, the effectiveness of literacy is now emphasized more. It is, however, very difficult to measure the effectiveness of life skills with uniform indicators. Therefore the term "literacy" has been used based only on the conventional definition of literacy. In considering "non-formal literacy education," which has been mentioned, who are the people who have not been able to get enough school education? When we discuss literacy, we are not only talking about school-aged children but also about young people and middle-aged people and those in my generation as well. If I may use the word "investment," the government faces a difficult challenge of deciding priorities within the limited budget. Anyway, unless literacy is improved in various ways, the welfare of each citizen of a nation cannot be improved. Unless everyone's welfare is improved, we cannot achieve sustainable development, which is our shared goal. In this way, everything is connected. Numeracy means not only the ability to add, subtract, multiply and divide but also the ability to use mathematical thinking in daily life. In this sense, "numeracy" was also included in the SDGs. I believe it was included because the international community has recognized its importance. UNESCO could not have done this alone.

Mabel Imbuga (Vice Chancellor, JKUAT, Kenya /Board Chair, RUFORUM Network)

I would like to add an additional comment. As far as touching on why MDGs interact so well, first of all, you realize that the MDGs did not focus on university education at all. They left universities out. But the universities are now involved in the SDGs. So definitely, SDGs are going to work because universities can have different intervention strategies that can go right up to the common country person, we can go to the lower levels through community social responsibilities where using university students when they go back home. Now through ICT, we can train many of these people even through mobile phones, through television and through radio. So to me, I'm really optimistic by the universities being involved now and being mentioned in the SDGs. This time round, it's going to work.

Nobuko Kayashima (Senior Advisor, JICA)

With regard to multi-ethnicity, I think multi-ethnicity is an example to show there are many similarities between the issues we face in Japan and those in developing countries. Japan has not been able to solve these issues fully in this new globalization. How can we solve them, then? NGOs, governments and experts are doing activities similar to those of aid organizations dealing with these issues, but these actors are usually working separately. Those who are addressing domestic issues in Japan say that they are trying to solve domestic issues and cannot really think about issues outside Japan. But when we share the activities in developing countries, we can probably learn a lot. Japanese experience may be used, too, and we may be encouraged. For example, the issues related to children of Japanese ancestry and those of the aging society can be shared. There are many challenges we commonly see, so instead of being donors and recipients, it would be great if we could create an environment in which we could learn from each other, understand each other, sympathize and collaborate to solve our shared issues.

About the multi-ethnicity, though we're always talking about inclusiveness, multi-ethnicity but in a true sense, inclusiveness is really a big problem due to mindset. People who have grown within close environment and were home schooled, rarely think about the diversity and their mind is not open enough to accept the inevitable reality. If we really want to create inclusive society, we can consider to include this sort of things in the curriculum and also to do something more to motivate the society as a whole. Thank you.

Soledad A. Ulep (Director, UP NISMED)

Regarding non-formal education, in the Philippines, our Department of Education has the Alternative Learning System (ALS), where those who belong to this sector can still study and learn by going through a set of learning modules and finishing them in their own time specifically for example, for those who are in the advanced elementary and secondary levels. There are agreed meetings with the teachers for discussion of whatever concepts are being developed in those modules. The contexts of presenting the concepts as what our Bangladeshi friend has already said, relates to their daily lives, so they see what they are learning as relevant to their needs. They are also given an examination – the ALS Accreditation and Equivalency Test. And once they pass this, then they are given a comparable certificate of rating and/or diploma. So, they are not left out. Those who are in this sector are still included in the main goal of providing quality education for all.

Kazuhiro Yoshida (Director, CICE, Hiroshima University)

Now, I would like to re-open the floor and invite comments.

Q3.

Bong-gun Chung (Research fellow, Instructor, College of Education, Seoul National University/ Visiting Professor, CICE, Hiroshima University)

What is the success factor of Kenya project? The discussion gave me an impression that it's the hardworking of the Japanese work ethic and the dedication of the local people. So in more detail, what are the success factors of this preliminary case? On the other hand, what are the failure factors that you mentioned in Japanese ODA, there are many suspended grants.

The other question is in the past two months while staying in Japan, I feel like there are many discussions and concerns about assessment, evaluation, understanding the consequences, and thinking about the outcomes. And I think all these are related to big changes in the scenes. From my understanding, I feel that we are turning away from the neo-liberal quantified approach to education to some kind of philosophical, ethical issues. In UN SDGs, there are expressions like human dignity, decent work in their life. And so things are changing in terms of assessment. We need to think more about the unseen part, unmeasurable part, some invisible quality or invisible aspect of outcomes accumulated. So in your discussion, what do you really have in your mind? What does it really mean? Is it evaluation or quantified indicatorization that we have doing the past decades or are we going to do something different from now on? Or, maybe we cannot perfectly escape from the quantification and numbered tradition but I think we need at least some add-on to the other quality part. And in that regard, I just want to know what Japan are talking about assessment, evaluation, appreciation or understanding of the holistic outcome on their life. If it is possible in the education sector, it could be a big signal to the people out there in the economic development part or the ministry of finance. In that regard, I want comments from the panelists. Thank you.

Q4.

Kenneth King (Professor Emeritus, University of Edinburgh)

This is Kenneth King again. I couldn't say this I think in UK, but let me say it here. There are two stories I've heard today. Story one starts in 1977 in Kenya with the JKUAT, it goes through to the Philippines 1994 with lesson study, and it goes through a whole series of different activities including Bangladesh in PEDP. So there's a story about Japanese investment in a small number of very specific educational activities through 1977 or 1982 and right up to now. And the second story, put together very brilliantly by Yoshida sensei, is a story at the global level from 1990, Jomtien, then EFA at Dakar and then, 2015. That story doesn't mention science and maths, you won't find those words in the EFA or Jomtien Declarations, you won't find lesson study, you won't find laboratory based education or monozukuri or all those Japan-specific terms in the global story. But my question is this. At the end, if we listen to Kayashima san and what the MoFA people who are in the room have done, they put together the two documents and those documents try and look back at story one because those documents, although they are quite short, are full of 'Japaneseness' or what Japan does well. But they also try and connect to the Yoshida story. They also ask what is Japan doing about 2015? So my question is this. How does Japan with its dramatically reduced budget for education look at Muta's paper. How does it support the continuation of story number one and Japan's comparative advantage in education and how does it do what our friends in MoFA, MEXT and JICA are saying, which is to try and make education relate to all the other 16 goals? So it's a very ambitious agenda if you look at these papers. I don't know how many people have read the JICA position paper or the MoFA paper. But they start with a very ambitious agenda but they also want to continue with what I'm calling story one. So that's my analysis of what I've enjoyed listening today and what we couldn't hear in the UK. I couldn't tell that story as a DFID story because that story about UK's comparative advantage in specific educational aid activities is over. We can't tell that story any longer.

Kazuhiro Yoshida (Director, CICE, Hiroshima University)

Ok, I see a few more hands. So I will collect the few more questions first before I give voice to keynote speakers and panelists. In view of time constraint, please make it concise and to have your name first please.

Q5.

Keita Niwayama (Graduate School of Applied Linguistics, Meikai University)

Thank you for your wonderful presentations. First, I'd like to ask about Japan's contributions. I think there are areas in which Japan has not been able to contribute enough. I study linguistics. There are language problems behind the issue of science and math education. I'd like to ask your opinions on the difficulties children of Japanese ancestry face, which was mentioned earlier.

Q6.

Leyla Radjai (Graduate School of Asia-Pacific Studies, Waseda University)

I'd like to ask Prof. Yoshida about the program-based approach. Is it correct to say that the world is shifting to financial assistance while Japan is mainly implementing projects? In that case, will Japan also shift to a greater focus on financial assistance as the global trend in international education cooperation shifts in that direction? ODA plays an important role in showing the presence of Japan and in building friendly relations with other countries. If Japan shifts to financial assistance, I'm concerned that the assistance will be invisible. It is often said that Japanese-style cooperation focuses on local needs. What does "local needs" mean? Are they the needs of the country or the citizens' needs? Are the needs of a country different from the citizens' needs? If the citizens' needs can be addressed through the cooperation, how are they addressed?

Kazuhiro Yoshida (Director, CICE, Hiroshima University)

Thank you very much. Already, rather a long and heavy list of questions posed on us.

- What do we know about the success and failure factors? This is not really directed to Kenya's case, but I think it's a general question to what we collectively known about the success and failure factors of the way Japan has been working to improve the education in our partner, developing countries.
- The question was raised about how we understand the assessment. I think the imbedded question is also what we are trying to measure. What does that assessment really mean vis-a-vis the meaning of the results we are trying to achieve?
- And the other question, very different question. On one hand, Japan has been consistently assisting in such a manner as we have been assisting in developing countries on one hand. And on the other hand, there is the global discourse being evolved from the decades of Jomtien, Dakar and now the SDGs. How do we compare this and put Japanese way of assistance to such context and what is the Japanese-ness? Is this the word you would like to use? In that changing context,

if you have any answer.

- The meaning of language as a background of promoting or not so successfully promoting math and science education, do we have anything to say about the importance of the language?
- And also, a series of questions raised on program-based approach, so anybody on the floor enlighten us?

Mabel Imbuga (Vice Chancellor, JKUAT, Kenya /Board Chair, RUFORUM Network)

Thank you for the questions. I'll just respond to in a small way on the first question about the success factors and failure factors of the Japanese assistance. I think I would recommend you to read the reviews of JICA. Because after every five years, there were reviews. It's not something that we can answer in one sentence. It is a whole lot of things, there were very many successful things that were mentioned there. The failures were very few and I think if you continue focusing on failures, then you can never move. So the best is that to look at the successes and learn from them. And I would recommend you read the reviews. They are very important. There must be some in the JICA headquarters.

And my friend from Scotland, how can Japan continue in assisting, we all know, we all talked about comparative advantage and the product life cycle. And when it becomes the maximum, it can either go up if you add something or it can go down if you don't do anything. So what Japan needs to do is that it does not need to put in money or the time. It can just put in ideas. And I think now, they are promoting regional dynamism which is coming up very well. And we have even finished in Kenya, under the Africa ai program. They are linking up with Japan, African Union and JKUAT. And they are reaching the rest of Africa. So it doesn't always mean just funding and money. It can just be ideas. And also just to focus the country in the right way. So yeah, just think about the product life cycle. Thank you.

Hiromitsu Muta (Professor Emeritus, Tokyo Institute of Technology)

With regard to the question on evaluation, it is not possible to measure all the effect of education, but there are some aspects that can be measured. Nowadays, everything needs to be quantified, and it may seem impossible to do so. In the past, not much effort was made to measure results, and instead, they used fancy words. If I may say this, it was something like prettifying the results. As has been mentioned, the amount of ODA is being reduced. Unless we explain the actual benefits of ODA, we cannot increase the ODA budget. The same applies to university budgets and to everything else. Unless many people understand how much has been done with the money used, we cannot continue projects. Thus it is important to measure whatever can be measured. It is, however, wrong to believe that everything can be measured. There are many things that cannot be measured. I think it will help a lot if we know clearly what can be measured. If we are aware that there are, for example, 10 items and that we are measuring one or two items that can be measured out of the 10, it would help us a lot. As Ms. Kayashima said, I think we can somehow measure the effect of developing curriculum. There are difficulties, however, in the area of education because there are other assessments such as graduation examinations and university admission tests, which are extremely influential. I think we can measure the effects of changing curricula, changing locations and conducting teacher training using assessment methods suitable to measure these specific actions, but the results must be linked with university admission tests or other assessments that have a major impact on the country. If university admission tests only measure students' ability to memorize, even if curricula are reformed to improve students' ability to think, the results of the projects will not be widely used under the bigger influence of the existing system. When an assistance project aims

at curriculum reform to improve students' thinking ability, we must also reform the existing system of university admission tests and other related factors in order to make the curriculum reform effective. When we carry out assessments, we must also consider what we measure. Are we measuring the effects of the project or the link with other factors measured from other perspectives? With regard to quantification, which was mentioned earlier, nothing can be zero. Everything can be quantified in some way. But, of course, we must remember the limitations of measurement. It would be a big mistake to think we can measure everything. At the same time, making efforts to measure results and to show them in clear ways has become a condition for continuing any project.

Soledad A. Ulep (Director, UP NISMED)

I'll talk about the success factors and these will be based on our own experience. I think that one factor which contributed to the success of the JICA project in the Philippines was that, right from the very beginning, the Japanese experts already made us aware of how to sustain the project once it ended. So they had this "long term" thinking. For example, when we were still preparing for the national training programs where we needed to develop the activities and instructional materials, they already had sustaining the project in mind. The Japanese experts were thinking long-term: What if this project ends already? What will be left behind? So they thought of-putting all these instructional materials together and come up with sourcebooks for teacher trainers. It's not easy to develop these materials because they needed to be tried out first. We had to take into account for instance, the content background of the teachers and other relevant considerations such as whether or not the activities were doable ~~or~~ and whether or not they were appropriate to the level of the teachers. So, despite its being not easy to do, in a span of five years, we were able to develop 8 plus 8, 16 volumes of sourcebooks on practical work for teacher-trainers. In mathematics, the sourcebooks have lessons that exemplified teaching mathematics through problem solving. I think that the view of sustaining the project after it ends was a success factor. Another factor was the clear communication between the two parties, the Japanese experts and the UP NISMED staff regarding the expected outputs of the project. ~~So~~ We knew what we were supposed to be accountable for. The Japanese experts had very good work ethics. They were hardworking. The UP NISMED also worked hard, so that together, we can produce the outputs. I think that clear communication was a very important factor, too. So the success ~~can~~ may partly be attributed to these factors.

Shyamal Kanti Ghosh (Secretary, Ministry of Agriculture, Government of Bangladesh)

I would like to respond about why I think development activities are better in program-based approach than many individual projects. A program-based approach is good for the development of the whole sector. It ensured the continuity, it ensured transparency, ownership, it avoids the duplication as well, above all, the usefulness. I'll give an example in the education sector. We have a project for curriculum development, but there is no provision for teacher's guide, teacher training. After the development of curriculum, it could not bring any change in the school level due to lack of teacher's knowledge about that changed materials. There was another project for infrastructure building, they built school building as well as the furniture. Everything was there, but there was no blackboard because it was not included in the project document. If it happens in the case of program-based approach it could be solved easily, because there is flexibility. In the program-based approach, you will find everything together, what you need to develop your sector according to need (considering resources). From the financial management perspective, it is more transparent because money is coming through the

government treasury. On the other-hand all the money from the development partner is also going to the government treasury, so you have to maintain only one account. Though the money is coming through government treasury, still you have to be accountable to the development partners, how much money you are spending and for what purposes you are using that money. You have to give the accounts to the government people also. If we have the demand from the citizens, and we develop the project or the program, then it is useful. If we develop the project or the program without knowing the demands of the citizens, it has no use. If a project or the program is developed for the political purpose, that is different issue. Most of the donor agencies give the aid or loan to the government and not the citizens directly, government in the power negotiate the matter, that has to be bear in mind. Still it is a big question and also a matter of debate.

In response to the question related to language, I think it is needless to mention that language is very vital for overall learning of every individual. Without proper knowledge of language, nobody can learn anything it may be math or science, whatever it., communication creates huge barrier on proper understanding as well as learning. That's why, it is very vital to know the language. In my opinion it is better first, mother tongue and then the other languages. And the people like me who have grown through the colonial administration and educated under the colonial education system, they have second language, English for us and then the third one may be Arabic, Sanskrit, French, Spanish or something like that. We have a huge population and not so much natural resources. If we want to develop our country, we must educate our people and impart skills to them then they convert into resources and they can be citizen for the world and serve for the world. To serve the other nation of the world people need to know their language culture etc. If they earn mastery in their own language, then only they can learn the second or the third language. So, language learning should be emphasized most. Thank you.

Kazuhiro Yoshida (Director, CICE, Hiroshima University)

With regard to a program-based approach, which is becoming a mainstream modality, there was a question on what education cooperation Japan should offer and whether Japan can provide education cooperation with ODA while maintaining its visibility. I think people have different answers. In relation to a program-based approach, it is said that donors' aid should be better harmonized based on the principles of the Paris Declaration. The declaration includes various terms such as "alignment" and "ownership" to emphasize the importance of the systems of the recipient countries. "Sector-wide approach" and "financial assistance" are now used rather than "program-based approach" because many people involved in education cooperation discussed it and came to the conclusion that these are important in order to maximize the benefits of cooperation. There are, however, critical studies on the benefits of financial assistance to improve education in developing countries. For example, some findings show that financial assistance for the educational sector has been quite effective in improving access to education but that it has not been always effective in improving the quality of education such as learning outcomes. The DFID conducted a strict evaluation in the U.K. on financial assistance, and the findings of the evaluation also show this tendency. The U.K. and the European Union, which have focused on financial assistance, have similar findings. The problems that can be solved with money can be solved with money, but regardless of the availability of money, educational effects must be achieved. Therefore, projects have been the mainstream modality for international cooperation. In other words, projects provide a process for the people in developing countries to gain the technical expertise lacking in their countries, and their overseas partners can join them in this learning process. If a program-based approach as the form of financial assistance is given more power, it becomes more important to jointly study how to

improve educational benefits with that money. In fact, some of the organizations that believe that financial assistance is the most effective modality are actually investing in research on how to improve education. As a result, assistance will be given not as individual activities in the form of conventional projects but as part of the effort to improve the entire sector. JICA's actions are well positioned in the improvement plan for the educational sector, and, in that sense, they are well aligned with the program-based approach. I think JICA has been promoting such actions for quite a long time. This is my first answer. But is it OK as it is? I don't think so. We must take responsibility for analyzing whether a program-based approach is really effective in improving the quality of education. I think unless we question the effectiveness of the program-based approach and redefine this approach, we cannot improve learning outcomes in education. Japan can provide this input as Japan has experience both in its own educational development and in international educational cooperation. I believe that people expect Japan to promote the process of redefining the program-based approach. I would like to say more about this in the concluding discussions, so I'll stop here.

And this will bring us to the time limit of this slot of session. I know there are many other issues to deepen the discussion but let me take a pause here and turn over the mike to the MC for a moment.

Concluding Discussion

Riho Sakurai (Associate Professor, CICE, Hiroshima University)

Now we would like to go on to the closing discussion. Please turn your attention once again to the theme of this forum, which is stated on the program: "It will focus on the possible future direction of Japan's international educational cooperation in order to contribute to the achievement of post-2015 education goals." In this closing session, I would like to ask the two keynote speakers and the panelists what they found from today's forum to be important for Japan's future international education cooperation. As the time is limited, I would like to ask the keynote speakers to speak for four or five minutes and the panelists for three to four minutes each about what they learned today, focusing on the theme of the forum. I'd like to first ask Prof. Imbuga on the far right, then Prof. Muta, Ms. Kayashima, Mr. Ulep, Mr. Shyamal and Prof. Yoshida. Thank you.

Mabel Imbuga (Vice Chancellor, JKUAT, Kenya /Board Chair, RUFORUM Network)

I have three points. The first one is on how Japan can contribute to the next post 2015. First of all, I was very happy to hear that there is recommendation for Japanese universities to open up for interaction with other universities in the world, which, I think, is very important. So that now Japanese universities would be internationalizing and, the other universities would also be doing the same. I think it is very important in terms of student-staff exchanges specially to encourage the interaction between the universities in Japan and universities globally because this is a new area of collaboration. I think it should be encouraged and also expanded.

The second one is on JICA and the government of Japan encouraging regional dynamism. The regional dynamism is now very important and where JICA or the Japanese government can use one center and interact with many other regions. And in this, I'm looking at expanding the networks to provide education globally. At the moment, we are collaborating with about 22 countries which cover more than a half of African countries through ai-Japan program. And if this program is encouraged, all the other countries have an impact from the programs laid down by JICA and the government of Japan. So regional dynamism is very important. And then, I was also happy to learn that the government of Japan is spending more financially on higher education. This is the opposite to what my government is doing. They spend so much on the basic education and secondary education and they miss out universities. So from the Education 2030, this changes. I know they are starting to concentrate also on higher education because higher education is equally as important as I mentioned. For the first time, universities have been mentioned in the SDGs. They were not in the MDGs. So I really appreciate that the roles of universities are being recognized. We should also promote STEM, that is the science, technology, engineering and mathematics. In order for the developing countries to come up, they have to industrialize. And you cannot industrialize if you have not built the capacity in the STEM areas, so those areas are very important to be focus as we go forward.

And the last one. I was happy to learn from Bangladesh that the women actually were passing more than the boys there. This is very encouraging for us. And I would like to know what Bangladesh has done to make their women perform better than their boys because it is something that we have been struggling with in Kenya for a long time. And then, I think we have come up with a slogan in Kenya to say that what men can do, women can do it even better.

So that now, we can encourage more women coming into this program that they fear. For example, in the electrical and electric engineering program, you find only two ladies out of a class of 40. So this is something that we need to focus on as we go ahead with the 2030. Let us focus on the STEM and let us also focus on the gender parity. So that now, we don't leave our women behind. As we move into the 2030. let us also focus on agriculture, agri-business and agricultural mechanization. This is very important because Africa is basically agricultural land. And if you go to farms, you find the women. We want to release the women so that they can do other roles. Not being on the farms with horses digging and planting, but by mechanizing agriculture, we shall be able to release the women. Let us focus on agri-business. Even just small gadgets can take up household activities. Like when the microwave came, it made changes. We can do the same on on-site processing of agricultural products. So that African can now start exporting semi-processed products or fully processed products. I think that will be very important and I know it can be done. We really appreciate JICA on where you are going. You have given us your next five years plan and we are happy and we are going to align ourselves on it. So I would like to take this opportunity to thank the government of Japan in supporting Africa and I'm looking forward to all of you to coming to attend the TICAD VI, which is very important. For the first time, it is going to be held in Africa and where else, but in Kenya because Kenya is the leading partner. You can never go wrong by coming through Kenya to access the rest of Africa. Thank you very much for listening to me.

Hiromitsu Muta (Professor Emeritus, Tokyo Institute of Technology)

May I say something a little different? I am now serving as a policy advisor to Myanmar's Ministry of Education and live in Myanmar for about seven months of every year. There were serious floods in July and August last year, and many schools suffered heavy damage. The Japanese government was to offer 5 billion yen of assistance, mainly to rehabilitate these schools, using various schemes. When I was in Myanmar, at first I heard that JICA was going to build schools using a scheme called "general grant aid." So I met with the Deputy Minister of Education and conveyed the Japanese plan, which he said was not good. He asked me if I knew about Cyclone Nargis. When schools were damaged by this cyclone, Japan provided assistance using general grant aid and built elevated concrete school buildings, which can serve as shelters for local people during cyclones. With general grant aid, beautiful buildings can be built, but it takes time because many procedures are involved. With regard to the reconstruction after Nargis, only half of the schools in the plan were completed. It would have taken two or three years, and they could not wait. They built their schools on their own or with the support of other donors. Of course, the completed buildings were beautiful, but only half of them were built. The deputy minister said that emergency assistance for disasters should produce immediate results. He wanted financial assistance in such a case. I told him that Japan did not provide financial assistance. I promised to convey his message, but I said I didn't think it was easy for Japan to provide financial assistance. I did convey his message, and I don't know what discussion took place in Japan, but in the end, it was decided that JICA's assistance was to be given in the form of financial assistance. I was very glad to hear that. I thought JICA and the Foreign Ministry had changed a lot and become quite flexible. Of course the Ministry of Education was very glad to hear that. The other donors were concerned, wondering if it would work. They wondered if the funds would disappear after JICA provided the financial assistance or if bidding would actually take place or if the procurement of materials would be made based on the procurement documents. In order to implement the financial assistance, JICA dispatched two experts to provide guidance. The construction work is basically conducted by local people, but the experts provided guidance to conduct public bidding and procurement based on international standards. In this way, it was decided that financial assistance would be used to rebuild schools as soon as

possible. I think schools will be built in about a year. If financial assistance is needed again for other purposes, the system is already in place, so I think it will be easier. I don't think financial assistance is always good, but this was a very good example of expanding schemes so that Japan can now use financial assistance as a tool in addition to grant aid, technical cooperation and loans. As there are more schemes, financial assistance can be combined with technical cooperation or other schemes. I wrote about this a little in the evaluation report I mentioned today. Financial assistance tends to be invisible, and there is concern about how the money is used. With regard to the "visibility" of Japan's activities for example, in this case in Myanmar, we can still make it clear to people what Japan is doing. Myanmar builds schools with the financial assistance provided by Japan, but we can make the project "visible" by following the progress and publicizing it in various ways, with regard to how many schools are being built and to what extent, or by asking the completed schools to use logos on the school buildings. We can also ask these schools built with Japanese assistance to conduct many educational projects. Most of our projects being conducted are on developing curricula, so we can ask these schools to use such curricula. Various projects can be conducted at these schools. So, activities can be expanded in many ways. JICA has many tools. I believe education cooperation using various tools can significantly contribute to achieving the goals of the SDGs.

Nobuko Kayashima (Senior Advisor, JICA)

There was a very difficult but interesting question on the factors in the success of the Jomo Kenyatta project. I'd like to mention Mr. Sugiyama. He was an expert who played a very important role in the latter part of the project. After the Jomo Kenyatta project was over, he served as leader of the science and math project in Kenya, too. Around that time, I worked with him a few times. When Phase II of the science and math project was over, he insisted that we should end the project then. Project leaders usually do not insist that the project should be ended. We were afraid that if the project ended then, the activities that had been undertaken, namely the teacher training which had finally begun at the nationwide level, might stop. We were afraid that the activities would be discontinued, so we insisted that the project be continued, but he disagreed with us and insisted that it be ended. He said if the project's activities were to stop then, it was important to let them stop. He said the project would become truly successful if the partners could stand on their own and continue it. This is just one episode, but I came to think about, for example, JICA's reports, which often state what was done and how much was done. JICA's policy position papers and the MOFA's policy papers also state what will be done and how much will be done. The Global Monitoring Reports also say how much money will be raised and put in developing countries. Now I sometimes wonder if this is enough. I think it is actually important to also consider what we didn't do and where the projects were handed over to developing countries. The donors have to say that they will do this much and have done this much, but I think it is also important for them to believe in the ability of people in developing countries to take action. It is important to wait for them to stand on their own, to believe in them and wait. Even if they fail, we must wait and develop projects, providing only what is needed. This is my personal opinion based on my personal experience. Some countries have grown, and we can now discuss various issues with them. This is what I feel based on my on-site experience.

Soledad A. Ulep (Director, UP NISMED)

The fact remains that in order to have quality education, teacher competence needs to be continuously enhanced. Teacher training programs are necessary and important but they are not

sufficient. So I think a great contribution of Japan can be to continue disseminating lesson study because lesson study can complement the teacher training programs that are being provided and to do more research related to lesson study. And then, once these are done, probably, we can answer one of the issues that was raised by Yoshida sensei regarding the need to explore how much we know about how to improve learning. I think we can gather a lot of substantial data from doing lesson study.

Shyamal Kanti Ghosh (Secretary, Ministry of Agriculture, Government of Bangladesh)

Thank you. About quality education, first what we mean by the term quality education, how we could achieve quality in education, what we need to do for quality education, is it only curriculum, textbooks, teachers, environment, equipment, management, technical know-how, school factor? There are so many things to consider. Government of Japan is helping Bangladesh through JICA to improve the quality of education in Bangladesh. They are working for curriculum development as well as teacher's development. No doubt it is the vital area for quality, it will be better if it enhanced more in the future. Educational experts and managers are getting scholarship from Japan and they earning degrees and diploma from renowned institutions of Japan. It is no-doubt, but we need more experts, we have more than 20 million children up-to grade 5 primary. Expenses of 2 year-degree program cost nearly 10 million yen. If there is shortage of fund, JICA can consider of sending expert to Bangladesh for 2, 3 months, they can train the trainers, instead of 2 year-degree program. We appreciate if they could conduct both.

Other thing is that, I don't have much knowledge about educational condition of Japan 50 years ago, but our education is based on rote learning. We write on an exam paper and pass the exam. How it could work in our life, we have no idea. Now we are thinking about how the learning can affect the life of the learners and how it could be useful. Experts should be interchanged among the countries. Knowledge as well as teaching skills are necessary. The adaptation of the technology as well as the mindset of the people should also be looked into. Overall, I think involvement of parents in children's education is necessary, otherwise it will not improve as we expected. We have introduced primary education completion exam so that parents can understand that they need to allow their children to go to school and spend more time on education. In Bangladesh there are more than 70 percent of parents who does not have educational background so that they are not aware of that and even they don't know what will be the future of their children. They send their children to schools, but they have no idea about schools, they do not know what their children's are learning, so we try to involve them in the school system. I think we can request the parents to come to school and ask the class-teacher to explain about their children, what they are doing what they are learning in the school, at least after completion of every semester.

The other issue of achieving SDG is feeling of togetherness among us all that already explained by Mrs. Mabel. I also express the same view yesterday. If all the people of the world feels that we are the citizen of the world, this is our mother earth, we are all together and want to develop together, that will certainly bring result. Otherwise, it may not be useful and it may not be easy to implement the SDG goal, especially goal 4. Thank you, thank you for your patience.

Kazuhiro Yoshida (Director, CICE, Hiroshima University)

A little bit of an inside story: Before the SDGs were adopted in the United Nations last year, many people engaged in serious negotiations at various places. I mean, the eight MDGs were adopted in 2000. The sectors included in these goals were better off, but those not included in the MDGs had suffered a lot. When the post-2015 development framework was to be established, people in different sectors conducted aggressive lobbying, determined not to be left out. Fortunately, education was able to secure one goal, Goal 4. As has already been discussed today, the new SDGs are not goals for someone to achieve but represent a framework under which all countries and all people in the world can address universally relevant issues. "Universal" has become a keyword. The "D" of the SDGs stands for "development," and serious discussions have been conducted on what we are trying to develop sustainably. It was concluded that the SDGs should be transformative. The new framework was formed, based on the harsh criticism and the realization that continuing the same efforts would not make everyone richer. The education sector decided to promote inclusive, equitable, high-quality education. Most people who were not involved in the process of formulating the SDGs, however, think the new framework for development is very difficult to understand. The new goals were finally determined, but in the educational sector, for example, there are terms like "inclusive." Some people are happy to see it included in the headings, but others say they don't understand what it means. Even if people are told that "learning outcomes" are now considered more important than before as some people had insisted on their importance, I doubt that everyone will be willing to improve learning outcomes in their countries. If we say we have to do this because it is written in the framework adopted by the international community, I don't think people will become actively involved in addressing issues at their own initiative. I believe the new development framework calls for people to actively take actions to address their own issues. That is the message of the new framework. It will soon be five years since the Great East Japan Earthquake, which took place on March 11, 2011. The earthquake led to serious disasters, but if there's one positive thing, Japanese people's way of thinking about disaster-stricken areas and their way of taking action in the event of disasters have greatly changed. People came to believe that the suffering of others was their own suffering, and they gave serious thoughts to what they could do. Many young people, in particular, took action, and I think this was encouraging. As we are discussing education in this forum, I would like to consider this phenomenon in light of the new SDG4. How can we understand what children and others hope to achieve through education in the true sense of the word? How can we consider the problems they face as our own problems? How can we join them and take action using our knowledge? We must seriously consider these questions and start building a process to make this happen. Just repeating "inclusive and equitable" will not lead people to take action or make them seriously think that these are their own issues. Frankly speaking, Japan cannot contribute to international education cooperation or implement Japanese-style education in foreign countries without understanding its own strong points and issues. If we look at our own position and consider various issues as our own, then we can start finding our own methods of international education cooperation. I don't intend to offer any conclusions here, but I hope to work with you and promote thinking about this with you so we can take concrete actions. Thank you.

Riho Sakurai (Associate Professor, CICE, Hiroshima University)

Thanks to the keynote speakers and panelists. How did you like the 13th JEF, the Japan Education Forum? As there is little time left, as moderator, I would like to add just one thing. William Arthur Ward, a famous American writer, minister and teacher, wrote: "The mediocre

teacher tells. The good teacher explains. The superior teacher demonstrates. The great teacher inspires." I think this is very true. Education 2030 and the SDG4, discussed today in the keynote speeches and in the panel session, aim at quality education. The maxim by Ward is linked to improving learning and the quality of learning for better education and how to improve students' learning. It is also related to promoting self-reliant education development, the goal of this forum. In today's session, we also discussed how we can plant seeds. Perhaps we are in an age in which we learn this from each other. As I said at the beginning of this session, it is not our aim to reach a conclusion at this forum. On behalf of one of the organizers, I hope this forum has provided a thought-provoking opportunity to all of you.

Now we have to close the forum. Please give a warm round of applause to Prof. Imbuga, Prof. Muta, Mr. Shyamal, Mr. Ulep, Ms. Kayashima and Prof. Yoshida. Thank you. All the programs of the 13th Japan Education Forum have now been concluded. On behalf of the organizers, I would like to once again express my sincere gratitude to the keynote speakers and the panelists and above all, to all the participants who have contributed to active discussions throughout the forum. I would also like to thank JICA for its support, the three interpreters for their wonderful work, and the students who worked behind the scenes to prepare for the forum and helped pass the microphones. As I said at the beginning, this forum was jointly organized by the MEXT, the MOFA, the University of Tsukuba and Hiroshima University. I'd like to thank them and the staff members of the secretariat at Hiroshima University for all of their hard work. Thank you very much.