



CADEFEST News

Newsletter: Volume 3

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UP COMING EVENT:

- SC Meeting
- JCC Meeting
- Seminars
- JICA Intern Dispatch
- Short Term Trainee in Japan
- Japanese Expert Dispatch and Special Lectures

Message from CADEFEST Project Manager

Welcome to the third edition of our project newsletter!

First of all, I would like to express our gratitude for all stakeholders who support our project, and my appreciation to those who give us their time and effort to develop our faculty.

This project started from August 2016 , we are now in the third year, which means that we are now at middle point of the project.

Through this 3rd edition of JICA CADEFEST Phase II Newsletter , it can be clearly found that our programs are actively conducted as scheduled. I am personally proud of this success although we have many challenges to tackle together.

As the Project Manager and Dean of Faculty of Engineering Science and Technology, I would like to request all readers to share our activities and progress to others and give us better ideas and suggestion to improve our education and research activities as well as contribution to our society as a center of excellence in Timor-Leste. We

will reflects your positive feedback to our project and promote the activities within the remaining half duration of the project.

Please enjoy reading our third edition!



Dr. Ruben Jerónimo Freitas

Project Manager, CADEFEST Project Phase II

Dean, Faculty of Engineering Science and Technology-FoEST, UNTL

Message From Chairman of Japanese Supporting Universities (JSUs)



Yasuhiro TAKAHASHI, Ph.D.

Chairman of Japanese Supporting Universities
Committee

On behalf of Japanese supporting universities, I am very pleased that 3rd issue of JICA CADEFEST news is now published.

In this second phase of CADEFEST project, four universities, such as, Yamaguchi, Nagaoka, Kyushu, and Gifu University, have been continuing activities to support the improvement of research, academics and management capacities through JICA short term trainings, and short term experts dispatch.

I have joined this project since 2006, that is from the start of CADETES project. Compared with the previous project, we have the actual feeling that the outputs through this project have been increasing year by year, for example, the number of faculty management activities is ten including three special lectures, two site visits, and so on, in this Japan fiscal year.

From the point of view of research outputs, we are very pleasure to publish a new journal which is named "Timorese Academic Journal of Science and Technology" from the faculty. We hope this journal TAJST becomes a world-leading journal in engineering field in the future.

In this and next year, in order to increase the outputs, we think you may face some challenging issues, for instance, preparation for Syllabus/Curriculum review in 2019, continuous research paper publication, and activity plans for project activities. Our four universities will fully support you to gain the outputs targeted through this project.

Message From Chief of Cooperation Unit



Câncio Monteiro, Ph.D.

Chief of Cooperation Unit, Vice Dean Cooperation
and Research Affairs, Faculty of Engineering
Science and Technology, UNTL

I hope the contents of this 3rd CADEFEST project News will respond of what you want to know about project activities done so far during the last six months.

During this semester, many activities have been conducted in Faculty of Engineering Science and Technology—UNTL, which were supported by CADEFEST Project phase II. The activities such as Electronics and Electrical Engineering Department Seminar, Special Lectures, project coordination Meeting with UNICEF, the JCC Meeting and Journal Launch.

Specially, I am honored to announce that Cooperation Unit published "Timorese Academic Journal of Science and Technology (TAJST)" on 6th September 2018 during 3rd JCC meeting. In this first issue, it contains 21 research papers from lecturers of Faculty of Engineering, Science and Technology and we are planning to continue to publish annually.

In the next issue, we expect more lecturers to submit their research papers to introduce our research activities and how we are contributing our society.

Equipment Handover Ceremony

The Equipment handover ceremony was held on 22nd July 2018, in Faculty of Engineering Science and Technology, National University Timor Lorosa'e, Hera Campus.

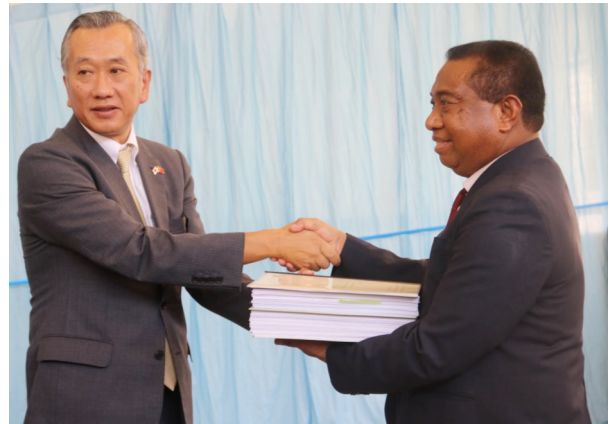
The ceremony was attended by Ambassador of Japan to Timor-Leste Mr. Hiroshi Minami, Vice Minister of Public Work, Mr. Nicolau Freitas Belo, Vice Minister of Social Solidarity, Ms. Signi Verdial, the Director General of Higher Education, Ms. Maria Elsa D. Correia, Rector of UNTL, Prof. Dr. Francisco Miguel Martins, Chief Representative of JICA Timor-Leste, Mr. Masafumi Nagaishi, Senior Representative of JICA Timor-Leste, and other guest.

Mr. Hiroshi Minami, Ambassador of Japan to Timor-Leste made opening speech. Ms. Maria Elsa D. Correia, Director of Higher Education, also made speech on behalf of Timor-Leste Government. The following that, Prof. Dr. Francisco Miguel Martins, Rector of UNTL expressed to his appreciation to people of Japan that they always support Timor-Leste from 2002, especially for the development of the Faculty of Engineering, Science and Technology, UNTL.

All guests were invited to see the demonstration of new equipment provided by Japanese Government through JICA.



Guests Group Photo



Ambassador of Japan and Rector of UNTL



Demonstration of New Equipment by Japanese Consultant and UNTL Lectures.

The 3rd JCC Meeting



The 3rd JCC Meeting

On Thursday 6th September 2018, the 3rd Joint Coordinating Committee (JCC) Meeting for “The Capacity Development of the Faculty of Engineering Science and Technology, UNTL, Project Phase II (CADEFEST Project Phase II)” was held in Hotel The Ramelau in Dili.

The Director General of Minister of Higher Education, Ms. Maria Elsa D. Correia, Chief Representative of JICA Timor-Leste Mr. Masafumi Nagaishi, and Rector of UNTL Prof. Dr. Francisco Miguel Monteiro attended and made opening speeches.

The progress of the project second year and the target activity indicators were presented by Dr. Cancio Monteiro, Vice Dean of Cooperation FoEST, UNTL. In second section, Prof. Dr. Koichi Shimakawa Chief Advisor, CADEFEST project 2 made presentation of working plan for the project third year. Participants have exchanged their views and discussed the issues to improve the faculty management and the ex-

Group Photo at Launching Ceremony for New Journal.



Dean handed the New Journal to Director General of Higher Education Science and Culture

pected outcomes. The achievement to target indicators and the working plan is approved by participants.

During the meeting, the launching ceremony for Timorese Academic Journal of Science and Technology (TAJST) was conducted. The ceremony was successful and some inputs from participant will reflect to the second edition of the journal.

Mr. Masafumi Nagaishi, Chief Representative JICA Timor-Leste making his speech.



The 6th Steering Committee (SC) Meeting

On 26th June 2018, the 6th SC meeting was held in meeting room at Hera Campus. The participants were Dr. Ruben Jeronimo Freitas, Dean of Faculty of Engineering Science and Technology, UNTL and his structures. Prof. Dr. Koichi Shimakawa, Chief advisor of JICA CADEFEST Project and all Department Directors and Vice Directors.



The 6th Steering Committee Meeting

The aims of this meeting were to monitor, evaluate and review the project activities last three months and to plan and confirm the project activities for next three month. Participants exchanged their views and counter measures to solve issues or challenges for implementing the Project.

Meeting With UNICEF



Meeting with UNICEF staff in Timor-Leste

The meeting between UNICEF and the Faculty of Engineering Science and Technology was held on 9th August 2018 in meeting room at Campus Hera.

The main purpose of this meeting was to discuss the possible colligation for the project for the Development of Birth Registration System in Timor-Leste, Foundation for Child's Life and Good Governance. The project is financed by the Government of Japan with the amount of 2,500,000 US dollar. The duration for the project is 1st October 2018 to 30th September 2021 and many institutions are involving the project, such as Ministries, UNTL, other UN agencies and NGOs.

On this meeting, UNICEF staff explained the detail plan of the project and the possible technical collaboration with Informatics Engineering Department, FoEST. The first stakeholder workshop will be scheduled in February or March in 2019.

COOPERATION UNIT ACTIVITIES

Electrical and Electronics Engineering Seminar



The 3th Electrical and Electronics Seminar

On 19th June 2018, Electrical and Electronics Department, Faculty of Engineering Science and Technology, UNTL conducted the seminar on “Electrical and Electronic Engineering Role for National Development”. The main topic of this seminar was Renewable Energy in Timor-Leste. The seminar was opened by H.E. Mr. Inacio Freitas Moreira , Vice Minister of Development for Transport and Communication. Other representatives from government institutions shared their activities such as National Directorate of Renewable Energy, National Directorate for Water Service and National Development Agency. At the same time, lec-

tures and one alumni Electrical and Electronics Department presented their researches in the seminar.

This seminar was supported by UNTL and JICA through the project for Capacity of Development Faculty of Engineering Science and Technology.



Informatics Engineering Department Seminar



IT Seminar

On 10th August 2018, Informatics Engineering Department Seminar was conducted by Students in Informatics Engineering Department, Faculty of Engineering Science and Technology, National University Timor Lorosa'e in Hera Campus.

Mr. Frederico Soares Cabral, lecture of Informatics Engineering Department, currently the master student in Gifu University, Japan,

presented his research on “**An Automatic Survey System for Paved and Unpaved Road Classification and Road Anomaly Detection Using Smartphone Sensor**”.



Ms. Kumi Torii, JICA Intern, Master student in Soka University, Japan also presented her research on “**A Study on Monitoring System for Child Care with RFID Sensor Tags**”. Finally Mr. Vosco Perreira, lecture of Informatics Engineering Department, also presented his research on “**A Deep Learning-Based Approach for Road Pothole Detection in Timor-Leste**”. He also currently studies his Master's degree in Gifu University, Japan.

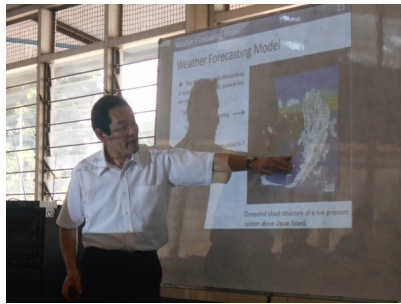
Special Lectures

Prof. Tomanao Kobayashi

On 28th September 2018, Mechanical Engineering Department, Faculty of Engineering Science and Technology, UNTL had Special Lecture by Prof. Tomanao Kobayashi, JICA expert, from Gifu University, Japan. The topic of the special lecture was “**Simulation of Weather and its Application to Renewable Energies**”.

In the special lecture Prof. Kobayashi explained the importance of weather prediction to produce the efficient renewable energy.

Around fifty students attended the lecturer and learned latest issues for weather simulation and renewable energy.



Prof. Yasuhiro Takahashi



The special lecture of Prof. Yasuhiro Takahashi was conducted on 7th September 2018 in Electrical Department main room Hera Campus.

The topic of the of special lecture was “Fundamental of Optical Communication System”. His lecturer included fundamental of optical fiber transmitting system; overview of photo-diode; overview of I/V convert, and trans-independence amplifier and active inductor for 1-chip LSI.

Prof. Takahashi illustrated the number of broadband internet users in Japan increased every year and then, optical fiber to the home and broadband wireless access have increased. He also explained about the latest innovation to accelerate the internet volume is optical fiber and its communication system.

Prof. Mitsuo Yamaga

On 28th September, 2018, Electrical and Electronics Engineering Department, Faculty of engineering Science and Technology, UNTL had Special lecture which conducted by Prof. Mitsuo Yamaga. The topic of the special lecture was “**Efficient Use of Renewable Energy-Solar Pumped Solid-State Laser**”.

In the special lecture the student and the lecture were very actively involving questions and answers session. Some students requested to have his special lecture in the future, too.



Prof. Hidehiko Kazama

On 22nd October, 2018, Prof. Hidehiko Kazama JICA expert from Japan conducted special lecture for student in Civil engineering Department, Faculty of Engineering Science and Technology, UNTL.



The titles of the special lecture was “**Theory of Geotechnical, Stability of Ground and One-dimensional consolidation theory and practical application**”. Through the special lecture, Professor emphasized the importance of understanding the functional relationship to soil properties and the consolidation theory using mathematical methods.

Japanese Professor Dispatch

Mechanical Engineering Department

MT Software Training



The Mahalanobis Taguchi (MT)
Methods Training

On August 18th to 25, 2018, Prof. Ikuo Tanabe was dispatched to Mechanical Engineering Department, Faculty of Engineering Science and Technology, UNTL. He conducted and Mahalanobis Taguchi (MT) Method Training for lectures in Mechanical Engineering Department. The lectures will utilized the methods for their research activities.



Renewable Energy and Weather Forecast

Prof. Tomonao Kobayashi, Vice Dean of Faculty of Engineering Gifu University, Japan visited the Faculty from September 22nd to 29th, 2018 as JICA expert for Mechanical Engineering Department, Faculty of Engineering Science and Technology, UNTL. The purpose of his visit was to give his research advice to Mechanical Engineering Department Lectures, especially renewable energy fields such as solar energy and wind power.

Mr. Antonio Pedro Belo and Dr. Victor da C. Soares from Department of Mechanical Engineering discussed with Prof. Kobayashi about their research activities and they participated short term training from November 2018 to December 2018.

During his staying in Hera Campus, he also made courtesy call for Dr. Ruben Jeronimo Freitas, Dean of Faculty of Engineering Science and Technology, UNTL. He discussed the possibility of research collaboration with all departments in Faculty of Engineering in the fields of renewable energy and weather forecasting.



Dr. Ruben Jeronimo Freitas, Dean of FoEST welcomed Prof. Tomonao Kobayashi in his office.

Civil Engineering

Survey Instrument Training

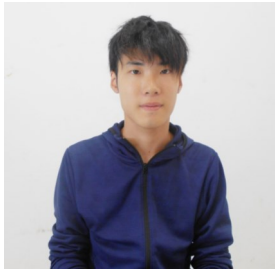
On Monday 20th August 2018, Prof. Shinichiro Nakashima, from Yamaguchi University in Japan, was dispatched to teach survey instruments such as GPS and Total Station in Civil Engineering.

These survey instruments were newly installed by Japan Grant Aid Project. Other than, Civil Engineering Lectures, Staff of APORTIL, had also joined the training to utilize their instruments for future collaboration between APRTIL and Civil Engineering in terms of Surveying in Timor-Leste.



Prof. Nakashima explained how to set Total Station to Civil Engineering Lecturers and staff from APORTIL

Student Exchange Program



Name: Yudai Okamoto
From : Yamaguchi University, Japan

Hello, I am Yudai Okamoto, I came from Japan, and I am a student in Sustainable Engineering in Yamaguchi University.

I stayed in Timor-Leste, Faculty of Engineering Science and Technology, UNTL Hera Campus for one week.

I joined activities which were conducted by Prof. Masahiko Sekine in Civil Engineering department. I really enjoyed staying Hera and learned a lot from Timorese teachers and students!

Drone Operation Training

Prof. Masahiko Sekine was dispatched to Civil Engineering Department from 15th to 22th September 2018, as JICA expert to support Civil Engineering lectures for research equipment training such as Drone and its software.



Prof. Sekine also taught some student about Biochemical Oxygen Demand (BOD) measurement in Civil Engineering Laboratory. In addition, He gave some advice the student's final thesis.

Other than activities in Hera Campus, Prof. Sekine and lectures and students visited Water purification plant in Liquica to study the real purification system in Timor-Leste.



Geotechnical Engineering



Geotechnical Training in Civil Engineering Department

From 13th to 27th October, 2018, Professor Hidehiko Kazama JICA expert from Japan stayed in Timor-Leste to support Civil Engineering lectures and students of Faculty of Engineering Science and Technology, UNTL. During professor's staying in Timor Leste, he conducted many activities such as trainings related to Geotechnical Engineering in laboratory of Civil Engineering Department, Survey visit to Karimbala with Francisco Guterres O. Ximenes, Civil Lecturer and other two students and also special lecture for students in Civil Engineering Department.

Furthermore, on 23rd October, 2018 Prof. Kazama attended in the 4th International Conference organize by IPG (Institution Petroleum e Geology) in Dili Conventional Center, Kaikoli, Dili, Timor-Leste. In the conference, he made a presentation and his topic was "Development and application of database system of Geological and Geotechnical Information".

Electrical and Electronics Engineering

Electrical Equipment Training



Prof. Mitsuo Yamaga explain functionality of Oscilloscope for Electrical and Electronic Department Lectures.

From 17th September to 28th September 2018, Prof. Mitsuo Yamaga, was dispatched as JICA expert for Electronics and Electrical Department, Faculty of Engineering Science and Technology, UNTL.

The purpose of his training was to improve experimental class in Electrical and Electronics Department Lectures with electrical equipment such as Oscilloscopes and Signal Generators.

Student's Final Thesis



Prof. Takahashi gives advice to a student.

Prof. Yasuhiro Takahashi was dispatched to Electrical and Electronics Department from 3rd to 7th September 2018.

He gave advice of research activities and student's final thesis. Professor also attended the Joint Coordinating Committee Meeting that realized on 6th September 2018 in Hotel The Ramelau as a representative of Japanese Supporting Universities.

Informatics Engineering

Server set up in Informatics Engineering Department

On 6th August 2018, Prof. Hidekazu Fukai and Prof. Satoshi Tamura came to Faculty of Engineering Science and Technology, UNTL. The purpose of two professors' stay for one week in Timor-Leste was to support informatics lectures set up the servers in Informatics Department. The servers were set up to facilitate informatics lectures to save and manage the data by themselves for research and education purposes. There were four servers that were provided by the Project. Other hand the two Professors also discussed with Informatics lectures about their research topics and their future plan of their further study.



Server set up in UNTL main Campus

JICA Volunteers Visit Informatics Engineering Department

On Wednesday 4th July 2018, the Faculty of Engineering Science and Technology, National University of Timor-Lorosa'e has received the JICA Volunteers visit in Hera, Campus. Ms. Hiromi TOMITA, IT Officer and Ms. Seiko NAKAJIMA, Pharmacist in Serviço Autonomo de Medicamentos e Equipamentos de Saúde (SAMES), Dili.



The JICA Volunteers discuss with Dr. Cancio, Ms. Zulmira and Mr. Abreu

The objective of their visit was to discuss the necessity of IT human resource in Timor-Leste, specially for IT Programmer.

Dr.Câncio Monteiro, Vice Dean for Research and Cooperation Affairs, Ms. Zulmira Ximenes da Costa, Director of Informatics Engineering Department and Mr. Abreu Boavida, Vice Director of Informatics Engineering Department jointed the meeting. They agreed to have collaboration activities in the future to promote the capacity development of students in Informatics Engineering Department.



Site Visit

Coffee Factory



Dr. Junior observing the Coffee Machine

On 20th June 2108, Dr. Junior Raimundo da Cruz Mechanical Department lecture and his students visited Paric coffee factory in Bebonuk, Comoro, Dili, Timor-Leste.

Mr. Santiago Boavida, alumni of Mechanical Engineering Department, National University Timor Lorosa'e who works there as a technician in coffee factory, explained the factory operations and challenges.

The main purposes of the visit was to observe the machine that use for coffee production and its environment impact.

Field Survey of Mechanical Department



Local Tua Sabu Industry Survey

From May 21st 2018 to May 25th 2018, Mr. Domingos de Sousa Freitas as Principal Investigator and Mr. Evangelino Candido Gaio as Co-Investigator for Tua Sab production research conducted their research survey in Laclubar, Batara, Orlala Villages, Manatuto Municipality. They are from Mechanical Engineering Department, Faculty of Engineering Science and Technology, National University of Timor Lorosa'e

The objectives of their case study are to observe and analyze the traditional cooking method of using traditional materials to produce Tua Sabu and how its impact to the indoor air pollutions, environment, education and economy at three villages. The other objective was to have interviews with the producers and consumers of Tua Sabu and to present the previous research results of Tua Sabu production research at Junior and Senior High School at Laclubar village.

In the future, they will design and study new Tua Sabu production device to improve production efficiency and promote to apply the Tua Sabu new devices at these three villages.



Tide Gauge at Dili Port

On 1st August 2018, Lecturers of civil engineering, Faculty of Engineering Science and Technology, UNTL had meeting with Mr. Kenji Sasa JICA expert for APORTIL.

The purpose of visit was to study the Tide Gauge System in APORTIL. They observed the Tide Gauge at dock and the Data Center. Mr. Kenji Sasa explained the functions of Tide Gauge system. The Tide Gauge was provided by Japanese Government. There is only one Tide Gauge in Timor-Leste. The Data can be utilized for many kind of application, such as construction, geological survey etc. It is

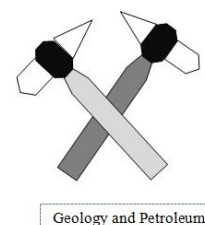
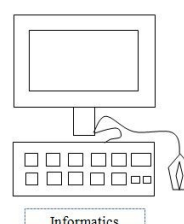
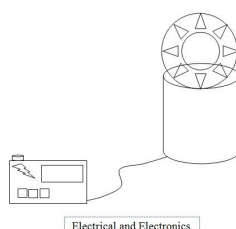
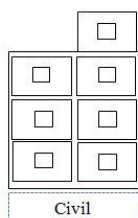
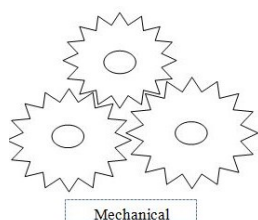
very essential for the country development. The effective collaboration between Civil Engineering Department and APORTIL are important and expected.



Graduate Tracer Survey

On October 2018, the graduate tracer survey has been conducted and the result is shown as the table below.

Graduation Month /Year	Total	Responded (A)	No Response	Employed (B)	Unemployed	Employment Rate B/A X 100
November 2016	74	40	34	27	13	67.5%
May 2017	67	35	32	18	17	51.4%
November 2017	91	48	43	26	22	54.2%
May 2018	87	55	32	22	33	40%



The employment rates for those who graduated half year ago (May 2018), a year (November 2017) after, one and half year (May 2017) before and two years ago could achieve 40%, 54.2%, 51.4% and 67.5% respectively. The current students in Hera Campus are expected to prepare well to get job after the graduation to improve this situation. We here express our appreciation towards to the graduates who responded this tracer survey.

Electrical Laboratory Renovation

Research for Road Surface

Mr. Frederico Soares Cabral and Mr. Vosco Pereira, are lecturers in Infomatics Engineering Department who currently pursue their master's degree in Gifu University.

On 7th and 8th August 2018 they conducted road roughness survey to collect the data for their research. Mr. Frederico Soares Cabral conducted the survey in Baucau and Liquisa. In the same time, Mr. Vosco Pereira conducted it in Liquisa and Maliana. These data will be analyzed in their master thesis. And the results will be vital for developing road maintenance program in Timor-Leste.

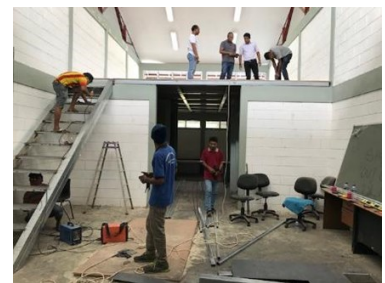


Mr. Frederico collecting the data using smartphone sensor to recording the data.

The Chief Advisor of JICA CADEFEST II, Dean and Directors of Departments in Faculty of Engineering Science and Technology attended the Ceremony for the workshop renovation in Electrical and Electronic Engineering department, on 7 June 2018, in Hera-Campus.

The objectives of this renovation were to provide sufficient and secure space for student's classes and practical activities. Furthermore, the enough space for research activities in Electrical and Electronics Engineering Department are prepared.

This renovation was partially supported by JICA CADEFEST project phase II, but lecturers and students in Electrical and Electronics Engineering Department contributed their private money and provide their time and labor work to renovate the rooms, even during the weekend!



JICA Intern



Group Photo after Her Physics Class

On 6th August 2018, Ms. Kumi Torii came to Hera campus as a JICA Intern and she stayed in Timor-Leste for one month. The main purpose of her internship was to support students to study basic math and physics.

During her staying, she conducted basic math and physics extra class, for all students of Faculty of Engineering Science and Technology, UNTL. The extra class was conducted after

regular classes and students were very enthusiastic and attended the class. Through her extra class, students gained the knowledge of basic math and physics which it will be essential to study special subjects in their departments.

To express appreciation to Ms. Kumi, students sang the friendship Japanese Song “Kokoro No Tomo” at the last extra class of Ms. Kumi Torii. Thank you for Kumi –san, Hope You will keep in touch with us !!



Ms. Kumi Torii, a JICA Intern explained how to solve basic Math problems to students.



**JICA CADEFEST PROJECT
PHASE II**

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and
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Up Coming Events...!

- ◆ Japanese experts dispatch
- ◆ Project Steering Committee Meeting
- ◆ JICA Intern Dispatch
- ◆ Special lectures
- ◆ Short Term Training in Japan
- ◆ Seminars



Editors are happy to receive suggestions and comments to improve this news letter.