

4. 合同調整委員会 (JCC) 議事録

Minutes of 2nd Joint Coordination Committee (JCC)

2nd JCC was held on October 15, 2003 in Izmir-Ege Sağlık Hotel.

I. Attendant

1. Turkish Side

- (1) Ministry of National Education
 - Mr. Hüseyin ACIR : General Director of Technical & Vocational Education
 - Mr. Sami ÖNAL : Board of Education – Section Director
 - Mr. Yücel YÜKSEL : Head of Department, Technical & Vocational Education Directorate
 - Mr. İhsan SAVAŞ : Head of Department, Technical & Vocational Education Directorate
 - Mr. Bayram GÜN : Section Director, Technical & Vocational Education Directorate
- (2) Regional Education Directorate
 - Mr. Ahmet SALGIN : Manager of Technical & Vocational Education Section, Izmir Province-National Education Directorate
- (3) İzmir Industry
 - Mr. Enver OLGUNSOY : President of Education Committee – Aegean Region Chamber of Industry (EBSO)
- (4) Konya Industry
 - Mr. Mustafa KÜÇÜKDERE : Investments and Planning Specialist – Konya Chamber of Industry
- (5) Anatolian Technical High Schools
 - Mr. Satı ÇALIŞKAN : School Director, İzmir Mazhar Zorlu ATHS
 - Mr. Muzaffer APAN : School Director, Konya Adil Karaağaç ATHS
 - Mr. Egemen DÖGER : Counterpart, İzmir Mazhar Zorlu ATHS
 - Mr. Turgay İŞBİLEN : Counterpart, İzmir Mazhar Zorlu ATHS
 - Ms. Güliz GÜLSEVİN : Counterpart, İzmir Mazhar Zorlu ATHS
 - Mr. Mustafa GÜNEŞ : Counterpart, İzmir Mazhar Zorlu ATHS
 - Mr. Hasan YILDIZ : Counterpart, İzmir Mazhar Zorlu ATHS
 - Mr. Selim GÜLÇEN : Counterpart, İzmir Mazhar Zorlu ATHS
 - Mr. Sedat ELBİR : Counterpart, İzmir Mazhar Zorlu ATHS
 - Mr. Mehmet ARIKAN : Counterpart, İzmir Mazhar Zorlu ATHS
 - Mr. Mustafa NAZMAN : Counterpart, İzmir Mazhar Zorlu ATHS
 - Mr. Bülent VARDAR : Counterpart, İzmir Mazhar Zorlu ATHS
 - Mr. Talât GÜLER : Counterpart, İzmir Mazhar Zorlu ATHS
 - Ms. Melek TOTAN : Counterpart, Konya Adil Karaağaç ATHS
 - Mr. Osman KÖSE : Counterpart, Konya Adil Karaağaç ATHS
 - Mr. Yüksel ÇINAR : Counterpart, Konya Adil Karaağaç ATHS
 - Mr. Murat AKDOĞAN : Counterpart, Konya Adil Karaağaç ATHS

2. Japanese Side

- (1) JICA Turkey Office
 - Mr. Yasushi INABA : Resident Representative, JICA Turkey Office
 - Mr. Ali BEKİN : Administrative Officer, JICA Turkey Office
- (2) Mid – Term Review Team
 - Mr. Yoshio SATO : Team Leader, Mid – Term Review Team (Senior Curriculum Specialist, Elementary and Secondary Education Bureau, Ministry of Education, Culture, Sports, Science and Technology)

- Mr. Tateo MATSUI : Advice on Material Development, Mid – Term Review Team (Principal, Chiba Prefectural Toso Technical High School)
- Mr. Ayako WATANABE : Researcher, Mid – Term Review Team (Regional Planning International Co., Ltd)
- Mr. Takeshi MATSUYAMA : Cooperation Planning, Mid – Term Review Team (Second Development Cooperation Division, Social Development Cooperation Department, JICA)
- (3) JICA Project Team
- Mr. Yasuo SUZUKI : Chief Advisor, JICA project Team
- Mr. Yasuhiro ISHIDA : Expert, JICA Project Team
- Mr. Yoichi MASUDA : Expert, JICA Project Team
- Mr. Shuichi YUZAWA : Expert, JICA Project Team
- Mr. Tetsuya OKUBO : Expert, JICA Project Team
- Mr. Jin KOKI : Project Coordinator, JICA Project Team
- Ms. Ayten IVERSON : Project Secretary, JICA Project Team
- Ms. Neslihan KARAÇUHA : Project Secretary, JICA Project Team

II. Business

The meeting was opened by Mr. Hüseyin ACIR, chairman, at 10:00.

1. Speech by Chairman

Chairman made a speech, focusing on the importance of industrial development of the country and expected impact from the JICA project department to the industrial development (see attached Doc – 1).

2. Self – Introduction of the Participants

3. Speech by the Industry Side

(1) Izmir Industry

Mr. OLGUNSOY made a speech and below is the summary.

- a. The technical and vocational schools, educating mid – level technical human resources, have importance for the industry of Aegean Region.
- b. EBSO-Education Committee is ready to support the new education system which is established in Izmir Mazhar Zorlu ATHS.
- c. EBSO puts emphasis on introducing the project school to the industry of Aegean Region. In this connection, some meetings were organized at the school and the representatives of the industry were invited to the meetings.
- d. In certain times, articles concerning the project department of Mazhar Zorlu ATHS and its activities are being published in EBSO Magazine, which has 6,000 subscribers among the industry.
- e. A Robot Contest was organized on the occasion of Izmir International Fair-2003 with the cooperation of IZFAŞ (Izmir Fair Organization). Mazhar Zorlu ATHS won 1st prize of the contest.
- f. EBSO is planning to have closer contact with the related industrial companies to introduce the project department students for the factory training, which will start in next summer vacation.
- g. EBSO will also assist the job hunting of the graduates of this department.

(2) Konya Industry

Mr. KÜÇÜKDERE made a speech focusing on the below points.

- a. Konya was a traditional industrial city with lots of grain warehouses, it was industrialized in recent years.
- b. Today, Konya Chamber of Industry has 1,200 members from different sectors.

- c. In Konya, using high technology, automotive spare-parts production is the leading sector. Most well-known customer of the sector is TOYOTA.
- d. CNC machines, mostly made in Japan, Korea or Taiwan, are being used for the production of automotive spare parts.
- e. Konya industry needs well-trained and talented technical human resources. Therefore, Konya industry is willing to accept the graduates from the project department of Adil Karaagaç ATHS.
- f. Konya Chamber of Industry is ready to support the project.

After the above speeches, Chairman stated that the cooperation with the industries of both regions is one of the important points for the job hunting of the graduates.

4. Presentation of Ministry of National Education

Mr. Yücel YÜKSEL made a presentation on the resource inputs by Turkish Government and plans for the future development of the project. Here below are the topics of his presentation (see attached Doc – 2).

- (1) Aim of the project
- (2) Modifications of the laboratories and workshops
- (3) Assignment of the counterparts
- (4) Project Progress Meetings and Introduction of the project
- (5) Impact of the new department to the Turkish industry
- (6) Dissemination of the project

5. Presentation of JICA Project Team

Mr. SUZUKI made a presentation as below.

(1) Technological activities in the first half of the project period.

a. Provision of Equipment

During the first half of the project period, educational equipment with a total amount of 3 million USD was procured and installed to the laboratories and workshops of two project schools.

b. Development of Textbooks

Development of total 27 textbooks, which is one of the most important duties of the project team, will be completed during 5 year- project period. 9th and 10th grade textbooks were already developed and trial versions were printed. 11th grade textbooks are now being prepared by the JICA Experts.

c. Short – Term Experts

8 short – term experts were dispatched to the Izmir and Konya project schools and supported the practical studies of the Turkish Counterparts.

d. Technical Seminars

The aim of technical seminars is to disseminate the new technologies to other technical teachers in Izmir and Konya by the Turkish Counterparts with the supervision of JICA Experts. During the first half of the project period, 7 technical seminars were held. The subjects were Programming, PIC (Peripheral Interface Control), PLC (Programmable Logic Control) and Network, which are the most important fields for the industrial development of Turkey.

e. Relationship with the Industry and the Universities

In order to grasp the needs of industry, the needs which are to produce the mid-level technical human resources, some meetings were held with Izmir and Konya's Chamber of Industry. The project is also in close contact with 4 Turkish Universities, namely Ege University, Dokuz Eylül University, Advanced Technology Institution and Selçuk University. The relationship with the universities will play the key role for updating the textbooks.

- (2) Plan for the latter half of the project period.
- a. Textbook Development

Development of the remaining 18 textbooks out of 27 will be completed by the JICA Experts and the Turkish Counterparts during the latter half of the project period.
 - b. Factory training and job hunting of the students

Factory training is a good chance to observe the needs and impact of the industries, especially view points of monitoring the educational level and its quality. Therefore, a supporting system for job hunting of the graduates should be established by Turkish side and necessary guidance should be given to the students by the Turkish Counterparts.
6. Presentation of School Directors
- (1) Director of Izmir Project School

Here below are the topics of the presentation of Mr. ÇALIŞKAN (see attached Doc – 3).

 - a. Long – Term and Short Term expert activities, assignment and activities of the counterparts.
 - b. Curriculum and textbook development
 - c. Introduction of the project department
 - d. Cooperation with the Chamber of Industry, other chambers, universities and other technical high schools.
 - e. Installation of the equipment procured from local market and Japan, laboratory activities.
 - f. Teachers Training Center Plan and In – Service Training
 - g. Success rates of the prep. and 9th grade students in the academic year of 2002–2003.
 - (2) Director of Konya Project School

Mr. APAN made a presentation focusing on the below points.

 - a. After having the introduction of the project activities to the Konya industry and public, high interests were shown, especially from the people, who belong to educational world as well as industry. There are number of teachers and industrial employees, who have children as primary school students, show their strong willingness to send their child to our department.
 - b. According to the impressions which obtained from the discussions with the industry side, the department students will be hopefully accepted for the factory training.
 - c. From the more effective counterparts training point of view, a long – term expert is requested to assign at the Konya school. If it is not possible, long – term experts are requested to stay in Konya for longer period.
 - d. Since Konya industry is mostly composed of factories manufacturing hydraulic machines and spare parts, which are based on the mechanical technology, there is a request from the industry side to open the “Information Machinery” sub-department in Adil Karaagaç ATHS.
7. Presentation of Mid-Term Review Team
- Mr. SATO, Team Leader, presented the outline of mid-term review including the below topics (see attached Doc – 4).
- (1) Preface
 - (2) Objectives of the Review
 - (3) Members of JICA Mid – Term Review Team
 - (4) Methodology of the Review
- Mr. MATSUYAMA explained the Project Design Matrix (PDM) (see attached Doc – 5) and results of the mid – term review (see attached Doc – 6).

8. Questions & Answers and Additional Topics

Mr. ÇALIŞKAN expressed the below points.

- (1) The harmonization between Japanese and Turkish sides, which is the most important factor for the efficiency and effectiveness of the project activities, was obtained through the big efforts of Mr. SUZUKI, Chief Advisor, and other JICA Experts.
- (2) It is known that the assignment period of JICA Expert is handling by JICA headquarters but, if there is a possibility not to replace the existing team members, especially the Chief Advisor, up to the end of the project period, it will give positive effect for the success of the project.

9. Comments from the Resident Representative of JICA Turkey Office

Mr. INABA, Resident Representative of JICA Turkey Office, gave the below comments.

- (1) Turkey is going forward to be an EU member. To realize this, I believe that well organized harmonization studies with EU are necessary.
- (2) As the harmonization studies mentioned above, more importance should be placed on the technical & vocational education sector.
- (3) In the meantime, for the support to the technical and vocational education sector by JICA, Ministry of National Education should study and analyze the contents of the support, giving careful consideration of harmonization process to EU.
- (4) In order to harmonize the JICA Project activities and the EU studies, it is strongly proposed to have further meetings between JICA (Turkey Office) and the Ministry.
- (5) The request, relating the replacement of existing JICA Expert, will be considered by JICA Headquarters.

10. Acknowledgement and Closing

Chairman acknowledged the discussions with the below speech.

- (1) It is obvious from the discussions that the project activities are going on successfully in a well-organized cooperation between Turkish and Japanese sides.
- (2) There are 3 points that need to be stressed.

a. Employment

In order to provide employment to the graduates, a survey was started together with the State Planning Organization (SPO) and State Statistics Institution (SSI). Technical & Vocational General Directorate of Ministry is playing the coordination of the survey. The result of survey will be shared with the Japanese side. With the aim of sending the first graduates to the industry, together with the Japanese side, it is requested not to terminate the project before having the first graduates in 2006.

b. Publicity

To introduce the project activities to the industry and public, more importance should be placed on publicity. To make a common brochure of the both project schools is one of the ideas.

c. Sister School Plan

The review team is requested to form a sister school plan between Turkish and Japanese schools.

The meeting was closed by the chairman at 15:40.

The speech of Mr. Hüseyin ACIR, General Director of Technical & Vocational Education-Ministry of National Education

Dear Distinguished Participants,

Technology is transforming our society. The rapidly advancing technology reflects the new expectations of society and the aspiration to achieve.

Utilizing robots and automation systems in the Industrial enterprises, instead of a human resources, cuts the expenses down and creates advantages on competition in the production. Due to this fact, it is necessary to provide and prepare an educational program that meets the needs of the rapidly advancing world. Technical project implementation was requested to JICA by our government, with the aim of training technical human resources who are required by the Turkish Industry.

In accordance with the technical cooperation agreement named "Establishment of Industrial Automation Technologies Departments in Anatolian Technical High Schools" signed between 2 governments, Turkey and Japan, put in implementation in two pilot schools.

Industrial Automation Technologies Department has 2 sub-departments; namely,

- Information Electronics
- Information Machinery

The department which includes the knowledge of electric, electronics, computer, machinery, production technology, controlling technology, mechatronics, robotics, automation systems, communication and network technology, is the first and only one in Turkey. Even the education given in our universities is not as flexible as the education given in this department. Therefore, there were some modification has been completed in these project schools such as; establishment of 17 workshops and their equipment provided by Japanese Government and the schools started their education in 2001/2002 academic year.

One of the most important activities of this department is to keep close contact with industry in order to prepare the curriculum in accordance with the needs and requirements of industry. Having human resources directly from schools to companies will benefit enterprises on reducing the expenses to zero on the training of their future employment.

Technology transfer is given to the department teachers by the Japanese experts. After their training in Japan, the department teachers can master their related field.

We do not want to limit this project in only 2 schools. Our works continue to expand this new technology to the other schools all over Turkey.

I would like to thanks to individuals, Japanese officials, Mr. Mazhar ZORLU and his staff and individuals from industry, for all of your very hard work in establishing this project.

Speech of Mr. Yücel YÜKSEL, Head of Department of Technical & Vocational Education Directorate - Ministry of National Education, in 2nd Joint Coordination Committee (JCC), on October 15, 2003.

Distinguished General Director
Leader of Japanese Mission
All the participants

In accordance with the agreement signed between Turkish and Japanese Governments on October 12, 2000, we already completed the half term of 5 year – project period. I would like to give a presentation on the summary of first half term now.

1. Aim of the Project

The aim of the project is to establish a new educational system as an extension model in the selected schools, İzmir Mazhar Zorlu and Konya Adil Karaagac Anatolian Technical High Schools, in order to introduce qualified technical human resources in the category of mid –level technician to the country which is needed for the industrial modernization.

2. Modification of the Laboratories and Workshops

In accordance with the signed RD, the education in Industrial Automation Technologies Departments were started with two sub–departments of Information Electronics and Information Machinery in İzmir project school and the sub–department of Information Electronics in Konya project school in the academic year of 2001 – 2002.

The necessary modifications based on the educational aim of the project department were made on the school buildings of both schools, and 9 in İzmir, 8 in Konya, total 17 new laboratories and workshops were formed and equipped.

The breakdown of the allocated budget to the project schools for the modification of the laboratories and workshops, air conditioners, desks, workbenches, cabinets, etc. is as follows.

In the fiscal years of 2001 and 2002

	İZMİR (Turkish Lira)	KONYA (Turkish Lira)	TOTAL (Turkish Lira)
Modification	106 billion	84 billion	190 billion
Furniture	91 billion	63 billion	154 billion
From MoNE Foundation	10 billion		10 billion
TOTAL			354 billion

In the fiscal year of 2003

General	168 billion	30 billion	198 billion
TOTAL			552 billion

3. Assignment of Counterparts

The most important factor for the success of the project is the teachers. In order to provide teachers to the project, total 38 technical teachers from the fields of electricity, electronics, computer and mechanics took the English language course for 6 months, then the successful teachers from the course were assigned to the project in accordance with the counterpart assignment plan of the project.

In the year of 2003,

There are 14 counterparts in İzmir and 5 counterparts in Konya, total 19 counterparts in project. 8 of them completed their training in Japan, and 4 counterparts, 3 from İzmir and 1 from Konya, are still in Japan for training.

Additionally, two teachers, Murat ÖZDEVECİ (Bilecik Ind. Voc. HS / Mechanical Teacher) and Ünal SEVİM (Gebze STFA AHS / Control Technology Teacher) were already sent to Japan for JICA Group Training Courses. When they return to Turkey on February 2004, they will be assigned to the project schools.

4. Project Progress Meetings and Project Introduction

In order to evaluate whether the project activities are carried on as planned, Project Progress Meetings are being held periodically. Related Ministry authorities, Japanese Experts and Turkish counterparts participate in the meeting to discuss the situation of education, technology transfer to the counterparts, development of textbooks and educational program, etc.

- Konya project school was inaugurated by Minister of National Education, Prof. Dr. Necdet TEKİN, on October 15, 2002.
- The meetings were held with Konya industry representatives on November 01, 2002 and with İzmir industry representatives on March 07, 2003, in order to get comments and suggestions from industry side on educational program of departments and learn their demands and expectations from the graduates.
- Konya project school joined the Technical and Vocational Education Fair in Konya on May 2003, and İzmir project school joined İzmir International Fair in İzmir on August 2003. Also, in the robot contest based on the concept of İzmir International Fair, İzmir project school gained the championship and provided a good introduction for the project.
- A visitation was made to the Ankara / Middle East Technical University on April 11, 2003 in order to introduce project schools and departments to the academicians and students related with the automation systems and robots.
- In summer season, technical seminars on Programming, PIC, PLC and Network were given in Konya and İzmir project schools to the teachers of other technical high schools of the related cities. The participants of these seminars also applied to be a counterpart in the project.

In 2004, technical seminars will be given to the technical teachers of all over Turkey in İzmir and Konya project schools.

5. Impact of the New Department to the Turkish Industry

According to the researches concerning with the relation between education and manpower in Turkey, while the rate of high school and university graduates was 26.03% in 2001, it was increased to 28.97% in 2002. This rate is needed to be increased more for obtaining a priority in the competition with the other countries with qualified and cheaper production.

Since the new department did not give any graduate yet, it is impossible to make an evaluation related with the impact of project department to the industry.

In Turkey, most of the secondary education students aim to continue to the higher education. The reason of this situation is that especially the vocational secondary education graduates can not find a job related with their field.

Since the educational program of this department gives the students all the necessary knowledge and skills needed by the industry, we believe that the graduates will be

employed soon after the graduation and they will be able to earn money more than the ordinary university graduates, so that it will be very useful both for the graduated students and industry.

6. The Dissemination of the Project

The project period of Industrial Automation Technologies Department will be terminated in the year of 2006. In 5 year – project period, equipment of laboratories and workshops will be completed, enough number of Turkish teachers will be trained at a high level, development of textbooks will be completed and project department will reach to the desired level.

Without limiting with only two schools, disseminating the project department to the other technical high schools all over Turkey is very important for the economical and industrial development of our country. Starting from the year of 2005, the successfully implementing project, which will be terminated in 2006, will be disseminated to the other technical high schools, which will be selected based on the industry, employment, population, migration rate and Small and Medium Size Enterprises (SMEs) facilities, in order to meet the needs for technical human resources within the selected cities. It will bring us the development of the country and give a reasonable priority for the competition with the EU countries.

For the reason above, in the compound of Izmir project school, the establishment of a Teachers Training Center (TTC) with a dormitory, which is for the accomodation of the teachers coming to training from the other cities, was proposed to the State Planning Organization (SPO). Also a presentation was given to SPO on March 2003, in order to introduce project schools in detail. SPO authorities approved this proposal and include the establishment of TTC into the 2003 program.

Concerning with the total cost of dissemination, a cost analysis was made with the help of Mr. SUZUKI and other Japanese experts.

Including the modification, equipment of laboratories and workshops, and training of the teachers of 20 schools to be disseminated, total cost is around US\$ 42,750,000.

In order to get EU financial support in the scope of the project of “Modernization of Technical and Vocational Education” and the project of “The Strengthening of the Vocational Education”, an application was made to “Ministry of National Education – Projects Coordination Center” for the project called “The Dissemination Project of Industrial Automation Technologies Department” on July 2003.

It is thought that the construction of TTC for Dissemination Project will be financed by Turkish Republic annual budget, modification and equipment of the dissemination schools’ laboratories and workshops will be financed by EU.

As in all kind of project, the most important factor in the dissemination project is human-being. The TTC will play an important role here. In TTC, a technical training for 10 months will be given to the teachers. TTC will be also used for the introduction of new technological development to the teachers.

The dissemination of the project to the 20 schools will start from the year of 2006.

In 2006 – 30 teachers

In 2007 – 30 teachers

In 2008 – 30 teachers

Total 90 teachers will be given technical training during 3 years.

The educational program, which will be applied after the year of 2008, will be open for all the vocational and technical teachers who want to brush-up himself/herself.

In other words, we are aiming to increase the technical high school education level through the TTC.

To be able to achieve this aim, we would like to get assistance from JICA. The Teachers Training Centers in Japan are playing important roles in in-service-training of the teachers and in technological researches. We will need JICA/Consultation Team to direct us for the establishment of TTC.

Our requests from JICA;

1. The development of teachers' training program for 10 months.
2. Development of the textbooks to be used for teachers training.
3. Preparation of education implementation program, giving training support to the teachers of TTC.
4. Providing coordination of the dissemination project to 20 schools.
5. Support by the Short – Term “Technology Completion Programs”.
6. Acceptance of dissemination schools' directors to Japan for training.
7. Providing other necessary support for the dissemination.

The project activities are carried successfully and without any problem as planned in RD. At the end of the project period,

1. This project will be the most successful project among JICA projects implemented all over the world.
2. This project will give positive impact to the Turkish educational system and industry. Our country will gain a priority on production sector in the competition with the other countries, so that it will give our society higher economical level and better life conditions.

I can not complete my speech without mentioning about project team leader, Mr. SUZUKI's efforts and positive supports. His international experiences, his success to motivate his team and counterparts on positive direction and his detailed studies not to have any missing point for the success of the project are his perfect characteristics.

The extension of his duty period was very positive decision. For this decision, we would like to give our thanks to the concerning higher Japan authorities. Assuming that JICA accepts giving technical assistance to the TTC, extension of Mr. SUZUKI's duty period in Turkey even up to the end of TTC project will be a big happiness for us. We would like to give our thanks also to the other Japanese experts for their self-denying studies.

We wish Mr. SATO, mid-term review team leader, submit our above request to the related Japan authorities.

With my best regards

Yücel YÜKSEL

LONG -TERM, SHORT - TERM EXPERTS ACTIVITIES, COUNTERPART ASSIGNMENTS and COUNTERPART ACTIVITIES

1. After the signing of Records of Discussions on October 12, 2000, Technical and Vocational Directorate of MoNE selected the teachers as counterparts (CP) for the project and sent to Ankara for English language course on March 2001.
2. 6 JICA Experts started their duties in the project school on April and May, 2001.
3. After the completion of school building modifications, MoNE assigned 6 of the selected teachers to the İzmir project school. Then, the studies on technology transfer, development of curriculum & textbooks and preparation of laboratories & workshop were started.
4. As the CP training in Japan, 2 CPs completed their training in Japan between the dates of November 2001 – March 2002 and 3 CPs between the dates of August – December 2002. 3 CPs are still in Japan for training.
5. Among 6 JICA Experts came to school on May 2001, 3 of them returned to Japan on May and June 2003. 3 new JICA experts started to their duties on May 2003.
6. In the progress of project, on September 2002 – 3 new CPs , on June 2003 – 1 new CP and on October 2003 – 4 new CPs, total 8 CPs were assigned to the Izmir project school by the MoNE. Total number of CPs in the school is now 12 with the above assignments.
7. Short – Term JICA Experts are being dispatched to the project schools depending on the needs for support on certain fields. So far, total 5 short – term experts came to Izmir school.

DEVELOPMENT OF CURRICULUM and TEXTBOOKS

1. Weekly subject program for all grades of Industrial Automation Technologies Departments and educational program of 9th grade, prepared by Japanese experts and counterparts, was approved by the Board of Education for test and trial on October 2002 (with the law dated 2nd October, 2002, numbered 303).
2. Program was applied first in the academic year of 2002 – 2003 and necessary modifications were informed to MoNE.
3. The studies for preparing the educational programs of other grades are still being continued.
4. Development of textbooks were partially completed and distributed to the students. The missing points of the used textbooks will be observed by the time and necessary procedures for the publishment of final versions will be requested from the MoNE.
5. At the end of academic year 2001-2002, 3 students from the prep. grade of electronics department and 7 students from prep. grade of machinery department failed. Other students, who passed 9th grade, was the first generation getting technical subjects in 2002 – 2003. All of them succeeded 9th grade and passed to 10th grade in 2003 – 2004.
6. As the general success rate of the students at the end of the academic year of 2002–2003, the rate is 94.4% in prep. grade and 100% in 9th grade.
7. At the weekends, additional courses are being opened for the necessary subjects, especially for mathematics, to complete the missing parts on students.
8. 10th grade students of 2003 – 2004 request the school to open weekend-course for the subjects of mechanical workshop practices and microcomputer.
9. Students are willingly involved in project introduction activities, for example in fair organizations, and their requests for additional weekend courses show us that they are always willing to learn more.

Department Introduction Activities are carried out as follows:

1. The students, teachers and parents of primary education schools are being invited to the school to have an observation tour with the guidance of related counterparts.
2. A group of counterparts are visiting other schools in certain times and taking out introductory CD and cassette there.
3. Web page of the school is being announced to the public and industry and introductory brochures are being distributed as well.
4. Press is following our school and activities closely.
5. Also, some industrial magazines, including periodical magazine of Chamber of Industry (EBSO), is giving space to the articles concerning the school and project department activities.
6. As the school management, our impression is that all of our parents are satisfied with the school and education.
7. Common request from the parents is to establish a friendship with the students in Japan high schools, an exchange program, if possible. There are some students having contact with the students in Gumma – Takasaki Technical High School.

COOPERATION WITH THE CHAMBER OF INDUSTRY, OTHER VOCATIONAL CHAMBERS, UNIVERSITIES and OTHER TECHNICAL HIGH SCHOOLS

Activities related with this topic can be listed as follows.

1. On December 27, 2001, EBSO was visited and a meeting was held with the Education Committee of EBSO.
2. On December 2002, counterparts visited Ege University-Mechanical Engineering Faculty and its laboratories.
3. On January 15, 2003, the periodical meeting of EBSO-Education Committee was held in our school.
4. On January 30, 2003, Chamber of Mechanical Engineers was visited with the project team and counterparts.
5. On February 2003, Mr. Serkan SAYGIN, academician in the Ege University-Astronomy Faculty and Science Consultant of Izmir Fair Organization (IZFAŞ), visited the school and had an observation tour in the laboratories and workshops of the project department.
6. On March 3, 2003, our school was invited to join the Izmir International Fair.
7. On July 10, 2001 and March 10, 2003, Istanbul Consulate of Japan visited our school.
8. On March 7, 2003, after having the 6th Project Progress Meeting, “School – Industry Cooperation Meeting” was held in our school. The participants were authorities from Technical and Vocational Education Directorate-MoNE, Deputy of Izmir Governor, Izmir Province and Bornova District National Education Directors, some EBSO members, industry representatives, Japanese experts, counterparts, Deputy Rector of Ege University, Director of Vocational Higher School and some academicians.
9. On April 11, 2003, JICA experts and counterparts visited Ankara-Middle East Technical University with the guidance of Technical&Vocational Education Directorate authorities. A computerized introduction and a demonstration was made for the technological activities in our school. The studies of university on automation and robotics field was observed.
10. On April 5, 2003, “National Hydraulic-Pneumatic Congress” organized by the Chamber of Mechanical Engineers was held in our school. Representatives of various companies from different regions of Turkey, chamber members and counterparts were participated.
11. On May 8 – 14, 2003, our school joined the Technical and Vocational Education Fair (METEF) and demonstrated the activities of each department.
12. On August 26, 2003, Izmir International Fair was opened and our stand for the Industrial Automation Technologies Department demonstrated all the activities.
13. On August 29, 2003, “Aegean Region 1st Robot Design Contest” was organized by EBSO and IZFAŞ. Our school, joined the contest with 4 project, came as the first winner with the project of “Sumo Wrestling Robot”.

14. On September 9, 2003, JICA experts and counterparts, leaded by the project team leader, visited Izmir Adanced Technology Institution. A professor was requested from the institution to give technology transfer to the project counterparts. It was agreed to start the requested technology transfer on January 2004.
15. On September 16, 2003, Mr. Beno KURYER, a professor from Ege University, started to give the counterparts technology transfer on mathematics subject, in order to improve mathematical level of counterparts.
16. Our students from the project department, guided by the counterparts, joined the activities, organized for the 35th anniversary of the establishment of Dokuz Eylül University, with 3 demonstration products.
17. On October 01, 2003, Mr. Yusuf Ziya GOKSU, Izmir Governor, Izmir Province and Bornova District Directors of National Education, Head Official Bornova District, Mr. Mazhar Zorlu, founder of our school, some industry people visited our school and observed the laboratories and workshops.

INSTALLATION OF THE EQUIPMENT PROCURED FROM LOCAL MARKET AND JAPAN

1. On March – April, 2002, first group equipment, procured by JICA, arrived at our school and inspected by the JICA experts and CPs. Then, the equipment was officially transfered to the school management to register them as the school inventory. The above mentioned equipment was installed to the mechanical workshop, technical drawing room, multimedia laboratory and electricity-electronics laboratory to prepare for the education of 9th grade in the academic year of 2002 – 2003.
2. On January 10, 2003, a short-term expert came from Japan for planning the placement and installation of Factory Automation and Sequence Control Laboratories.
3. On April 19 – 23, 2003, Programming Laboratory and Computer Server Room was installed with the related equipment and prepared as ready to operate.
4. On May 29, 2003, second group of equipment, procured by JICA, arrived at the school.
5. On June 11, 2003, installation works of microcomputer laboratory were started.
6. On August 18, 2003, 3 engineers came from Japan to guide the installation works of Factory Automation and Sequence Control Laboratories. They left after the completion of the installations.
7. On September 15, 2003, first day of the academic year of 2003 – 2004, 1 mechanical workshop, 1 electricity-electronics laboratory, 1 microcomputer laboratory, 1 multimedia laboratory, 1 programming laboratory, 1 technical drawing room and 1 computer server room was ready.
8. Each counterpart was assigned as the responsible teacher for the equipment registration, installation, maintenance and operation the related laboratories & workshops.

TEACHERS TRAINING CENTER and IN-SERVICE TRAININGS

In the scope of dissemination activities of Industrial Automation Technologies Department to all over Turkey, impelemented by the MoNE, the following In-Service Trainings were organized by the MoNE and Izmir Province National Education Directorate.

1. June 17 – 18, 2002, Computer Programming Seminar (number of participants : 30)
2. June 19 – 20 – 21, 2002, PIC Microprocessor Seminar (number of participants : 30)
3. February 3 – 4, 2003, PLC Programming Seminar (number of participants : 30)
4. July 7 – 11, 2003, Computer Programming Seminar (number of participants : 20)
5. July 14 – 18, 2003, PIC Microprocessor Seminar (number of participants : 23)
6. July 21 – 25, 2003, PLC Programming Seminar (number of participants : 12)
7. August 4 – 8, 2003, Basic Computer Network Seminar (number of participants : 20)

At the end of the seminars, on August 8, 2003, Mr. Kamil AYDOĞAN, Izmir Province National Education Director and his deputy Mr. Ahmet SALGIN attended the closing ceremony and delivered the certificates to the participants of the seminars.

The In-Service Training Program, which will be organized by the project in 2004 for the schools in region and all over the country was informed to the MoNE to be included in the annual plan.

With the fact that qualified teachers are needed to educate qualified students, the establishment of a Teachers Training Center in our school compound was included in the annual budget and inspections for the construction was almost completed. Additionally, the dissemination of the project department to 20 schools all over the country increases the importance of the establishment of Teachers Training Center.

2002 – 2003

MAZHAR ZORLU ATHS – INDUSTRIAL AUTOMATION TECHNOLOGIES

DEPARTMENT

SUCCESS RATES OF PREPERATION and 9th GRADE STUDENTS

No.	Subject	9 / A	9 / B
1	Turkish Language and Literature	100%	100%
2	Religious Culture and Ethics Knowledge	100%	100%
3	History	96%	100%
4	Geography	100%	100%
5	Mathematics	70%	78%
6	Biology and Health Knowledge	100%	100%
7	Physics	100%	96%
8	Chemistry	100%	100%
9	English	93%	100%
10	Technical Drawing	100%	100%
11	Industrial Mechanics	100%	100%
12	Industrial Mathematics	81%	83%
13	BasicPractice of Information Technology	100%	96%
14	Basic Practice of Industrial Works	96%	100%

No.	Subjects	Prep. A	Prep. B
1	Turkish	100%	96%
2	English	83%	83%
3	Gymnastics	100%	100%
4	Mathematics (selected subject)	90%	75%
5	Computer (selected subject)	100%	96%

2002 – 2003 SUCCESS RATES OF IND. AUTO. TECHNOLOGIES DEPT.

As of October 14, 2003

Grade	Number of Students			Successful			Failed Down			Total	Boy	Girl
	Total	Boy	Girl	Total	Boy	Girl	Total	Boy	Girl			
Prep.	54	52	2	49	47	2	5	5	-	94,23	94,00	100,00
9th	50	46	4	50	46	4	-	-	-	100,00	100,00	100,00

Outline of the Mid – Term Review

1. Preface

The Project was initiated in April 2001 and will be 3rd year in the year of 2003. This time, the Japanese team dispatched by JICA is visiting the Republic of Turkey from 5 October to 24 October, 2003 for the purpose of reviewing the achievement and make recommendations for the future directions of the Project.

2. Objectives of the Review

Objectives of the review are as below.

- (1) To review the activities and achievement of the Project,
- (2) To clarify the problems and issues to be addressed for the successful implementation of the Project, and
- (3) To make recommendations for the activities and directions to be undertaken for the remaining period of the Project.

3. Members of JICA Mid – Term Review Team

Mr. Yoshio SATO	Team Leader
Mr. Tateo MATSUI	Advice on Material Development
Ms. Ayako WATANABE	Project Effect Analysis
Mr. Takeshi MATSUYAMA	Cooperation Planning

4. Methodology of Review

The review study was conducted in accordance with the Project Cycle Management (hereinafter referred to as “PCM”) method in the following steps:

- (1) Achievement of the Project was studied by collecting data and other relevant information according to the Project Design Matrix (hereinafter referred to as PDM).
- (2) Analysis was made for five (5) criteria described below.
 - 1) Relevance
Relevance of the Project Plan is reviewed by the validity of the Project purpose and the overall goal in connection with the development policy of the Government of Turkey and needs of the beneficiaries and also by the logicity of the Project plan.
 - 2) Effectiveness
Effectiveness is assessed by evaluating to what extent the Project has achieved its purpose and clarifying the relationships between that purpose and outputs.
 - 3) Efficiency
Efficiency of the Project implementation is analyzed with emphasis on the relationships between outputs and inputs in term of timing, quality and quantity.
 - 4) Impact
Impact of the Project is assessed by looking at either positive or negative influence caused by the Project, which is not originally expected in the Project plan.
 - 5) Sustainability
Sustainability of the Project is assessed in organizational, financial and technical aspects by examining the extent to which the achievements of the Project are sustained or expanded after the Project is completed.
- (3) Finally, the review team reached an agreement on the conclusion of the review and made recommendations.

PROJECT DESIGN MATRIX (PDM)

Project Title: The Project on Establishment of Industrial Automation Technologies Departments in Anatolian Technical High Schools

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<p>Super Goal</p> <p>To fill the demand for mid-level technicians and engineers in the industrial automation technology field in the Republic of Turkey.</p>	<p>After 10 years of the project completion, the number of graduates of Industrial Automation Technologies Departments in Anatolian Technical High Schools becomes 360 or more every year.</p>	<p>Data from the Ministry of National Education</p>	
<p>Overall Goal</p> <p>To introduce a new educational system for industrial automation technology for other Anatolian Technical High Schools.</p>	<ol style="list-style-type: none"> 1. Degree of which schools implement the new educational system 2. After 3 to 5 years of the project completion, the number of Industrial Automation Technologies Departments in Anatolian Technical High Schools becomes more than 4. 	<ol style="list-style-type: none"> 1. Data from the Ministry of National Education 2. Data from the Ministry of National Education 	<p>Enterprises continue to require technicians trained in automation technology.</p>
<p>Project Purpose</p> <p>To establish a new educational system as an extension model in the Izmir and Konya Anatolian Technical High Schools in order to train mid-level technicians that will meet the requirements of industries utilizing automation technology.</p>	<ol style="list-style-type: none"> 1. Ministry of National Education announces the introduction of the new educational system. 2. The number of enterprises that hopes to employ the graduates exceeds over 40 in Izmir and 20 in Konya. 3. Number of applicants to Izmir Mazhar Zorlu and Konya Adil Karaagac ATHSs 4. Entrance examination scores of successful applicants of both schools 	<ol style="list-style-type: none"> 1. Data from the Ministry of National Education 2. Questionnaires distributed to enterprises 3. Data from Izmir Mazhar Zorlu and Konya Adil Karaagac ATHSs 4. Data from Izmir Mazhar Zorlu and Konya Adil Karaagac ATHSs 	<ol style="list-style-type: none"> 1. The needs of enterprises for technicians trained in automation technology do not change significantly. 2. The project continues to receive the support of the Ministry of National Education. 3. Teachers that have received training do not enter private employment. 4. Continuous funding of the project is secured.

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Outputs 1. Development of an innovative curriculum.	1-1. Curriculum is developed by October 2001. 1-2. The project team prepares the syllabus of the new departments subjects by May every year. 1-3. Degree of satisfaction related industries have for the curriculum	1-1. Records of project activities 1-2. Records of project activities 1-3. Questionnaires distributed to related enterprises	The needs of enterprises for technicians trained in automation technology do not change significantly from those assessed by the needs survey.
2. Development of suitable learning materials.	2-1. The project team prepares textbooks (Trial Version) by August every year. 2-2. By August, following year of above 2-1, Trial Versions are revised and First Editions are prepared by the Project. 2-3. The project team prepares practice textbooks by August every year. 2-4. The project team prepares equipment for experiment and practice by August every year.	2. Records of project activities.	
3. Development of suitable teaching materials.	3. The project team prepares Teachers Manual (samples of Annual Plan, Instruction Outline, Practice Guidance and Text Guide) by August every year.	3. Records of project activities.	
4. Establishment of a training system for teachers (including teaching methods) and improvement of teachers' capabilities.	4. For each subject unit, at least ten (10) hours of technology transfer (technical guidance and teaching method guidance) given to more than 2 counterparts at the commencement of the respective subject stars.	4. Records of project activities.	
5. Introduction of suitable equipment to meet the requirements of industry.	5-1. Degree of satisfaction of enterprises for level of equipment supplied. 5-2. Equipment is installed 3 months before the concerned subject starts.	5-1. Interviews of related enterprises. 5-2. Equipment maintenance records (purchase plan?)	
6. Proper operation and maintenance of the equipment mentioned above.	6. For the newly introduced equipment to Izmir Mazhar Zorlu and Konya Adil Karaagaç ATHSSs, at least 2 counterparts have learned how to use and maintain the respective equipment properly.	6. Records of project activities.	
7. Outputs 1. – 6. above are disseminated to the public, other schools and industries via the Internet.	7-1. Degree to which conversion has been completed (curriculum, syllabus, learning materials, teaching materials, training system) 7-2. Percentage of electronic media deployed to the public, other schools and industries.	7-1. Records of project activities. 7-2. Records of survey of amount of information made available on the Internet.	
8. Establishment of a new system for industrial automation technologies departments in Anatolian Technical High Schools that meets the needs of industry, and creation of an extension system. Establishment of a system for finding the needs of industry and dissemination of the new educational system.	8-1. Surveys of the needs of enterprises are conducted more than once per year. 8-2. At least one extension seminar for the new educational system (directed at enterprises) is held before the students are graduated. 8-3. At least 4 extension technical seminars for the other schools' teachers are implemented. 8-4. The number of participants to the above-mentioned seminars exceeds 300.	8-1. Questionnaires distributed to the enterprises. 8-2. Records of project activities. 8-3. Records of project activities. 8-4. Records of project activities.	

Activities	Inputs	Important Assumptions
<p>1-1. Formulation of curriculum 1-2. Drawing up of a syllabus 1-3. Understanding the industry's attitude to the curriculum 2-1. Production of textbooks (Trial Version) 2-2. Production of textbooks (First Edition) 2-3. Production of practice textbooks 2-4. Preparation and production of appliances for experiments and practices 3. Production of teachers' manuals for practice 4. Technology transfer of related subjects and its teaching methods 5-1. Drawing up of a list of equipment 5-2. Procurement and installation of equipment 5-3. Understanding the industry's attitudes to the above equipment 6. Technology transfer related to the correct usage and maintenance of equipment 7-1. Convert the above outputs to digital data which are suitable for Web page 7-2. Making of project Web page site and upload the digital data 8-1. Understanding of the automation technology needs of industry 8-2. Implementation of seminars aimed at introducing the new educational system to enterprises. 8-3. Implementation of seminars on new technology and teaching method to the other school teachers.</p>	<p><u>Turkish Side</u></p> <ol style="list-style-type: none"> 1. Assignment of personnel -Counterparts (C/Ps) IZMIR Information Electronics: at least 7 Information Machinery: at least 7 KONYA Information Electronics: at least 7 -Administrative personnel 2. Buildings and facilities 3. Furniture and consumable materials 4. Allocation of budget <p><u>Japanese side</u></p> <ol style="list-style-type: none"> 1. Dispatch of Experts -Long-term experts Chief advisor, Information Electronics: 2 (Industrial Product Design Sub-division, Network Design for Automatic Control Sub-division), Information Machinery: 2 (Automatic Production Technology Sub-division, Factory Automation System Technology Sub-division), Coordinator -Short-term experts 2. Provision of equipment 3. Training of Turkish C/Ps in Japan 	<p>1. The occupational training system in Turkey does not change significantly. 2. Accessibility to the Internet improves. (Establishment of infrastructure for electronic communication progresses.)</p> <hr/> <p style="text-align: center;">Preconditions</p> <hr/> <ol style="list-style-type: none"> 1. Counterparts are appropriately assigned. 2. Financial resources are appropriately secured.

Results of the Mid – Term Review

The progress of the Project activities has (tentatively) reviewed by the mid – term review mission on the following five evaluation items, i.e. relevance, effectiveness, efficiency and sustainability.

Relevance

The Turkish Government has continuously put high priority on human resource development and industrial development and internationalization both in the 7th and 8th Five Year National Development Plans, targetting 1996 – 2000 and 2001 – 2006 respectively. Also, Izmir and Konya schools have been paid much attention and provided considerable support by the Government as the model schools for future dissemination. Regarding industries in both sites, the Project was found in close and collaborative relations with local industries with obtaining good understanding on the concept from their side. The Project could, therefore, be evaluated highly relevant to the Turkish policy, in the selection of the target sites, and to the needs of local industries.

Effectiveness

Effectiveness of the output during the first – half of the project was found satisfactory and the achievement of each Output has been obtained as scheduled. The curriculum has been approved by the Ministry of National Education and learning materials as well as the teaching materials are being developed without delay. The counterparts have been trained and their capacity has been upgraded and expected to keep further improving. Assessment from local industries should be obtained in the latter half of the Project period.

Efficiency

Inputs have been made efficiently mostly on good timing and in suitable quantity and quality by both Turkish and Japanese sides. Japanese experts have satisfactorily contributed to the progress of all the activities in the PDM. Counterpart training in Japan has provided the counterparts with new as well as wider views both in technical and in management term, which have helped the Project to make sufficient progress by now. Most of the equipment provided by JICA was appropriate in quantity and quality, with proper and on-timing installation to both schools. As for Turkish side, eighteen (18) counterparts out of twenty-one (21) planned have been already assigned, who are highly appreciated in their capacity as well as willingness to work. Seventeen (17) laboratories and workshops have been modified and furnished, which was delayed approximately four (4) months but did not interrupt the progress of the Project.

Impact

No negative impact has been found by now. As positive impact, it could be found that Izmir and Konya schools have strengthened their linkages with local industries. Technical teachers of other ATHSs have found gaining their interest in the Project activities, showing by the number of applicants for summer seminars. Added to the above, the Ministry of National Education has obtained the idea for dissemination and started their preparation to realize it.

Sustainability

Regarding institutional aspect, both schools have set up the related departments with the assignment of the counterparts as scheduled and been smoothly delivering classes to the students by now. The system for maintaining the equipment should be further developed in the latter half of the Project period. Financial sustainability has been found positive, with highly supportive attitude of the Ministry of National Education and their preparation of the dissemination plan. The Project could be found highly sustainable in technical term as well, with further training from Japanese experts and their strong willingness to learn in the latter half of the Project period.

