

2-2 チームの構成

	氏名	担当	所属
(1)	岩本宗治	総括・団長	文部省初等中等教育局 職業教育課 教科調査官
(2)	早川明彦	中等教育行政	文部省初等中等教育局 職業教育課 課長補佐
(3)	原田秀明	技術協力行政	外務省経済協力局 技術協力課 外務事務官
(4)	芦田守道	教科書作成	社団法人 全国工業高等学校長協会 事務局長
(5)	渡辺元治	研修計画	国際協力事業団研修事業部 研修第3課 職員
(6)	永田邦昭	実施計画	国際協力事業団社会開発協力部 社会開発協力第1課 職員

2-3 活動日程表

日順	月 日	曜日	移 動 及 び 業 務
1	10.31	土	12:35 東京発 → 17:40 チューリッヒ着 (SR-167)
2	11. 1	日	12:40 チューリッヒ発 → 20:10 リアド着 (SR-374)
3	2	月	8:50 JICA事務所と打ち合わせ 9:10 在「サ」日本大使館表敬訪問 11:00 GOTEVTダラーン総裁表敬訪問 14:00 リアド電子技術学院訪問 専門家との打ち合わせ及び学院施設視察
4	3	火	8:45 GOTEVTにおいて第1回協議 *協力期間延長にかかる協議議事録(ミニッツ)日本側案の説明・協議 16:00 ミニッツ修正にかかる団内打ち合わせ
5	11. 4	水	9:00 GOTEVTにおいて第2回協議 *サ側提案議題に基づく協議 13:00 ミニッツの最終案作成 15:00 ミニッツ署名
6	5	木	(休 日)
7	6	金	(休 日)
8	7	土	9:00 リアド工科短大視察(岩本、早川、芦田) 9:00 リアド電子技術学院においてカウンターパート 研修終了者及び予定者と打ち合わせ(渡辺) (*10:10 原田、永田団員リアド発。トルコ地震 防災研究センター長期調査に参加のためトル コに移動、11月15日帰国)
9	8	日	10:35 リアド発 → 14:55フランクフルト着 (LH-625)
10	9	月	17:00 フランクフルト発 →
11	10	火	→ 12:15 東京着 (LH-710)

2-4 主要面談者

<サウディアラビア側>

*技術教育職業訓練庁 (General Organization for Technical Education and Vocational Training : GOTEVOT)

Mr. Mohammad S. Al-Dhalaan	Governor
Mr. Abdulmohsin Al-Thuwani	Deputy Governor
Mr. Kasem Baboor	Acting Director General of Technical Education
Dr. Ali N. Al-Ghafis	Director of Research and Curriculum

*リアド電子技術学院 (Technical Electrics Institute in Riyadh)

Mr. Hussein Al-Dahlawi	Director
Mr. Ali Al-Atni	Assistant Director

*リアド工科短期大学 (College of Technology in Riyadh)

Dr. Saeed Bin Yurki Milah	Dean of the College
---------------------------	---------------------

<日本側>

*在サウディアラビア日本大使館

太田 博	大使
大木 正 充	公使
黒川 純一良	二等書記官

*JICAサウディアラビア事務所

館野 紀 昭	所長
菊地 智 徳	所員

*リアド電子技術学院プロジェクト専門家

大 島 正 弘	チーフ・アドバイザー
廣 田 嘉 男	工業基礎 (電気)
池 内 淳	〃 (機械)
伊 落 崧	オーディオ・ビデオ
柏 木 考 平	工業電子 (電子)
土 屋 堯	工業電子
能 智 功	自動制御
宮 本 修	コンピューター技術
井 手 三 男	電子通信
石 垣 滋 樹	調整員

3. 協議内容・結果

3-1 協議内容

調査団は、11月1日(日)リアドに到着、翌2日(月)GOTEVOT総裁を表敬訪問し、実質的な協議はGOTEVOT副総裁他関係者との間で3日(火)、4日(水)の2日間に亘り集中的に行なった。第1日目は日本側よりミニッツの日本側案を説明した後、各項目について協議した。第2日目はサ側が用意した議題(付属資料一7を参照)に基づき協議を行い、その内容も含めたミニッツを作成し、両者にて合意・署名した。以下に協議内容を要約する。

(1) サ側ミニッツ署名者

これまで副総裁であり本プロジェクトの実質的責任者として協議ならびにミニッツ署名を行なってきたグラーン氏が本チーム訪問前の92年10月正式に総裁に任命された。日本側からは、過去の経緯も熟知しているグラーン総裁に対し協議への出席とミニッツの署名を強く要請したが、同総裁からは組織的な(ポストによる)対応をする必要があり、新任の副総裁に任せたい旨説明があったため、昨年同様副総裁と協議・署名することに合意した。

(2) 協力期間の延長と開校時期の延長

1974年6月に署名された現行討議議事録(R/D)により協力期間は学院開校までとなっている。開校の遅れは、学院に電力を供給する変電施設建設の遅れとサ側経費による教育・実習用機材の調達手続きの遅れによるものであるが、本チーム滞「サ」中に、変電施設が完成していること(スイッチを入れることは可能な状況にあるが、学院内の諸施設の最終検査を行なっている段階)と今後の機材調達のスケジュールが確認されたことから、1993年9月開校の見込みがたつたものと判断し、93年9月を開校時期とし、協力期間を1994年3月まで1年間延長することに合意した。

(3) 開校準備作業スケジュール

1993年の開校に向けた教職員スタッフの配置、教育・実習用機材調達、教科書作成等の作業スケジュールについては、ミニッツ添付書類(ANNEX)の1のとおり確認された。

(4) 学院の運営体制・教職員の配置

92年9月、学院の校長と副校長としてアラウィ氏とアリ氏がそれぞれ正式に任命され、今後の開校準備を進めていくことになっている。校長の権限・責任及び学院の組織・教職員の配置計画は、ミニッツ添付書類(ANNEX)の2及び3のとおりであり、教職員は、1993年7月までサウディ人を中心として採用・配置する予定となっている。1988年度から継続的に日本での研修(2年間のコース)を受けているカウンターパートは、学院の実習指導員として働くことになっており、現在日本人専門家の指導の下で開校に向けた諸

準備にあたっている。

(5) 生徒募集

現時点では、生徒の募集スケジュールは確定しておらず、93年1月に出される予定の政令 (Royal Decree) を受けて、募集の手続きを進め、93年9月までには入学者を決定することとしている。一般的な募集・選考・入学手続き等の手順は準備されており、ミニッツ添付書類 (ANNEX) の4のとおり。

(6) 教育・実習用機材の調達

サ側は本機材の一括購入を諦め、本年度は第1年次・2年次用機材を調達することを決定しており、同機材のスペックは一部見直しを経て整っている。第1年次・2年次用機材リストは、ミニッツ添付書類 (ANNEX) の5に示される。今後の調達スケジュールは92年11月中に入札手続きの開始、93年1月契約、93年9月の開校までには据付が完了することになっている。

(7) 専門技術教科書・一般科学教科書の作成

専門技術教科書については、日本側は第1年次・2年次分英語版を既に提出しており、残りの第3年次分を94年3月の協力終了時までには作成することになった。日本側が作成している専門技術教科書リストはミニッツ添付資料 (ANNEX) の7に示される。サ側は日本側が作成した英語版をアラビア語に翻訳し教科書を完成させることになっているが、現在まだ着手されていない状況であるため、各年次ごとに必要となる時期までに完成させること、特に第1年次教科書については93年9月の開校までに完成することを再確認した。

一方、一般科学科目 (数学、物理、化学) の教科書は、サ側が国内に現存するものから適当なものを選定して利用することになっていたが、日本側が作成したカリキュラムに足りるものがないとして、日本側に対して同教科書の作成についての新たな要請があった。協議の結果、同国での既存の教科書でカリキュラムとの比較で足りない部分を日本側が補足することとし、具体的には次の手順で作業を進めることにした。

サ側は現在使用しているアラビア語の教科書の骨子を英訳して92年12月末までに日本側に提出する。日本側は、作成済のカリキュラムと比較し、不足部分について英語版の補足ペーパーを作成し、93年3月15日までにサ側に送付する。

(8) 追加専門家派遣要請

学院の一部であるコンピューターセンターにコンピューター技術の長期専門家1名を派遣して欲しい旨新たな要請があり、これをミニッツに記載した。

(9) カウンターパート研修

日本側で準備した1992年度カウンターパート研修計画 (ミニッツ添付資料ANNEXの

6) は一部の変更要請を除き基本的にサ側より合意が得られ、93年1月から5名を2年間受け入れる予定である。詳しくは、「4. 本プロジェクトにおけるカウンターパート本邦研修」を参照)。

(10) 機材の据付け

日本側が供与した機材の中で、未だ据付をしていないPCBワークショップ関連機材について、日本側が開校までに据え付けを完了させることになった。ただし、この実施にあたっては、公害対策を含む基礎工事とそのシステムの設計を行なう必要があり、機材据付けに先立ちシステムを設計する短期専門家を派遣することになる可能性が高い。

(11) 開校後の学院に対する協力要請

サ側からは、懸案となっている開校後の学校運営段階での同学院に対する協力(フェーズ2)と同学院の短大レベルへの格上げに対する協力について改めて強い要請があった。

日本側からは、学院の開校が先決であり、R/Dに基づきフェーズ2はあくまでも高校レベルとしての学院運営に協力することを考えていること、学院の短大レベルへの格上げに対する協力は、開校も実現していない現段階では具体的に検討しえる状況にないこと、サ側の学院格上げの背景・具体的計画等については可能な範囲で情報を収集することにしたい旨説明した。

サ側はさらに、現在の協力は、延長の結果94年3月で終了することになるが、その際日本人専門家が一時に引上げるようなことがないように、94年3月以降直ちにフェーズ2協力が継続されることを希望している。そして新R/Dの締結に係るサウディ国内手続きに極めて時間がかかるという理由から、フェーズ2の協力に関する日-サ間の協議を今すぐにでも開始して欲しい旨重ねて要請があった。

これに対しては日本側より、93年9月学院の開校前後に、74年以降18年間の協力をレビューするための評価調査団を派遣し、その結果を受けてフェーズ2の協力に関する協議を進める必要があること、さらにフェーズ2協力にあたっては新たな要請書も必要となることから、具体的な協力内容を盛り込んだ要請書を早急に提出するよう説明を行った。

なお、サ側の学院の短大レベルの格上げについて得られた情報は、「5. 学院の短大への格上げ計画とその背景」に報告されている。

3-2 協議議事録 (Minutes of Discussions : M/D)

次頁を参照。

MINUTES OF DISCUSSIONS
BETWEEN
JAPANESE TECHNICAL CONSULTATION TEAM AND THE AUTHORITIES
CONCERNED OF THE GENERAL ORGANIZATION FOR TECHNICAL EDUCATION
AND VOCATIONAL TRAINING ON TECHNICAL COOPERATION
FOR THE PROJECT OF TECHNICAL ELECTRONICS INSTITUTE IN RIYADH

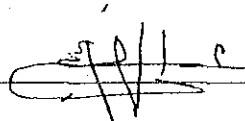
Japanese Technical Consultation Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Mr. Muneharu IWAMOTO, visited the Kingdom of Saudi Arabia from 1st to 8th November 1992, and had a series of discussions with the authorities concerned of the General Organization for Technical Education and Vocational Training (hereinafter referred to as "GOTEVT") on implementation of Japanese technical cooperation for the Technical Electronics Institute in Riyadh (hereinafter referred to as "the Institute").

As a result of discussions, the Team and GOTEVT agreed to recommend to their respective Governments the following matters.

November 4, 1992

岩本宗治

Mr. Muneharu IWAMOTO
LEADER, JAPANESE TECHNICAL
CONSULTATION TEAM, JICA



H.E. Mr. Abdolmohsin AL-THUWAINI
DEPUTY GOVERNOR, GOTEVT

1. TERM OF TECHNICAL COOPERATION BETWEEN JAPAN AND SAUDI ARABIA

Japanese technical cooperation for the Institute under the Record of Discussions (hereinafter referred to as R/D) signed on June 12, 1974 shall be extended for another one (1) year until the end of March 1994.

2. OPENING DATE OF THE INSTITUTE

The opening date of the Institute shall be in September 1993.

The working plan to opening of the Institute is scheduled and shown in ANNEX-1.

3. PROGRESS AND OUTSTANDING ITEMS OF MEASURES NECESSARY TO BE TAKEN BY SAUDI SIDE

(1) Construction Work of the Institute

Construction of the Institute (building and power supply) has been completed.

(2) Administration of the Institute

The Interim Administration of the Institute has been established, and the Director and the Assistant Director have been also appointed for the Institute.

The Director has overall responsibility for all preparation works to open the Institute in September 1993 according to the Working Plan in ANNEX-1.

Authorities and responsibilities of the Director is shown in ANNEX-2.

(3) Assignment of Educational & Administrative Staffs

Saudi Side will assign the necessary number of the educational and administrative staff by the end of July 1993, in order to work on the preparation activities for the opening of the Institute.

The organization chart and staffing plan for educational functions are shown in ANNEX-3(1),(2).

(4) Student Enrollment

The procedure of student enrollment has been prepared by the Saudi Side as shown in ANNEX-4.

(5) Authorization of Specifications of Equipment

The Saudi Side has authorized the specifications list of equipment referred to Item 4(3).

(6) Procurement of Equipment

The Saudi Side shall procure and install the equipment necessary, at least, for the first and second grade before the opening date of the Institute.

The equipment necessary for the first and second grade is listed in ANNEX-5.

(7) Translation of Technical Textbooks

The Saudi Side shall translate English technical textbooks prepared by Japanese Side into Arabic in due time for each grade, especially technical textbooks for the first grade by the opening date of the Institute.

(8) Preparation of Textbooks of General Science Subjects

The Arabic textbooks of mathematics, physics and chemistry for the first grade shall be prepared, in line with the curricula referred to Item 4(5), by the opening of the Institute.

The Saudi Side shall translate the table of contents of the existing general science subjects textbooks (mathematics, physics, and

11
72

chemistry) into English and submit it to the Japanese Side before January 1st 1993.

The Japanese Side will check the outline, and if any items need to be added, the Japanese Side will submit them in English to the Saudi Side by March 15th 1993.

4. PROGRESS AND OUTSTANDING ITEMS OF MEASURES NECESSARY TO BE TAKEN BY JAPANESE SIDE

(1) Dispatch of Experts

Japanese Side has dispatched ten (10) long-term experts to the Institute.

(2) Counterpart Training in Japan

Five (5) counterpart personnel have had technical training in Japan for two (2) successive years beginning 1991 while Japanese Side will be ready to accept another five (5) counterpart personnel for the same two (2)-year period of technical training in Japan from 1992. The fiscal year 1992/1993 training curriculum is tentatively planned and shown in ANNEX-6.

In the light of two(2)-year training period, rather longer than ordinary one, under the project, Saudi counterparts shall be granted home leave once a year at the expence of Saudi Side and in case that family members of participants are accompanied, JICA will not take any assistance for family members with regards to living cost, and arrangement of living accommodation, visa procedure, medical treatment and so on.

Each counterpart is required to observe rules & regulations of JICA Training Scheme. Those who receive insufficient grade on their training attitude might be cancelled to undergo further training.

7a

(3) Preparation of the Specifications of Equipment

Specifications of equipment to be purchased by the Saudi Side were prepared and submitted to the Saudi Side in the middle of September 1991.

(4) Installation of Equipment provided by the Japanese Side

The equipment provided by the Japanese Side such as personal computer system was installed by supervision of the Japanese experts in the middle of September 1992.

Thirteen (13) short-term experts were dispatched for this purpose for two (2) weeks in September 1992.

Equipment contributed by the Japanese Side in the PCB workshop will be installed by the Japanese Side before the opening of the Institute.

(5) Detailed Curricula of General Science Subjects

The detailed curricula of mathematics, physics and chemistry were formulated by the end of January 1992.

(6) Preparation of the Technical Textbooks

English technical textbooks for the first and second grade were prepared and submitted to the Saudi Side by the end of March 1992.

The technical textbooks for the third grade will be completed by the end of March 1994.

(7) Preparation of General Teaching Guidelines

General teaching guidelines for the workshops and the laboratories were prepared and submitted to the Saudi Side in the end of March 1992.

English technical textbooks and general teaching guidelines already

11/74

~~11/74~~

prepared and ones to be prepared by the Japanese Side in due time are listed in ANNEX-7.

5. Second Stage of Japanese Technical Cooperation

The Japanese Side will be ready to discuss the second stage of technical cooperation with the Saudi Side, which assists with the operation of the Institute.

Before the end of the first stage of the cooperation in March 1994, Japanese Side will send an evaluation team to review the first stage of the cooperation and an implementation survey team to discuss the second stage of the cooperation.

6. Others

The Saudi Side requested the Japanese Side to convey to their Japanese Authorities, the desire of the Saudi Side to achieve the following :

- (1) To discuss the future technical cooperation between the two sides as soon as possible. Accordingly the Saudi Side will send a detailed proposal regarding the continuity of the cooperation as early as possible.
- (2) Based on the proposal unofficially submitted by the Saudi Side to Mr. Muneharu IWAMOTO in May 1992, the Saudi Side requested to upgrade the level of the Technical Electronics Institute from the Secondary level to that of the Junior Colleges of Technology.
- (3) To dispatch a long-term expert on computer technology for the computer center in addition to ten (10) long-term experts currently serving for

↓
70

the Institute.

(4) To add some changes on the tentative curriculum for the counterparts of Riyadh Technical Electronics Institute Project (ANNEX-6) as follows :

A) No3. last statement (comprehensive training on the equipment) has to be moved to the end of the program.

B) No4. (a) has to be revised to concentrate on the hardware instead of software.

C) No4. (b) should add the satellite to the content.

D) No4. (c) pneumatic, hydraulic and CNC machines should be added to the contents.

LS
72

~~72~~

ATTENDANT LIST

SAUDI SIDE

1. Mr. Abdulmohsin AL-THUWAINI (Leader)
Deputy Governor
2. Mr. Kasem BABOOR
Acting Director General of Technical Education
3. Dr. Ali N. AL-GHAFIS
Director of the Research and Curriculum
4. Mr. Hussein AL-DAHLAWI
Director of the Institute
5. Mr. Ali AL-ATNI
Assistant Director of Institute

JAPAN SIDE

1. Mr. Muneharu IWAMOTO (Leader)
Senior Curriculum Specialist for Industrial Education, Elementary
and Secondary Education Bureau, Ministry of Education, Science and
Culture
2. Mr. Akihiko HAYAKAWA (Education Policy)
Deputy Director, Vocational Education Division, Elementary and
Secondary Education Bureau, Ministry of Education, Science and
Culture

3. Mr. Hideaki HARADA (Technical Cooperation Policy)
Official, Technical Cooperation Division, Economic Cooperation
Bureau, Ministry of Foreign Affairs
4. Mr. Morimichi ASHIDA (Textbook Preparation)
Secretary General, National Association of Technical High School
Principals
5. Mr. Kuniaki NAGATA (Implementation Plan)
Staff, First Technical Cooperation Division Social Development
Cooperation Department, Japan International Cooperation Agency
(JICA)
6. Mr. Motoharu WATANABE (Training Program)
Staff, Third Training Division, Training Affairs Department, JICA
7. Mr. Junichiro KUROKAWA
Second Secretary, Embassy of Japan in Kingdom of Saudi Arabia
8. Mr. Noriaki TATENO
Resident Representative of JICA office in Kingdom of Saudi Arabia
9. Mr. Masahiro OSHIMA
Chief Advisor, Riyadh Technical Electronics Institute Project
10. Mr. Atsushi IKEUCHI
Expert, Riyadh Technical Electronics Institute Project
11. Mr. Yoshio Hirota
Expert, Riyadh Technical Electronics Institute Project
12. Mr. Takashi Tsuchiya
Expert, Riyadh Technical Electronics Institute Project

..... الرقم
..... التاريخ
..... المشروعات

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ
المملكة العربية السعودية
المؤسسة العامة للتعليم الفني والتدريب المهني

ANNEX-2

Authorities' and Responsibilities of the Institute's Director

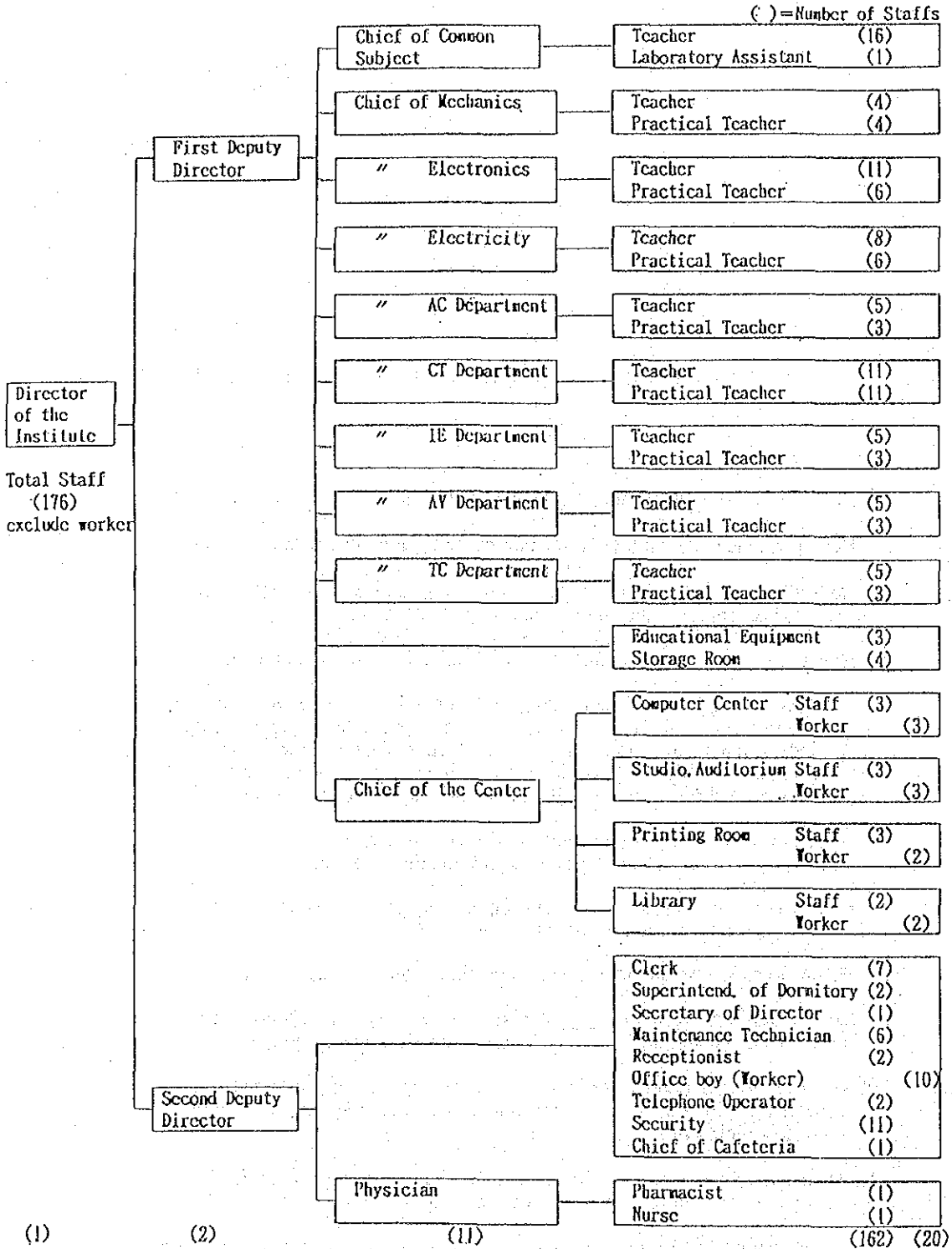
- 1 - He has to manage the technical , administrative and financial actions .
- 2 - He has to guide the Institute in the light of the Islamic instructions .
- 3 - He has to be sure that the technical , administrative and financial actions are effected according to the applied rules and regulations .
- 4 - He has to supervise the regular works and actions of the Internal Section .
- 5 - He acts as a chairman of the teaching staff council , administrative committee and all other councils and committees. He is responsible for preparing the periodical reports and annual statistics . He has to follow the teachers' attendance and preparations of the lessons. He is responsible for arranging and keeping all records, as well as files concerning tests and examinations.
- 6 - He has to activate the religious cultural , sports , social and technical activities of the students , inside and outside the Institute.
- 7 - He has to act as a liaison officer between the Institute, the Directorate of Education and other industrial authorities.
- 8 - He has to supervise the new students' enrollment and admission tests .
- 9 - He has to follow up continuously the implementation of the actions and activities inside the Institute in order to be sure of the work progress .
- 10 - He has to hold periodical meetings with all sections and departments of the Institute for discussing and solving any problem that may face them in the course of their work.
- 11 - He has to recommend the technical and administrative deputy directors as well as the head of theoretical and practical sections .
- 12- He is responsible for the uncurriculum activities concerning the environment , society and official ceremonies.

١٢

١٢

<ANNEX-3(1)>

()=Number of Staffs



(1)

(2)

(11)

(162) (20)

<ANNEX-3(2)>

Industrial Field		First Year (1993 / 1994)		Second Year (1994 / 1995)		Third Year (1995 / 1996)	
		Teachers	Prac. T.	Teachers	Prac. T.	Teachers	Prac. T.
Mechanical Engineering	Lathe	1	2	1	2	1	2
	Sheeting & Welding	1	2	1	2	1	2
Mechatronics						2(+2)	
Electrical Engineering		6	4	8 (+2)	6 (+2)	8	6
Electronics		4	2	11 (+7)	6 (+4)	11	6
Audio & Video						5 (+5)	3 (+3)
Industrial Electronics						5 (+5)	3 (+3)
Automatic Control						5 (+5)	3 (+3)
Telecommunication						5 (+5)	3 (+3)
Computer Tech. (Includ. C.S. & CAD)		2	2	3 (+1)	3 (+1)	11 (+8)	11 (+8)
TOTAL(Teacher & Practical Teach.)		14	12	24(+10)	19 (+7)	54(+30)	39(+20)
Chief Teachers		8		8		8	
TOTAL		34		51 (+17)		101 (+50)	

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

الرقم
التاريخ
المشفرات

المملكة العربية السعودية
المؤسسة العامة للتعليم الفني والتدريب المهني

ANNEX -4

Students Enrollment

- 1 - The Administration of the Institute appoints the time of applying for enrollment.
- 2 - The enrollment applications have to be submitted within the period defined by the Administration of the Institute.
- 3 - The Institutes Administration may hold an oral , written test or both for the new students.
- 4 - The selection of the admitted students will be based on the following bases:
 - a) Age of the student (as set forth in the Institute's Rule , Article VI , 5) .
 - b) Marks obtained in the Intermediate Education Certificate Examintion .
 - c) The date of obtaining the Intermediate Education Certificate providing that such date should not exceed 5 years.
 - d) The marks obtained during the interview , if any .
- 5 - The admitted students have to submit their files to the Institute within one week after announcing their names .
- 6 - In case that any of the admitted students failed to attend in the due time, he has to be replaced by another one from the reserves.

٧٢

[Handwritten signature]

Technical Subject Equipment List
for the 1st and 2nd grade

No.	Room	Item	Facilities	Q'ty
1	Da201	1	Teacher's Desk & Chair	1
2	Da201	2	Cabinet	7
3	Da201	2-1	Electric Fundamental Training Unit	15
4	Da201	2-2	DC Potentiometer	15
5	Da201	2-3	Portable Wheatstone Bridge	15
6	Da201	2-4	Experimental Joule's Heat Unit	15
7	Da201	2-5	Thermocouple Equipment	15
8	Da201	2-6	Magnetic Field Creator	15
9	Da201	2-7	Formation of Magnetic Field	15
10	Da201	2-8	Magnetization Testing Equipment	15
11	Da201	2-9	Electromagnetic Induction Field for OHP	1
12	Da201	2-10	Electromagnetic Force Demonstrator	15
13	Da201	2-11	Electromagnetic Induction Experiment	15
14	Da201	2-12	Electromagnet	15
15	Da201	2-13	Electromagnet	8
16	Da201	2-14	Magnetic Circuit Experimental Unit	15
17	Da201	2-15	Electro Magnetic Measuring Apparatus	15
18	Da201	2-16	Primary & Secondary Coils	2
19	Da201	2-17	Primary & Secondary Coils	1
20	Da201	2-18	Measurement of a Magnetic Field	1
21	Da201	2-19	Self-induction Current Demonstration	1
22	Da201	2-20	Oscilloscope	15
23	Da201	2-21	LCR Bridge	15
24	Da201	2-22	Electromagnetic Phenomena Demonstration Outfit	1
25	Da201	2-23	Portable Standard DC Ammeter	30+30
26	Da201	2-24	Portable DC Ammeter	15+15
27	Da201	2-25	Portable Standard DC Ammeter	15+15+15
28	Da201	2-26	Portable DC Voltmeter	15
29	Da201	2-27	Portable Standard AC Ammeter	15
30	Da201	2-28	Portable AC Ammeter	15
31	Da201	2-29	Portable Standard AC Voltmeter	15
32	Da201	2-30	Portable AC Voltmeter	15
33	Da201	2-31	Electric Voltmeter	15
34	Da201	2-32	Digital Multimeter	15
35	Da201	2-33	Galvanometer	15
36	Da201	2-34	Electronic Fluxmeter	1
37	Da201	2-35	Wattmeter	15
38	Da201	2-36	Integrating Watt-Hour meter	15
39	Da201	2-37	Watt-Hour meter	15
40	Da201	2-38	Three-phase Wattmeter	15
41	Da201	2-39	Power factor meter	15
42	Da201	2-40	Frequency meter	15
43	Da201	2-41	Gauss meter	1
44	Da201	2-42	Rotating Magnetic Field Demonstrator	15
45	Da201	2-43	Rotating Magnetic Field Demonstrator	15

No.	Room	Item	Facilities	Q'ty
46	Da201	2-45	Standard Resistor	15
47	Da201	2-46	Standard Inductance	15
48	Da201	2-47	Standard Variable Inductance	15
49	Da201	2-48	Standard Capacitor	15
50	Da201	2-49	Standard Variable Capacitor	15
51	Da201	2-50	Capacitor Unit	15
52	Da201	2-51	Decade Resistance Box	15
53	Da201	2-52	Slide Rheostat	15+15+15
54	Da201	2-53	Volt Slider	15
55	Da201	2-54	Function Generator	15
56	Da201	2-55	Regulated DC Power Supply	15
57	Da201	2-56	Portable Double Bridge	1
58	Da201	2-57	Cell Assembly Set	15
59	Da201	2-58	Thermal Coefficiency Measurement Device	8
60	Da201	2-59	Condenser Mersuring Apparatus	15
61	Da201	2-60	Pararell Plates Condenser Demonstrator	15
62	Da201	3	Working Chair	15
63	Da201	4	Working Bench	17
64	Da201	4-1	Universal Power Supply	15
65	Da201	5	White Board	1
66	Da201	6	Universal Load Single Phase	1
67	Da201	7	Universal Load Three Phase	1
68	Da201	8	Distorted Wave Trainer	5
69	Da201	9	Memory HI Corder	5
70	Da202	1	Teacher's Desk & Chair	1
71	Da202	2-60	Pararell Plates Condenser Demonstrator	15
72	Da202	2-59	Condenser Mersuring Apparatus	15
73	Da202	2-58	Thermal Coefficiency Measurement Device	8
74	Da202	2-57	Cell Assembly Set	15
75	Da202	2-56	Portable Double Bridge	1
76	Da202	2-55	Regulated DC Power Supply	15
77	Da202	2-54	Function Generator	15
78	Da202	2-53	Volt Slider	15
79	Da202	2-52	Slide Rheostat	15+15+15
80	Da202	2-51	Decade Resistance Box	15
81	Da202	2-50	Capacitor Unit	15
82	Da202	2-49	Standard Variable Capacitor	15
83	Da202	2-48	Standard Capacitor	15
84	Da202	2-47	Standard Variable Inductance	15
85	Da202	2-46	Standard Inductance	15
86	Da202	2-45	Standard Resistor	15
87	Da202	2-43	Rotating Magnetic Field Demonstrator	15
88	Da202	2-42	Rotating Magnetic Field Demonstrator	15
89	Da202	2-41	Gauss meter	1
90	Da202	2-40	Frequency meter	15

-- PAGE 2-

No.	Room	Item	Facilities	Q'ty
91	Da202	2-39	Power factor meter	15
92	Da202	2-38	Three-phase Wattmeter	15
93	Da202	2-37	Watt-Hour meter 30	15
94	Da202	2-36	Integrating Watt-Hour meter	15
95	Da202	2-35	Wattmeter	15
96	Da202	2-34	Electronic Fluxmeter	1
97	Da202	2-33	Galvanometer	15
98	Da202	2-32	Digital Multimeter	15
99	Da202	2-31	Electric Voltmeter	15
100	Da202	2-30	Portable AC Voltmeter	15
101	Da202	2-29	Portable Standard AC Voltmeter	15
102	Da202	2-28	Portable AC Ammeter	15
103	Da202	2-27	Portable Standard AC Ammeter	15
104	Da202	2-26	Portable DC Voltmeter	15
105	Da202	2-25	Portable Standard DC Ammeter	15+15+15
106	Da202	2-24	Portable DC Ammeter	15+15
107	Da202	2-23	Portable Standard DC Ammeter	30+30
108	Da202	2-22	Electromagnetic Phenomena Demonstration Outfi	1
109	Da202	2-21	LCR Bridge	15
110	Da202	2-20	Oscilloscope	15
111	Da202	2-19	Self-induction Current Demonstration	1
112	Da202	2-18	Mesurement of a Magnetic Field	1
113	Da202	2-17	Primary & Secondary Coils	1
114	Da202	2-16	Primary & Secondary Coils	2
115	Da202	2-15	Electro Magnetic Measuring Apparatus	15
116	Da202	2-14	Magnetic Circuit Experimental Unit	15
117	Da202	2-13	Electromagnet	8
118	Da202	2-12	Electromagnet	15
119	Da202	2-11	Electromagnetic Induction Experiment	15
120	Da202	2-10	Electromagnetic Force Demonstrator	15
121	Da202	2-9	Electromagnetic Induction Field for OHP	1
122	Da202	2-8	Magnetization Testing Equipment	15
123	Da202	2-7	Formation of Magnetic Field	15
124	Da202	2-6	Magnetic Field Creator	15
125	Da202	2-5	Thermocouple Equipment	15
126	Da202	2-4	Experimental Joule's Heat Unit	15
127	Da202	2-3	Portable Wheatstone Bridge	15
128	Da202	2-2	DC Potentiometer	15
129	Da202	2-1	Electric Fundamental Training Unit	15
130	Da202	2	Cabinet	7
131	Da202	3	Working Chair	15
132	Da202	4-1	Universal Power Supply	15
133	Da202	4	Working Bench	17
134	Da202	5	White Board	1
135	Da202	6	Universal Load Single Phase	1

- PAGE 3-

No.	Room	Item	Facilities	Q'ty
136	Da202	7	Universal Load Three Phase	1
137	Da202	8	Distorted Wave Trainer	5
138	Da202	9	Memory HI Corder	5
139	Da203	1	Head Teacher's Desk Set With a KeyBoard Drawe	1
140	Da203	2	Teacher's Desk Set	8
141	Da203	3	Cabinet	4
142	Da203	4	Cabinet With R/C	1
143	Da203	5	White Board	1
144	Da203	6	Bullelin	1
145	Da203	7	Teacher's Locker	1+4
146	Da203	8	Copier	1
147	Da203	9	OHP	1
148	Da204	1	Slide Rack Tray System	1
149	Da204	2	Wagon	1
150	Da204	3	Work Bench	1
151	Da204	4	Cabinet(Double Door)	4
152	Da205	3	White Board	1
153	Da206	2-1	Semiconductor Trainer	15
154	Da206	2-9	Gauss meter	15
155	Da206	2-10	Lux meter	15
156	Da206	3	White Board	1
157	Da208	3	Work Chair	10
158	Da208	4-1	Electric Drinder	1
159	Da208	4	Work Bench	1
160	Da209	5	Working Bench	2
161	Da209	6	White Board	1
162	Da209	8-2	Electric Grinder	1
163	Da210	5	Working Bench	2
164	Da210	6	White Board	1
165	Da210	8-2	Electric Grinder	1
166	Db102	1	Head Teacher's Desk Set	1
167	Db102	2	Teacher's Desk Set	8
168	Db102	3	Cabinet	4
169	Db102	4	Cabinet with R/C	1
170	Db102	5	White Board	1
171	Db102	6	Bullelin	1
172	Db102	7	Teacher's Locker	1+3
173	Db102	8	Copier	1
174	Db102	9	OHP With screen	1
175	Db103	1	Cabinet	4
176	Db103	1-1	Tool Case	30
177	Db103	1-2	Tool Case	30
178	Db103	1-3	Slide Gauge	2
179	Db103	1-5	Digimatic Micrometer	15
180	Db103	1-4	Digimatic Micrometer	15

- PAGE 4-

No.	Room	Item	Facilities	Qty
181	Db103	1-6	Micrometer Stand	10
182	Db103	1-7	Digimatic Caliper with 3 Pac Accesories	15
183	Db103	1-8	Oiler	10
184	Db103	1-9	Digimatic Indicator with Batteries	15
185	Db103	1-10	Dial Gauge Stand	10
186	Db103	2	Tool Rack	6
187	Db103	2-1	Supporting Tools for Lathe Working	1
188	Db103	3	Light Car	2
189	Db103	4	Racks for Round Bars	2
190	Db103	4-1	Materials Set for Lathe work	1
191	Db103	5	Rack for Sheetmetal	2
192	Db103	6	Tooling Cabinet	2
193	Db103	7	Oil Cabinet	2
194	Db103	7-1	Cooling Oil	10
195	Db103	7-2	Lubricating Oil	10
196	Db103	8	Cabint for Griding Stone	1
197	Db103	8-1	Griding Stone	20
198	Db104	1	Lecture Table	1
199	Db104	1-1	Side Table	1
200	Db104	2	Working Bench	20
201	Db104	3	White Board	1
202	Db104	4	Projecting Screen	1
203	Db104	5	Working Chair	20
204	Db105	1	Teacher's Desk & Chair	2
205	Db105	2	Tooling Cabinet	20
206	Db105	2-1	Standard Tool Sets	20
207	Db105	2-2	Special Accessorier for Lathe LR-55A	10
208	Db105	2-3	Rolling Center and Drill Chuck	10
209	Db105	3	White Board	2
210	Db105	4	Working Table	2
211	Db105	4-1	Machine Vice	2
212	Db105	5	Lathe LR-55A	10
213	Db105	6	Small Precision Lathe	10
214	Db105	7	Work Table with 4 Drawers	2
215	Db105	7-1	Drilling Machine	4
216	Db105	7-2	Vice for Drilling Machine	4
217	Db105	8	Electric Grinder	2
218	Db105	9	Surface Plate with Stand	1
219	Db105	10	Cabinet for teachers	2
220	Db105	10-1	Standard Taps and Dies Set	10
221	Db105	10-2	Tap Wrench and Dies Handle Set	10
222	Db105	11	Cabinets for Students	4
223	Db105	12	Mat with edge	20
224	Db105	13	Mat	6
225	Db106	1	Teacher's Desk set	2

No.	Room	Item	Facilities	Q'ty
226	Db106	2	Cabinet	3
227	Db106	2-1	Spot Welder's Accessories	30
228	Db106	2-2	Hand Drill	5
229	Db106	2-3	Disk Grinders with Grinding Disk 20 pcs	2
230	Db106	2-4	Sheetmetal Tool Sets	30
231	Db106	2-5	Drill Sets	20
232	Db106	2-6	Measuring Tool Set	1
233	Db106	2-7	Supporting Tools	1
234	Db106	2-8	Tool Cases	20
235	Db106	2-9	Safety Goods for Electric Welding	10
236	Db106	3	Locker for Student with Numerical Padlock	4
237	Db106	4	White Board	2
238	Db106	5	Work Table With 4 Drawers	10
239	Db106	5-1	Machine Vices	20
240	Db106	6	Spot Welders	2
241	Db106	7	Contour Machine with 3 Cases Metal saw	1
242	Db106	8	Manual Shear with Table	2
243	Db106	9	Mechanical Press with Foot Switch and Table	2
244	Db106	10	Bench Table	2
245	Db106	10-1	Drilling Machine	4
246	Db106	10-1	Vice for Item 10-1	4
247	Db106	11	Vibro Shears	2
248	Db106	12	Electric Grinder Chice	2
249	Db106	13	Square Shear	1
250	Db106	14	Bending Machine	2
251	Db106	15	Bending Roll	2
252	Db106	16	Cutoff Machine with Cutting Wheel 10 pcs	1
253	Db106	17	Surface Plates with Stand	2
254	Db106	18	Coating Sets	5
255	Db106	19	Foot Shear	1
256	Db106	20	Electric Welder with Accessories	2
257	Db106	21	Hack Saw with Standard Blade 100 pcs	1
258	Db106	22	Ventilator	1
259	Db106	23	Mat	6
260	Db201	2-1	Electronics Circuit Trainer for Student(Potab	15
261	Db201	2-8	RC Oscillator	15
262	Db201	3	White Board	1
263	Db201	5	Electronic Circuit Trainer for Teacher	1
264	Db202	2-3	IC Checker	5
265	Db202	2-4	Function Generator	15
266	Db202	3	White Board	1
267	Db205	1	Teacher's Desk & Chair	1
268	Db205	2	Cabinet	2
269	Db205	2-1	Positioning Control Unit	5
270	Db205	2-2	Positioning Control Unit	5

- PAGE 6-

No.	Room	Item	Facilities	Q'ty
271	Db205	3	Working Chair	15
272	Db205	4	Working Bench	5
273	Db205	4-1	Experimental AC DC Pulse Motor	5
274	Db205	4-2	Overhaul & Assembling Tools Set	15
275	Db205	4-3	Digital Hi Tester	15
276	Db205	5	Static DC Power Supply Unit	1
277	Db205	6	Cut Motor	1
278	Db205	7	White Board	1
279	Db205	8	Load Rheostat	5
280	Db205	9	Digital Electronic Measuring	5
281	Db206	1	Teacher's Desk & Chair	1
282	Db206	2	Cabinet	2
283	Db206	2-1	Volt Slider	10
284	Db206	2-2	Slide Rheostat	5
285	Db206	2-3	Tools Set	15
286	Db206	2-4	Digital Multimeter	15
287	Db206	2-5	Portable Standard AC Ammeter	15
288	Db206	2-6	Portable Standard AC Voltmeter	15
289	Db206	2-7	Wattmeter	15
290	Db206	2-8	Coil Winder	1
291	Db206	2-9	Three-phase Wattmeter	5
292	Db206	2-10	Power Factor meter	5
293	Db206	2-11	Cut Trans (dry type)	2
294	Db206	2-12	Cut Trans (dry type)	2
295	Db206	2-13	Cut Trans (oil cooled type)	2
296	Db206	2-14	AC ammeter	15
297	Db206	2-15	Cut Motor	1
298	Db206	2-16	Cut Motor	1
299	Db206	2-17	Cut Motor	1
300	Db206	2-18	Portable Frequency Meter	5
301	Db206	2-19	DC Volt Meter	10
302	Db206	2-20	DC Watt Meter	10
303	Db206	3	Working Chair	15
304	Db206	4	Working Bench	5
305	Db206	4-1	Experimental Transformer (Single Phase)	15
306	Db206	4-2	Experimental Transformer (3 Phase)	5
307	Db206	4-3	Slidac	5
308	Db206	4-4	Slidac	5
309	Db206	4-5	Single Phase AC Motor	5
310	Db206	4-6	Single Phase AC Motor	5
311	Db206	4-7	Single Phase AC Motor	5
312	Db206	5	White Board	1
313	Db206	6	Variable Power-factor Load Equipment 3 phase	1
314	Db206	7	Series Motor Experimental Unit	5
315	Db206	8	Parallel Operation Synchronous Generator	5

- PAGE 7-

No.	Room	Item	Facilities	Q'ty
316	Db206	9	Experimental Induction Motor	5
317	Db207	1	Head Teacher's Desk Set	1
318	Db207	2	Teacher's Desk Set	8
319	Db207	3	Cabinet	4
320	Db207	4	Cabinet with R/C	1
321	Db207	5	White Board	1
322	Db207	6	Bulletin	1
323	Db207	7	Teacher's Locker	1+4
324	Db207	8	Copier	1
325	Db207	9	OHP	1
326	Db208	1	Slide Rack Tray System	1
327	Db209	1	Teacher's Desk & Chair	1
328	Db209	2	Cabinet	2
329	Db209	2-1	Tool Set for Maintenance	16
330	Db209	2-2	Soldering Iron with Temperature Controller	16
331	Db209	2-3	Conector Wiring Tool	16
332	Db209	3	White Board	1
333	Db209	4	Working Bench	2
334	Db209	4-1	Electric Grinder	1
335	Db209	5	Working Chair	15
336	Db209	6	Home Electronics Application Practice System	16
337	Db209	7	Home Electronics Application Practice System	16
338	Db209	8	Home Electronics Application Practice System	16
339	Db209	9	Home Electronics Application Practice System	16
340	Db209	10	Home Electronics Application Practice System	16
341	Db209	11	Home Electronics Application Practice System	16
342	Db209	12	Home Electronics Work Bench & Others	16
343	Dc201	2-7	Digital Stop Watch	15
344	Dc202	1	Teacher's Desk & Chair	1
345	Dc202	2	Cabinet	1
346	Dc202	2-1	Maintenance tool for Etching device	2
347	Dc202	2-2	Tool Set	2
348	Dc202	2-3	PCB Holder	2
349	Dc202	2-4	Pivotable Vice	10
350	Dc202	3	Etching System	1
351	Dc202	4	Waste water Disposal System	1
352	Dc202	5	White Board	1
353	Dc202	6	Working Chair	10
354	Dc203	2-7	Digital Stop Watch	15
355	Dc203	3	Working Chair	15
356	Dc204	1	Teacher's Desk & Chair	1
357	Dc204	2	Cabinet	1
358	Dc204	2-1	Tool Set	11
359	Dc204	2-2	Soldering Iron with Tempertur Controller	11
360	Dc204	3-1	Engraving Machine	5

- PAGE 8-

No.	Room	Item	Facilities	Qty
361	Dc204	3-2	Perso-com. system for Engraving Machine	5
362	Dc204	4	Working Bench for Handwork	4
363	Dc204	4	Drilling Machine	3
364	Dc204	5	Working Chair	12
365	Dc204	6	CNC Drill/Routing Machine	2
366	Dc204	6-1	Tools & Material for MICROMAT Machine	2
367	Dc204	7	Printed Board (single & both face)	10x2
368	Dc204	8	White Board	1
369	Dc205	1	Teacher's Desk & Chair	1
370	Dc205	2	Cabinet	3
371	Dc205	2-1	Drafting Set	300
372	Dc205	2-2	Template	300
373	Dc205	2-3	Device Model for Drawing	10
374	Dc205	2-4	Trianguler Rule Set	10
375	Dc205	3	Handy-type Drafter	300
376	Dc205	4	Desk & Chair	30
377	Dc205	5	White Board	1
378	Dc205	6	Projecting Screen	1
379	Dc206	1	Drafting Machine Sets	4
380	Dc206	2	Teacher's Desk Set	1
381	Dc206	3	White board	1
382	Dc206	4	Cabinet with R/C	1
383	Dc206	5	Copier	1
384	Dc206	6	Map Cabinet (5 step)	1
385	Dc206	6-1	Stand for Map Cabinet	1
386	Dc206	7	Cabinet	2
387	Dc206	7-1	OPH	1
388	Dc206	7-2	Paper cutter with Changeing Blade	1
389	Dc206	8	Bulletin(pinless)	1
390	Dc206	9	Teacher's Locker	2
391	Dc207	1	Teacher's Desk & Chair	1
392	Dc207	2	Cabinet	3
393	Dc207	2-2	Template	300
394	Dc207	2-3	Device Model for Drawing	10
395	Dc207	2-4	Trianguler Rule Set	10
396	Dc207	3	Handy-type Drafter	300
397	Dc207	4	Desk & Chair	30
398	Dc207	5	White Board	1
399	Dc207	6	Projecting Screen	1

Tentative Curriculum for the Counterparts of
Riyadh Technical Electronics Institute Project

* 1st year

1. Orientation Programme (Briefing and General Orientation) 1 week
General Orientation is organized at Tokyo International Center (TIC) of JICA for three days prior to technical training in order to assist participants in understanding Japan and adjusting themselves to the way of life, and thus to facilitate their effective training.

The contents of the programme are;

- a. The society and natural features in Japan
- b. The culture and history of Japan
- c. The economy of Japan
- d. The industry of Japan
- e. The politics of Japan
- f. Bus tour in Tokyo

2. Intensive Japanese Language Course 6 months
Purpose: To learn Japanese necessary for Technical Training.
(This training will be given in Japanese or English)

3. Review on Basic Theory at Technical Senior High School 6 months
The contents of the programme are;

- a. Review on basic theory of electricity and electronics
- b. To learn teaching method for practice
- c. Study tours

Participants visit the factories whose equipment will be or have been installed at the new Institute and make observation and have comprehensive training on the equipment.

* 2nd year

4. Specialized Training for each Participants

6 months

-Course and training place are as follows;

a. Computer Technology Course

Purpose: To learn knowledge required for instructors on computer technology at the Institute

Contents:1- Operating system

2- Programming teaching (C language)

3- Operating system usage

4- On line database

5- Presentation method

6- Structured programming

7- Database system and data communication system

8- System design

9- Observation trip

Place :1. NEC International Training

2. CICC (Center for the International Cooperation for Computerization)

3. The Institute for Information Processing Education

b. Telecommunication Course

Purpose:To learn knowledge required for instructors on telecommunication at the new Institute

Contents:1-Multiplex communication system

2-Optical fiber transmission system

3-Microwave transmission system

4-UHF transmission system

5-Telephone, Facsimile and other terminals

Place:1.Fujitsu Co.Ltd. etc.

c. Automatic Control Course (Group training Course)
Purpose: To learn knowledge required for instructors on

Contents: 1- Basic theory and information of Automatic Control
2- Automatic Control devices with micro computer and their Application to systems
3- Automatic Control devices with PLC and their application to systems
4- Practical knowledge and technique of Sequence Control Process Control and Comprehensive automatic systems

Place: 1. JICA Kyushu International Center (Group training Course Automatic Control)
2. Fuji Dynamics Corporation, etc.

5. CAI Based Study at Kanazawa Institute of Technology 3 months
Purpose: Using the help of Computer Assisted Instruction (CAI), participants are expected to improve their knowledge on electronics preferably up to college level
6. Training on Teaching Method at Nippon Institute of Technology 3 months
Purpose: Participants are expected to make some electronic devices with guidance of the professors and thereby to learn advanced technical skills and knowledge on teaching method. They demonstrate and explain their devices in to the professors.
7. Evaluation Meeting
Purpose: To evaluate final level of Participants.

Note 1:

This curriculum is subject to change up to level of the Participants.

Note 2:

A one-month leave from the end of the year may be planned for the participants every year so that they could put their gained knowledge and techniques in a practical use at the Institute and review their training performances with the Institute authorities, and thereby prepare themselves for the future training in Japan.

Note 3:

At the end of first year, their accomplishments willingness to study and attitude in the training programme will be evaluated by JICA to see if their training should be continued in the second year.

THE LIST OF TECHNICAL TEXTBOOKS

(1991)

- | | |
|--|----|
| 1. Electronic Technology | IA |
| 2. Electronic Technology | IB |
| 3. Electricity Fundamentals | |
| 4. Information Technology Fundamentals | |
| 5. Electronics Drawing | |

(1992)

- | | |
|---|-----|
| 1. Instrumentation and Control | |
| 2. Electrical Engineering | IA |
| 3. Electronic Technology | IIA |
| 4. Electronic Technology | IIB |
| 5. General Teaching Guidelines For The Workshops And Laboratories In Electronics Institute In
RYADYH | |

(1993~)

- | | |
|-----------------------------|-----|
| 1. Project Study | |
| 2. Electronic Technology | III |
| 3. Audio Video | |
| 4. Industrial Electronics | |
| 5. Automatic Control | |
| 6. Telecommunication | |
| 7. Computer Technology | |
| 8. Electronic Drawing (CAD) | |

100FXH06-13-08

4. 本プロジェクトにおけるカウンターパート本邦研修

本プロジェクトにおけるカウンターパート研修員の受入れは、学院における実習指導者養成を目的として1988年より開始された。以下に平成4年度研修員受入れに係る協議の概要と帰国研修員の現状、これまで実施されてきた研修の概要をとりまとめた。

4-1 平成4年度研修員の受入れ

今回の協議においてカウンターパートについては、今後來日する予定の平成4年度研修員(第4グループ)の受入れ計画について協議を行った。

まず、日本側より、研修分野は電子通信2名、自動制御1名、コンピュータ2名、計5名であり平成5年1月中旬より2年間受入れることを説明した。さらに「研修開始分1年目の終了時点で、中間評価会を行い研修成果や研修意欲などの評価を行い、効果が期待できない研修員は中途帰国させること。家族呼び寄せは原則として認めていないことから、もし自分で呼び寄せた場合でも、JICAはその家族に対して一切の便宜を図らないこと。1年に一回ずつ約一か月間の休暇のための一時帰国を『サ』側負担にて行うこと。」との日本側の受入れ方針をこれまでの受入れ経験等も含め説明し、これに対し『サ』側は了承した。

研修内容については、ミニッツの添付資料(ANNEX)の6の計画にて受入れる旨説明を行ったところ『サ』側から以下の要望が出された。

- ① コンピュータ科についてはソフトウェア中心の研修からハードウェアのメンテナンスの研修を中心に変更してほしい、特に納入される予定になっているDEC社のVAXコンピュータについては研修させたい。
- ② 電子通信科については、衛星通信を加えてもらいたい。
- ③ 自動制御科については、油圧、空圧制御及びCNC(コンピュータ数値制御)の研修を加えてほしい。

以上の要望については、日本側としては、可能な限り研修内容に取り入れるということで双方合意した。

<平成4年度研修計画の概要>

ア 受入期間(予定) 93年1月中旬～93年12月中旬(但1年間の延長含みとする)

イ 研修内容及び研修先

(a) 日本語研修	JICA 東京国際研修センター	6か月
(b) 電気、電子の基礎	愛知県愛知工業高校	4か月
(c) 各専門分野研修		8か月
コンピュータ技術	NEC インターナショナルトレーニング	

	(財) 国際情報化協力センター (CICC) PC コース等	
電子通信	富士通 (株)	
自動制御	JICA 集団コース「自動制御」	
	富士ダイナミクス	
(d) コンピュータ支援教育法	金沢工業大学	3 か月
(e) 各専門分野の課題研究	日本工業大学	3 か月

4-2 帰国研修員の現状

本プロジェクトカウンターパートの受入れは、88年4月20日より始まり、これまでに3グループ各5名、計15名の研修員を受入れた(第3グループは現在日本にて研修中)。帰国済の研修員は10名であるが技術職業訓練庁を離職した者は2名、技術職業訓練庁の職員として電子技術学院以外で働いている者が3名、電子技術学院にて業務を行っている者は5名となっている(別紙参照)。現在学院にいる5名は日常業務として1993年9月の開校にむけての実習指導書の作成、及び機材の据え付けなどの日本人専門家の補助作業や、各分野について専門家から学習の指導を受けている。

4-3 第1グループの研修実績

学院における実習指導者の養成を図ることを目的として、学院の教育課程に係る実験実習に関連する内容及び日本の工業教育を理解するための研修が工業高校、機材納入メーカー中心に行われた。当初、1年3か月の研修期間の予定であったが研修員帰国後サウジ側より再研修の要請があった。その理由はサウジの制度上においては教職につく者は、海外にて2年以上の研修を行う必要があること、当初の研修によって、専門分野に関して必ずしも十分な成果を得ることができなかったことであった。当時の状況からするとそのままではサウジ側が、他国にて補完研修を行う可能性も十分に考えられたため、これまでの協力の成果を確保するためにも日本側は更に9か月の再研修を行う事で了承した。研修実施上の問題点としては、受入先の事情もあり、ほとんど1~2週間おきに研修先が変わり研修内容の重複があったこと、研修員の学習意欲が低く、目的意識がはっきりしないこと等の問題点があった。また無断一時帰国、家族呼び寄せ等、JICAの規則を無視した研修員の行動等もあった。

ほとんど実務経験のない学卒者を長期に亘って受け入れる事は、生活上の問題からも、JICAの研修員受入れスキームになじまないという点において、今後課題を残した研修であった。

ア 受入期間 88年4月20日～89年7月25日

90年6月13日～91年3月10日 (再研修)

イ 研修内容及び研修先

(a) 日本語研修	JICA 東京国際研修センター	3か月
(b) 情報技術の基礎等	東工大付属工業高校、都立鳥山工業高校	1か月
(c) 機械、電気電子工作実習	兵庫県立兵庫工業高校	3か月
(d) 電子実験実習	岐阜県立岐阜工業高校、岐南工業高校 岐阜西工業高校、大垣工業高校	3か月
(e) 情報技術の基礎等	東工大付属工業高校	1か月
(f) コンピュータ教育法	能力開発工学センター	1か月
(g) 各専門分野研修		9か月
オーディオビデオ	科学技術学園専門学校、ソニー(株)他	
コンピュータ技術	鳥山工高、科学技術学園、蔵前工高、IBM(株)	
自動制御	町田工高、小金井工高、富士ダイナミクス、榎本工業他	
電子通信	科学技術学園専門学校、日本無線 他	
工業電子	東工大付属工高、昭和電業社、富士ダイナミクス 他	
(h) 各専門分野の課題研究	日本工業大学	2か月

4-4 第2グループの研修実績

来日研修員5名のうち、研修態度不適格による研修中止が1名、膝の故障により1名が早期帰国をしたため修了者は3名であった。来日研修員が全員工業高校卒の学歴であり、専門分野に関する基礎知識が無かったため急遽研修内容を変更するということがあった。研修は数カ所の研修機関で行われたが、必ずしも系統立ったカリキュラムに添って行われたわけではなかったため、同じ研修内容が繰り返されたりする場合があった。またある研修先(メーカー)ではラインに入って単純作業をするだけの場合もあり、研修員から内容につき不満が出たこともあった。最終的には、3名中2名については専門知識に関する基礎学力は身につけることができた。日本語によるコミュニケーションは3名とも問題なくできるようになった。

ア 受入期間 90年1月9日～91年12月26日

イ 研修内容及び研修先

(a) 日本語研修	JICA 東京国際研修センター	4か月
(b) 電気、電子の基礎	兵庫県立兵庫工業高校、 愛知県立名南工業高校、愛知工業高校	11か月

富士ダイナミクス、プリント電子研究所 他

(c) 各専門分野研修		6か月
オーディオビデオ	NHK 放送研修センター、ソニー(株)	
コンピュータ技術	(財)国際情報化協力センター (CICC) PC コース	
自動制御	横河電機(株) 研修態度不適格のため2か月で中止	
電子通信	富士通(株)	
工業電子	膝の故障により早期帰国	
(d) 各専門分野の課題研究	日本工業大学	3か月

4-5 第3グループの研修について (研修継続中)

第1、第2グループの研修の問題点を踏まえて、年に一回サウジ側負担にて休暇のための一時帰国を行うこと、中間評価会を実施すること、研修スケジュール等の点で GOTEVOT 側と事前に協議を行った上での受入れとなった。しかしながら、来日した研修員全員が、工業高校のオーディオ・ビデオ科しか出ていないため、各人の専門分野に関する基礎知識が全く無いこと、英語があまり堪能ではなく、且つ日本語能力も伸びないこと等の理由により2か所の研修先を途中で変更した。また5名中2名が妻子を本国から連れてきて下宿しており、宿舎移動の問題、研修に専念できなくなる等の問題が出ている。研修態度は遅刻欠席等はあるものの、概ね意欲的であり受入先の努力もあり研修は継続中である。

ア 受入期間 91年7月30日～93年7月10日

イ 研修内容及び研修先

(a) 日本語研修	JICA 東京国際研修センター	1か月
(b) 電気、電子の基礎	愛知県立愛知工業高校	4か月
(c) コンピュータ支援教育法	金沢工業大学	1か月
(d) パソコン研修	NEC インターナショナルトレーニング	2か月
(e) 各専門分野研修		6か月
オーディオビデオ	ソニー(株)	8か月
コンピュータ技術	(株)国際情報化協力センター (CICC) PC コース	
	[変更後] NEC インターナショナルトレーニング	
自動制御	横河電機(株)	
工業電子	[変更後] 富士ダイナミクス	
電子通信	富士通(株)	
(f) コンピュータ支援教育法	金沢工業大学	2か月
(g) 各専門分野の課題研究	日本工業大学	3か月

リアド電子技術学院カウンターパートリスト

別添

第1グループ

受入期間 88.4.20 - 89.7.25 昭和63年度来日

90.6.13 - 91.3.10 (再研修) 平成2年度

〈研修員名〉	〈最終学歴〉	〈研修科目〉	〈現在の状況92・11〉
MR. AL-ASAIMI GHAZI J.	リアド工業短大工業電子科卒	自動制御	リアド留学中
MR. AL-KHAIBRI MOHAMMED M.A.	リアド工業短大工業電子科卒	工業電子	リアド 工業高校教員
MR. FALEH M. M. ABOWENDAH	リアド工業高 オディオ・ビデオ科卒	電子通信	在リアド 電子技術学院
MR. SAEED AHAMED AL-GHAMDI	リアド工業高 オディオ・ビデオ科卒	オーディオ・ビデオ	退職電気会社へ
MR. AL-ABUDULKARIM ABDULLAH S.N.	リアド工業高 オディオ・ビデオ科卒	コンピュータ技術	在リアド 電子技術学院

第2グループ

受入期間 90.1.9 - 91.12.26 平成元年度来日

〈研修員名〉	〈最終学歴〉	〈研修科目〉	〈現在の状況92・11〉
MR. SALEH A. A. EISSA (91.6.18 *)	リアド工業高 オディオ・ビデオ科卒	自動制御	リアド 工業短大へ進学
MR. ALA S. S. AL-BATTNIJI (90.10.4 *)	シエツダ 工業高工業電子科卒	工業電子	退職 行先不明
MR. WALID Z. H. BAHKALY	リアド工業高 オディオ・ビデオ科卒	電子通信	在リアド 電子技術学院
MR. FAHAD A. M. AL-JOMMA`H	リアド工業高 オディオ・ビデオ科卒	オーディオ・ビデオ	在リアド 電子技術学院
MR. SALAIMAN M. S. AL-SEHAIM	リアド工業高 オディオ・ビデオ科卒	コンピュータ技術	在リアド 電子技術学院

第3グループ (研修中)

受入期間 91.7.30 - 93.7.10 平成3年度来日

〈研修員名〉	〈最終学歴〉	〈研修科目〉
MR. ABDULLAH M. I. AL-KHENAIFER	リアド工業高 オディオ・ビデオ科卒	自動制御
MR. AHMED RASHED AL-ZHRANI	同上	工業電子
MR. SALEH AHMAD AL-SAIGH	同上	電子通信
MR. MANSOUR SULTAN AL-MOSABEHY	同上	オーディオ・ビデオ
MR. FAHADO M. AL-MOHEEMMID	同上	コンピュータ技術

5. 学院の短大への格上げ計画とその背景

本年6月23日、GOTEVOT 副総裁より送付された学院開校時期の1年延期通知文書では、延期の1つの理由として学院の短大レベルへの格上げの事が上げられているが、そのポイントは次のとおりである。

- (1) 民間及び政府部門において、学院の入学レベルを引き上げて入学対象を中卒者ではなく高卒者とするよう強い要請がある。
- (2) これは、電子技術の開発を一層進めるため、より優秀な理科系学生と高資格を有する電子技術者に対する増大する需要があるためである。
- (3) GOTEVOT は、本学院のみならず、同様の他の学院でも入学レベルの引き上げ計画を検討しており、また、技術学院を持っている他の政府機関でも同様の計画が実行されている。

本チームは、この問題については、現地滞在期間中に可能な範囲で「サ」側の考え方を中心に情報収集を行ったが、その結果を以下に質疑応答の形で報告する。

(質問) リアド電子技術学院における電子工業高校から短期大学への昇格については、どのように計画しているか。

(Mr.H.I.Al-Dahlawi 電子技術学院校長談要旨)

簡単に言えば、リアド電子技術学院の入学者の資格を中学校卒業生から普通高校卒業生に切換えたい。その為には、数学・物理・化学など普通科目の内容を高卒を対象とするように手直しが必要であると思う。また、専門教育内容については、普通高校卒業生が初めて学習する内容であり、現行の実験・実習でも十分にレベルが高いのでこのままで良いと考えているが日本側の意見はどうか。

この短大昇格の提案の背景には、増加する普通高校の卒業生の進学希望が多いこと、特に短大の電子工学希望が多いという状況がある。また、サウディ国において電子関係技術者の不足という社会的要請から出たサウディ政府の政策があり、GOTEVOT だけの提案ではない。

リアド電子技術学院を短大とする、その短大の中味については、現在リアドにある College of Technology in Riyadh と同様に考えている。

(質問) College Technology in Riyadh における短大の教育基準について質問しますので答えていただきたい。(回答はすべて Dr. Saeed Bin Turki Milah による)

〔短大の設置基準はあるか〕

Regulation はある。設置する短大の規模については、国の予算によって決まる。

〔サ国における短大の制度化はいつ始まったか〕

本校 (College of Technology in Riyadh) の創立が1983年であり、この時に制度化された。従って本校が最も古い短大である。その後、5校建設された。短大設立の理由は、国の高度技術者の育成にある。

〔同校の学科と在席者数について〕

本校には、6学科設置している。

- | | | |
|---------------|----------------------|----------------|
| ① 電子 | 〈自動制御コース
工業電子コース〉 | 在席者数 |
| | | 1/3→1/2 (500人) |
| ② 機械 | | |
| ③ 化学 | | |
| ④ 電気 | | |
| ⑤ 自動車 | | |
| ⑥ 産業 (主として会計) | | |

以上の学科があり、全学生数約1000人であり、現在1/2は電子学科に在席している。

〔入学生について〕

普通科卒を入学させており、普通高校の Science コースを履修した生徒が多い。彼等は電子科を希望している。

〔卒業に必要な単位数について〕

卒業に必要な単位数は90単位である。この内14単位は一般教養であり、数学、アラビック、物理、英語、イスラム (コーラン) により構成される。2年間で卒業できない者は、4年間在席できる。

〔教育課程と卒業研究について〕

教育課程については、大臣審議会 (Minister of Council) によるものであれば良い、選択科目も置くことができる。

卒業研究やゼミナールについては、電子学科において Computer と M-Processor に分け 8 時間の Practical Project を実施している。

〔授業時間及び単位について〕

講義 (Lecture) 50分を 1 ユニット

実習 (Workshop) 100分を 1 ユニット

としており、1 年間で 2 学期制、1 学期は 14~15 週であり、2 週のテスト期間がある。

〔教員の資格と平均持時間について〕

Professor	Ph.D
Associate Professor) Dr.
Assistant Professor	
Lecturer	Master
Teacher (Theory)) Bachelor
(Practical)	
Technician	

教員の平均持時間は、25hour/week である。

〔4 年制大学への昇格〕

本校は、今年度から 2 年間を加え上級の大学になり、学士号をだすことになった。他の短大からの卒業生も受け入れる。

目的は、先生になる人の養成である。

付属資料一 1

「リアド電子工業高校設立に関する日本側調査団とサウディアラビア
王国文部省との間の討議議事録（1974年5月12日署名）」

Record of Discussions between the Japanese
Implementation Survey Mission and the Ministry
of Education in the Kingdom of Saudi Arabia
concerning the Establishment of the Riyadh
Electronics Technical Institute

At the request of the Government of the Kingdom of Saudi Arabia for Japanese cooperation in establishing the Electronics Technical Institute at Riyadh, the Kingdom of Saudi Arabia, the Overseas Technical Cooperation Agency (OTCA), entrusted with the execution of the technical cooperation by the Government of Japan, organized a Preliminary Survey Mission, headed by Mr. Hachiro Suda, Director of Elementary and Secondary Education Bureau, Ministry of Education, the Government of Japan, which visited the Kingdom of Saudi Arabia from January 29 to February 12, 1974, for the purpose of conducting feasibility studies of the proposed project.

On the basis of the report of the afore-said Mission submitted to the Government of Japan, recommending that Japanese cooperation to this project would be feasible, the Implementation Survey Mission, organized by OTCA and headed by Mr. Takeichi Nomura, Technical Councillor, Educational Facilities Department, Administrative Bureau, Ministry of Education, the Government of Japan, was dispatched to the Kingdom from June 5 to June 18, 1974 and exchanged views and had a series of discussions in Riyadh with the authorities concerned of the Government of the Kingdom concerning the necessary measures to be taken by the two Governments for the smooth implementation of the project.

As a result of the survey and discussions between the Mission and the Kingdom of Saudi Arabian authorities concerned agreed to recommend to their respective Governments the matters referred to in this Record of Discussions including its Annexes concerning the establishment of the Electronics Technical Institute at Riyadh.

Riyadh, dated the 12th of June, 1974

For the Overseas Technical
Cooperation Agency

野村 武一

(Takeichi Nomura)
Head of the Japanese
Implementation Survey
Mission

For the Government of the Kingdom
of Saudi Arabia

Khalid Fahed

(Khalid Ben Fahed Ben Khaled)
Ministry of Education
The Kingdom of Saudi Arabia

Record of Discussions

1. The Outline of the Project:

- (1) The Government of the Kingdom of Saudi Arabia will establish the Riyadh Electronics Technical institute (hereinafter referred to as the "institute") for training electronics technicians in the Kingdom of Saudi Arabia. As a result of the establishment of the institute, the Radio and Television Courses of Riyadh Royal Technical institute will be integrated into the institute.
- (2) The institute will offer practical and theoretical training for electronics technicians.
- (3) Following Sections will be organized in the Institute;
 - (a) Radio Section,
 - (b) Television Section,
 - (c) Telecommunications Section and
 - (d) Electronics Instrument Section.
- (4) The period of training will consist of two stages, the first with the duration of two years and the second with the duration of one or two year(s).
- (5) Number of students of the institute will not exceed 660 students.
- (6) Either an intermediate School graduate or its equivalent is qualified for entering the Institute.
- (7) The institute will be inaugurated in September, 1977.

2. Necessary measures to be taken by the Government of Japan:

In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures to extend at its own expense the following technical cooperation:

- (1) Phase I Before December, 1974
 - (a) Dispatch of Japanese experts to help prepare a basic plan for the establishment of the Institute,

(b) Extending possible assistance to the Kingdom of Saudi Arabian Government for the latter to recruit Japanese engineers to help draft a basic design of the buildings and related accessories of the Institute as well as providing advice to these engineers as necessary. (See attached note.)

(2) Phase II January - August, 1975

(a) Dispatch of Japanese experts to prepare the list of educational equipments necessary for the operation of the Institute,

(b) Extending possible assistance to the Kingdom of Saudi Arabian Government for the latter to recruit Japanese engineers to help draft a detailed design for the establishment of the Institute as well as providing advice to these engineers as necessary. (See attached note.)

(3) Phase III September, 1975 - August, 1977

(a) Extending possible assistance to the Kingdom of Saudi Arabian Government for the latter to recruit Japanese engineers, and contractors for implementation and supervision of constructing the Institute. (See attached note.)

(b) Advice on preparation of the curricula including, if required, dispatch of Japanese experts for this purpose as well as on technical training in Japan of the Kingdom of Saudi Arabian officials associated with the activities of the Institute,

(c) Technical training in Japan of the Kingdom of Saudi Arabian officials associated with the activities of the Institute,

(d) Provision of educational equipments, to the extent possible, necessary for accomplishing the purposes of the Institute. The equipments mentioned above will become the property of the Government of the Kingdom of Saudi Arabia upon being delivered c.i.f., at any port in the Kingdom of Saudi Arabia, and

(e) dispatch of Japanese experts, if required, for installation of the above-mentioned equipments.

The above-mentioned Japanese technical cooperation will be implemented on the basis of the official request forms as mentioned below of the Japanese Government to be submitted by the Government of the Kingdom of Saudi Arabia.

- 1) Dispatch of Japanese experts. (A1 Form)
- 2) Technical training in Japan of the Kingdom of Saudi Arabian officials referred to in Paragraph (3) (c). (A2, A3 Form)
- 3) Provision of educational equipments referred to in Paragraph (3) (d). (A4 Form)

(4) Phase IV

Dispatch of 5 Japanese experts; chief advisor and one expert in each Section mentioned in Paragraph 1. (3) on technical training in the fields listed in Annex I.

3. Contributions to be made by the Government of the Kingdom of Saudi Arabia

As the project proceeds, the Government of the Kingdom of Saudi Arabia will take necessary measures in accordance with the laws and regulations in force in the Kingdom of Saudi Arabia to provide at its own expense the following:

- (1) requisite land, buildings and incidental facilities,
- (2) all expenses necessary for construction works of the Institute,
- (3) to provide the educational and administrative staff required to work with the Japanese advisers in the institute (such as indicated in Annex II for example).
- (4) any additional machinery, equipments, tools, their spare parts and any other materials other than those provided by the Government of Japan, during the operation period of the Institute

- (5) customs duties, internal taxes and any other charges, if any, imposed in the Kingdom of Saudi Arabia in respect of the articles referred to in Paragraph 2. (3) (d)
- (6) expenses necessary for the transportation of the goods referred to in Paragraph 2. (3) (d) within the Kingdom of Saudi Arabia as well as for their installation, operation and maintenance,
- (7) all running expenses necessary for the operation of the Institute,
- (8) all expenses necessary for the Japanese engineers and contractors recruited under in Paragraphs 2. (i) (b), 2. (2) (b) and 2. (3) (a),
(See attached note)
- (9) Privileges, exemptions and benefits will be according to Annex III.

4. Responsibilities:

The Ministry of Education of the Kingdom of Saudi Arabia will have the overall responsibilities for the establishment and implementation of the Institute. The Japanese experts on education will be responsible for the execution of the functions as listed in Annex I.

5. Mutual Consultation

There will be mutual consultation between the two Governments for the purpose of advancing the objectives of the institute and further promoting Japanese-the Kingdom of Saudi Arabian cooperation in operating the institute.

6. Others

a. Both delegations agree that this Record of Discussions will be covered by an exchange of notes between the Government of the Kingdom of Saudi Arabia and the Japan Government for final approval. All technical cooperation concerning this project will be implemented according to this Record of Discussions up till the opening of the Institute.

- b. An agreement will be prepared and signed between the two governments to cover the period of the technical and educational assistance beginning from September 1977 till September 1982 according to the principles agreed upon in the Record of Discussions.

N O T E

The Japanese Mission took note of the desires strongly expressed by the Saudi Arabian side referred to in paragraph 2, (1) (b), 2 (2) (b) and 2 (3) (a) as follows;

Selecting of and contracting with a consultant firm

- a. The Japanese Government shall undertake to select and propose to the Saudi Government a Japanese specialized consultant firm which will prepare the preliminary and final design of the Institute and all tender documents as well as general and Technical specifications (which must be prepared in both Arabic and English). At the same time the Japanese Government shall negotiate the contract with the consultant and submit this draft contract to the Saudi Arabian Government for final approval. This contract will be signed by the consultant and the Ministry of Education of Saudi Arabia.
- b. The contract with the consultant will cover the complete design and supervision of construction. The fees of the design will be a lump sum, while the supervision fees will be based for a period of 24 months calculated on the basis of man/month.
Also, the supervision part of the contract will be considered a unilateral obligation on the consultant to the Saudi Arabian Government.

Annex I

(1) Functions of the Japanese Chief Advisor:

- (a) to provide advice and guidance on the management and the matters related to the education in the Institute,
- (b) to instruct in the operation and maintenance of the equipments to be provided by the Government of Japan,
- (c) to exercise leadership on the Japanese educational experts, and
- (d) to conduct theoretical and practical training so far as his above-mentioned activities permit.

(2) Functions of the Japanese Educational Experts:

- (a) to provide advice and guidance to the Kingdom of Saudi Arabian counterpart instructors or teachers on technical matters concerned,
- (b) to instruct in the operation and maintenance of the equipments to be provided by the Government of Japan,
- (c) to execute other duties directed by the Japanese Chief Advisor, and
- (d) to conduct theoretical and practical training in specialized subjects so far as their above-mentioned activities permit.

Annex II

- (1) Principal
- (2) Vice principal
- (3) Counterpart instructors or teachers in the fields of;
 - (a) Radio Section,
 - (b) Television Section,
 - (c) Telecommunications Section, and
 - (d) Electronics instrument Section.
- (4) Administrative Staff;
 - (a) Clerks,
 - (b) Typists,
 - (c) Drivers,
 - (d) Messengers, and
 - (e) Others.

Annex III

Privileges, Exemptions and Benefits

- (1) Any privileges exemptions or benefits which may be granted to Japanese experts in a general agreement to be concluded between the Saudi Arabia Government and the Japanese Government will be automatically applied for the Japanese experts working in the Institute.
- (2) Income tax:
The Japanese experts and their families are exempted from income tax and other similar charges on their salaries paid by the Japanese Government.
- (3) Allowances:
The Saudi Arabian Government shall grant each Japanese expert an annual lump sum at the beginning of each scholastic year, which covers a housing allowance for a fully-furnished villa, transportation allowance and a medical treatment allowance.
The amount of this sum shall be mutually agreed upon by the two governments and shall be included in the final agreement.

付属資料一 2

[TECHNICAL EDUCATION AND VOCATIONAL TRAINING:
GREAT STRIDES TO A PROSPEROUS FUTURE—GOTEVOT]

KINGDOM OF SAUDI ARABIA

**GENERAL ORGANIZATION FOR TECHNICAL
EDUCATION AND VOCATIONAL TRAINING**

**TECHNICAL EDUCATION AND VOCATIONAL TRAINING:
GREAT STRIDES TO A PROSPEROUS FUTURE**

THIRD EDITION 1409H/1989



THE CUSTODIAN OF THE TWO HOLY MOSQUES
King Fahad Bin Abdul Aziz Al-Saud

INDEX

		Page
Introduction		
CHAPTER 1	Technical Education and Vocational Training in The Kingdom: Its Importance and Development:	69
Section 1	Importance of Technical Education and Vocational Training	71
Section 2	Technical Education and Vocational Training Before the Establishment of GOTEVOT	73
Section 3	Establishment of GOTEVOT: Regulations, Organization and Objectives	79
CHAPTER 2	Technical Education:	85
Section 1	Technical Industrial Education	89
Section 2	Technical Commercial Education	
Section 3	Technical Agricultural Education	
Section 4	Technical Supervisors Institutes	
CHAPTER 3	Vocational Training:	
Section 1	Vocational Training Centers	
Section 2	On-The-Job Training	
Section 3	ITI/IMDC	
CHAPTER 4	Cooperative Education and Training:	107
Section 1	Cooperation in Technical Education	109
Section 2	Cooperation in Vocational Training	
Section 3	Cooperation Agreements with Foreign Countries	111
CHAPTER 5	Activities:	
Section 1	Sports, scouting and socio-cultural activities	
Section 2	Public Relations	
CHAPTER 6	Technical Education & Vocational Training in the Kingdom's Development Plans:	113
Section 1	Technical Education and Training in the First Development Plan	
Section 2	Technical Education and Training in the Second Development Plan	
Section 3	Technical Education and Training in the Third Development Plan	
Section 4	Technical Education and Training in the Fourth Development Plan	115
CONCLUSION		

CHAPTER ONE

*TECHNICAL EDUCATION AND VOCATIONAL TRAINING
IN THE KINGDOM: ITS IMPORTANCE AND DEVELOPMENT*

SECTION ONE : Importance of Technical Education and Vocational Training :

Development policy in Saudi Arabia aims at the protection of moral and religious values, upgrading living standards of the citizens while maintaining social and economic stability by:

- a) Increasing the average growth of Gross National Product (GNP).
- b) Diversifying national income resources and concentration on industrial production.
- c) Development of human resources to enable all sectors of society to have full participation in the development process.

From the above mentioned objectives we find that increasing the average national product can only be achieved by a complete utilization of technological progress, and by increasing the human productivity which mainly depends on the permanent upgrading of technical and vocational skills, in order to cope with fast technological achievements.

Based on the above facts, the Kingdom in its development plans, has aimed at the utilization of its resources to qualify the citizen and prepare him for the role he is expected to play.

The formation of the Manpower Council and the establishment of GOTEVOT came to emphasize this goal, and also to emphasize the importance given by the government, with all its sectors, to the upgrading of workers and the development of their productivity through education and training, to create a highly experienced citizen capable of dealing with the advanced forms of production, to make all possible efforts to create balance between the available manpower and that needed in the future, and to allow all education and training facilities in all parts of the Kingdom to have more cooperation and coordination.

This interest, during the last few years, developed and became a strategic framework producing a number of objectives included in the Kingdom's Fourth Development Plan (1405-1406H). The above objectives require preparation of productive qualified workers to cover that stage, development and upgrading of manpower to serve all sectors and concentration on qualitative development by improving and developing the achievements made during the three previous development plans. It was found that the best way to set up the fifth strategic foundation in the Fourth Development Plan - the continuation of efforts in

manpower development - was through the evaluation and development of education and training programmes to agree with our Islamic principles and the changing society requirements. This could be achieved through:

1. Special incentives for some fields of specialization needed in the development plan, such as technical education and vocational training.
2. Concentration, in training, on advanced technology at its ordinary and high levels.
3. Training should meet the actual economic requirements in quality and efficiency.
4. More concentration on training, with the aim of encouraging on-the-job training.

This shows the importance of the role played by GOTEVOT in the realization of existing and expected development objectives. Therefore, the importance of technical education and vocational training according to the present needs, can be explained in the following:

1. Increase individual productivity.
2. Ensure protective maintenance.
3. Increase the income of individuals and improve their morale.
4. Reduce their consumption by depending on their own skills.
5. Full utilization, operation, development and maintenance of available financial and mechanical resources.
6. Innovate and develop and not be satisfied only with installation, maintenance and operation.

SECTION TWO : Technical Education and Vocational Training before the Establishment of GOTEVOT :

The beginning of technical education and vocational training in the Kingdom goes back to an early stage of its modern history. It is the fruit of continuous work started by the Unifier of the Arabian Peninsula, **the Late King Abdul Aziz, may God have mercy on him**, who, after the unification of the regions of the modern Saudi state, and proclaiming it a unified Kingdom under the name «Kingdom of Saudi Arabia» on 21 Jumada Al-Ula 1351H (September 23, 1932), started a new phase of planning, development, education and training at all levels, despite shortage in the financial resources at the beginning of the unification and planning stage. His Majesty was far-sighted, and had wide imagination and deep understanding of the conditions in the Kingdom compared to the surrounding Arab, Islamic and foreign countries.

During celebrations after five years of the establishment of Al-Kharj Agricultural Centre, His Majesty said **«unless the Arabs become capable of creating a scientifically, technically and vocationally developed social class at the proper time, future generations will be forced to continue to admit foreign interests which will become an attractive target for foreign companies to stay permanently in our country. Thus the independence of the Arabian peninsula will vanish like a dream»**.

His Majesty was full of hope for the future generations, and wanted to build the future of the country on a firm basis, and that is why His Majesty used to emphasize strongly in his speeches the following facts:

«Technological and industrial progress in the Arabian Peninsula should be in harmony with vocational education in the Arab world, and if we fail to achieve this, we will continue for ever to be in need of foreigners and depend on them».

«It is not good for any nation to depend on others to perform duties necessary for the life of its people. What benefit we gain from ending political influence if the purpose is to replace it by economic one? I believe that it is quite necessary to develop this country by depending upon the shoulders of the citizens. This is essential to maintain its full freedom and independence».

The words of the late King Abdul Aziz as well as his thoughts, were a very strong incentive which caused technical education and vocational training to start early in this country, when the various departments of the modern state started to feel the need for this new change, and the philosophies and technologies started to occupy the educational thinking after the Second World War.

Technical education and vocational training in the Kingdom, before the establishment of GOTEVOT can be explained in the following:

First - Technical Education

Technical education, in its industrial, commercial and agricultural sections, was affiliated with the Ministry of Education since its establishment in 1373H. In the following pages we will try to deal with each of the above sections until the formation of GOTEVOT.

1. Technical Industrial Education:

The first industrial school was established in Jeddah in 1369H, at the time of H.M. the late King Abdul Aziz, may God have mercy on him.

Duration of study was three years after elementary education which was replaced by another system of five years after elementary education. Schools here were called secondary industrial schools. Then came the system of 4 years after elementary education. Schools here were called intermediate industrial schools, and the first secondary industrial school in the Kingdom was opened in 1380/1381H.

The German Specialists in the industrial education department prepared advanced industrial education curricula. Educational units, to assist in the execution of these theoretical subjects in the curricula, were also made. As for the practical curricula, all training exercises required for the different trades were prepared in the framework of the German Technical Cooperation Agreement, in addition to twelve technical books in the different branches of general mechanics, electricity and auto trades.

The industrial education schools and institutes before the establishment of GOTEVOT were :

1.	The Industrial Model Institute in Jeddah	1369H
2.	SVS in Medina	1374H
3.	SVS in Hofuf	1379H
4.	Royal Technical Institute in Riyadh	1387H
5.	Higher Technical Institute in Riyadh	1392H
6.	Industrial Institute in Dammam	1393H
7.	SVS - Onaiza	1393H
8.	SVS - Taif	1393H
9.	SVS - Abha	1393H

Graduates from the different intermediate and industrial schools, and from the secondary industrial and vocational schools since the Ministry of education was established in 1373H and until 1399/1400H, were 5459 in 26 trades. Most of these trainees graduated during the last ten years, within the First and Second Development Plans, from 1390H to 1399H and totalled 3722 graduates.

In 1398/1399H, trainees in the industrial schools and institutes were 1291, but after the establishment of GOTEVOT all these numbers were rapidly increased because they were much less than those in the Second Development Plan.

Number of Admitted and Graduated Trainees from Industrial, Commercial
and Agricultural Schools and Institutes 1389/1390H - 1399/1400H

YEAR	ADMITTED						GRADUATED					
	Higher Commercial Institutes	Higher Technical Institutes	Secondary Agricultural Schools	Secondary Commercial Schools	Secondary Industrial Schools	Higher Commercial Institutes	Higher Technical Institutes	Secondary Agricultural Schools	Secondary Commercial Schools	Secondary Industrial Schools		
1389-1390	—	—	128	18	692	—	—	—	—	157		
1390-1391	—	—	29	—	819	—	—	—	—	207		
1391-1392	—	—	—	134	765	—	—	—	—	152		
1392-1393	—	58	—	321	977	—	—	—	—	187		
1393-1394	—	119	—	584	1477	—	10	—	113	226		
1394-1395	—	105	—	1170	2133	—	53	—	338	345		
1395-1396	19	108	—	1643	2293	—	50	—	286	634		
1396-1397	95	106	—	2306	2041	16	10	—	380	687		
1397-1398	229	147	136	2981	1474	45	52	—	818	627		
1398-1399	247	146	265	3516	1145	75	47	—	859	391		
1399-1400	264	137	322	4288	1213	63	61	118	1014	266		

X Intermediate Level .

Number of Industrial, Commercial and Agricultural
Schools and Institutes 1389/1390H - 1399/1400H

YEAR	CLASSES							SCHOOLS					Total
	Higher Commercial Institutes	Higher Technical Institutes	Secondary Agricultural Schools	Secondary Commercial Schools	Secondary Industrial Schools	Total	Higher Commercial Institutes	Higher Technical Institutes	Secondary Agricultural Schools	Secondary Commercial Schools	Secondary Industrial Schools		
1389-1390	—	—	5	1	27	33	—	—	1	1	5	7	
1390-1391	—	—	2	—	39	41	—	—	1	—	4	5	
1391-1392	—	—	—	10	43	53	—	—	—	3	4	7	
1392-1393	—	3	—	11	52	66	—	1	—	3	4	8	
1393-1394	—	6	—	22	70	98	—	1	—	3	4	8	
1394-1395	—	8	—	45	91	144	—	1	—	8	4	13	
1395-1396	1	8	—	73	108	190	1	1	—	11	8	21	
1396-1397	5	13	—	102	101	221	2	1	—	11	8	22	
1397-1398	13	11	6	129	89	248	3	2	1	14	8	28	
1398-1399	17	12	12	162	82	285	3	2	1	14	8	28	
1399-1400	14	12	12	183	91	312	4	2	1	15	8	30	

2. Technical Commercial Education :

Commercial education in the Kingdom of Saudi Arabia started in 1380H (1960) with four intermediate commercial schools. They were replaced by secondary commercial schools in 1385/1386H.

Commercial schools and institutes had morning and evening courses and before the establishment of GOTEVOT there were :

a. Higher Institutes for Fin. & Comm. Studies :

	Institute	Opening Date
1.	Higher Institute for Financial and Commercial Studies in Riyadh	1395/1396H
2.	Higher Institute for Financial and Commercial Studies in Jeddah	1397/1398H

b. Secondary Commercial Schools :

	School	Opening Date
1.	SCS, Riyadh	91/92
2.	SCS, Jeddah	91/92
3.	SCS, Dammam	91/92
4.	SCS, Qatif	94/95
5.	SCS, Hofuf	94/95
6.	SCS, Makkah	95/96
7.	SCS, Taif	95/96
8.	SCS, Medina	95/96

Numbers of trainees in the secondary commercial schools, in the four years before the establishment of GOTEVOT, were :

Year	Number
1396/1397H	2306
1397/1398H	2981
1398/1399H	3516
1399/1400H	4288

The total number of graduates from the secondary commercial schools in the same period was 3071, and those graduated from the Higher Institute for Financial and Commercial Studies during the same period were 199.

3. Technical Agricultural Education :

The first agricultural school was opened in Al-Kharj in 1375H (1955), and was affiliated with the Ministry of Agriculture before it joined the Ministry of Education in 1377H (1957). It was later closed due to a shortage of applicants.

In 1380H (1960) five secondary agricultural schools were opened in Hofuf, Majmaa, Buraida, Baljurashi and Jizan, but were closed because they failed to realize their objectives. Then it was decided to change the admission level in the agricultural schools to the intermediate certificate in order to upgrade them to the secondary level. The first to begin with was the technical agricultural institute in Buraida in the year 1397/1398H, which graduated 118 trainees in 1399/1400H from a total of 322 trainees.

The number of technical schools and institutes in 1399/1400H was 20, and the number of students who joined commercial, agricultural and industrial schools and institutes was 6224, with a 17% increase over the previous year 1398/1399H, while graduates of institutes and schools in the Ministry of Education in 1399/1400H amounted to 1522. Teachers in the Ministry of Education were 858 in 1399/1400H at all levels and sections of technical education.

SECTION THREE : Establishment of the General Organization for Technical Education & Vocational Training :

Regulations, Organization and Objectives :

After a detailed study of the manpower existing requirements, and whether they meet the needs of development in the Kingdom of Saudi Arabia, Government officials found that the best way to develop technical education and vocational training programmes and to concentrate efforts exerted in this field, was to establish the General Organization for Technical Education and Vocational Training (**GOTEVOT**) to take the responsibility of implementing manpower development plans. The establishment of **GOTEVOT** came to fully coincide with the establishment of the Manpower Council. The Custodian of the Two Holy Mosques approved the establishment of **GOTEVOT** when the matter was submitted to the Council of Ministers by the Manpower Ministerial Committee, and after a comprehensive study of the requirements of the plans and programmes aimed at the development of vocational and technical national manpower within the framework of the policies of the Manpower Council.

The Committee found that it was important to amalgamate all training centres and institutes affiliated with the Ministry of Labour and Social Affairs, and all technical institutes affiliated with the Ministry of Education, in one establishment known as the General Organization for Technical Education and Vocational Training (**GOTEVOT**), which was given financial and administrative independence enabling it to perform its duties easily, and managed by a Board of Directors headed by the Minister of Labour and Social Affairs. Members of this Board are selected from the concerned Government Departments in addition to two representatives from the private sector appointed by the Minister of Labour. This new organization shall have a Governor appointed in the excellent grade.

Due to the historical, organizational, and developmental importance of the Royal decrees and Ministerial resolutions relating to the establishment of **GOTEVOT** and Manpower Council, and to make such decrees and resolutions easily available to researchers, students and experts, we mention their numbers as follows :

1. **Royal Decree No. M/31** dated 10/8/1400H giving approval for the Manpower Council.
2. **Council of Ministers' Resolution No. 122** dated 12/7/1400H approving the Council's regulations.

3. **Royal Decree No. M/30** dated 10/8/1400H approving **GOTEVOT's** regulations.

4. **Council of Ministers' Resolution No. 118** dated 12/7/1400H approving **GOTEVOT's** regulations.

The Manpower Council, which will be responsible for manpower planning, is directly linked with the Prime Minister, the regulations which include five articles specified its duties as well as the formation of its Secretariat. These regulations were implemented from Shaban 1400H.

GOTEVOT's regulations, also implemented from Shaban 10, 1400H, consist of 16 Articles giving **GOTEVOT** full financial and administrative independence under the supervision of the Minister of Labor and Social Affairs. These regulations specified the aim of its foundation, the formation of its Board of Directors as well as establishing its duties, meetings, responsibilities and also the responsibilities of its Governor, and organization of its budget and finance.

GOTEVOT'S ORGANIZATION

After approving the previous regulations, GOTEVOT has become an independent body, and the aim of its establishment is to implement the programmes and plans aimed at the development of vocational and technical national manpower, within the framework of technical education in its different fields of industry, agriculture and commerce, as well as all other forms and levels of vocational training, such as adult vocational training, preliminary training, pre-vocational training, OJT, in addition to vocational researches for the development of performance and productivity. GOTEVOT is managed by a Governor in the excellent grade, and the Board of Directors is given the authority of proposing GOTEVOT's general policy and issuing regulations as well as taking other decisions, in addition to setting up GOTEVOT organizational structure and approving it in its final form. GOTEVOT has an independent budget which coincides with the Kingdom's general budget. Thus the organizational structure of GOTEVOT has been established in a way that ensures flexibility of performance as well as distribution of authorities in a clear form that will ensure, at the end, the realization of GOTEVOT's objectives regarding national manpower planning and development in all its technical and vocational levels. A look at GOTEVOT's organizational plan (see figure), shows the administrative organization emphasizing the direct link between the Governor and the departments which have public responsibility and independent performance.

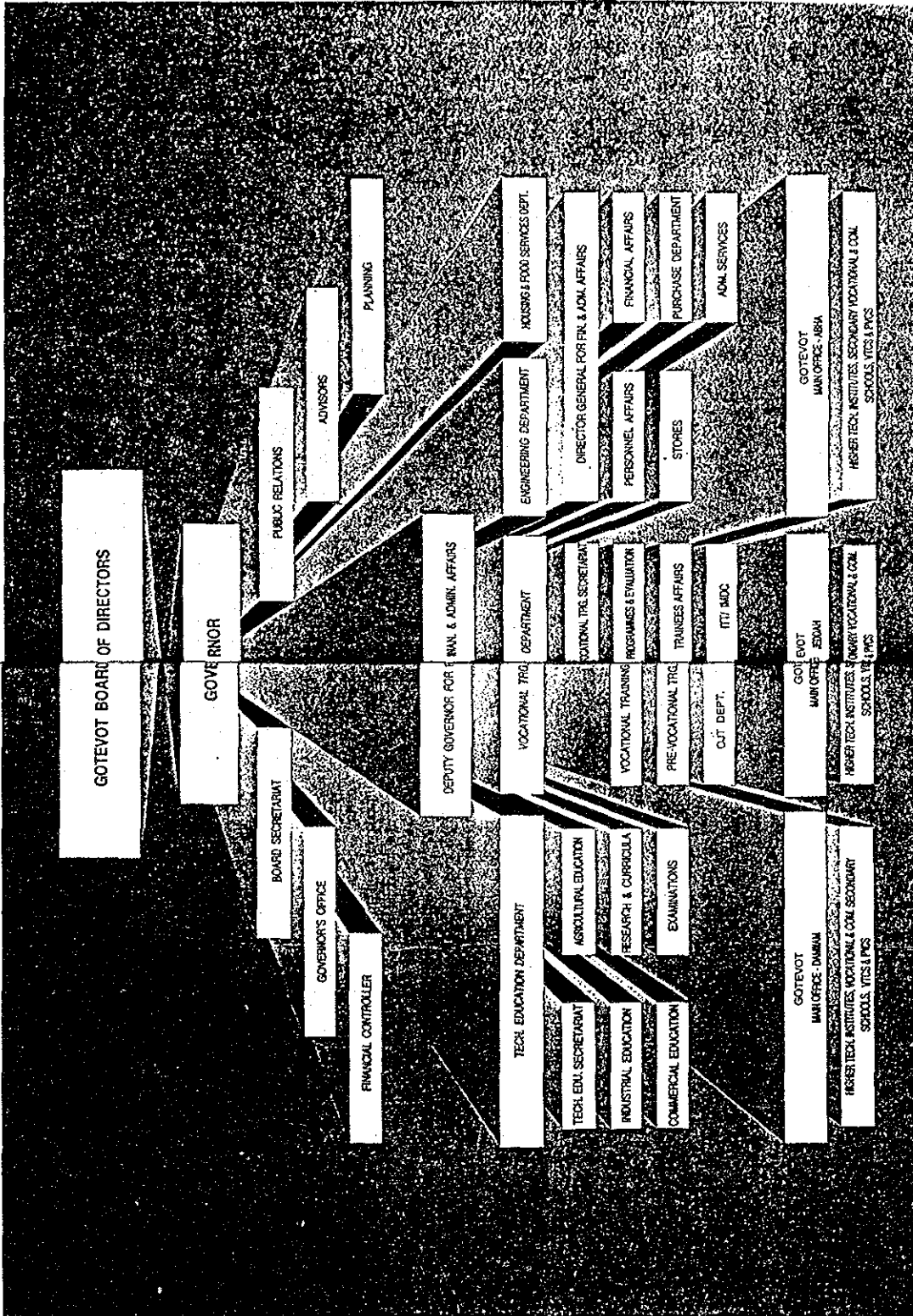
In fact, the above plan shows accurately the scientific and other objectives planned by GOTEVOT for the future of national manpower in the Kingdom. GOTEVOT has set up the general objectives of technical education and vocational training in the following manner :

- a) Prepare the individual for performing the required activities in the industrial, commercial and agricultural fields as well as the services that help to develop national economy through working in public establishments, ministries, private sector companies, or free work.
- b) Provide the individual with Islamic and general culture that helps to form a high moral standard, strong belief, and the ability of thinking and mutual understanding as well as adaptation to the different conditions.
- c) Offer a broad scientific base for technical manpower to increase individual response to rapid technological progress.

- d) Allow every person the opportunity to learn a trade, or to continue training according to his mental and physical abilities. This is known as «open training» scale.
- e) Develop technicians skills and upgrade their vocational knowledge continuously.
- f) Emphasize the dignity of manual and vocational work and their role in the development of society.
- g) Stop the internal migration to big cities by spreading vocational training centres throughout the Kingdom.

GOTEVOT would like to explain that its strategy in the implementation of these objectives is mainly based on the following :

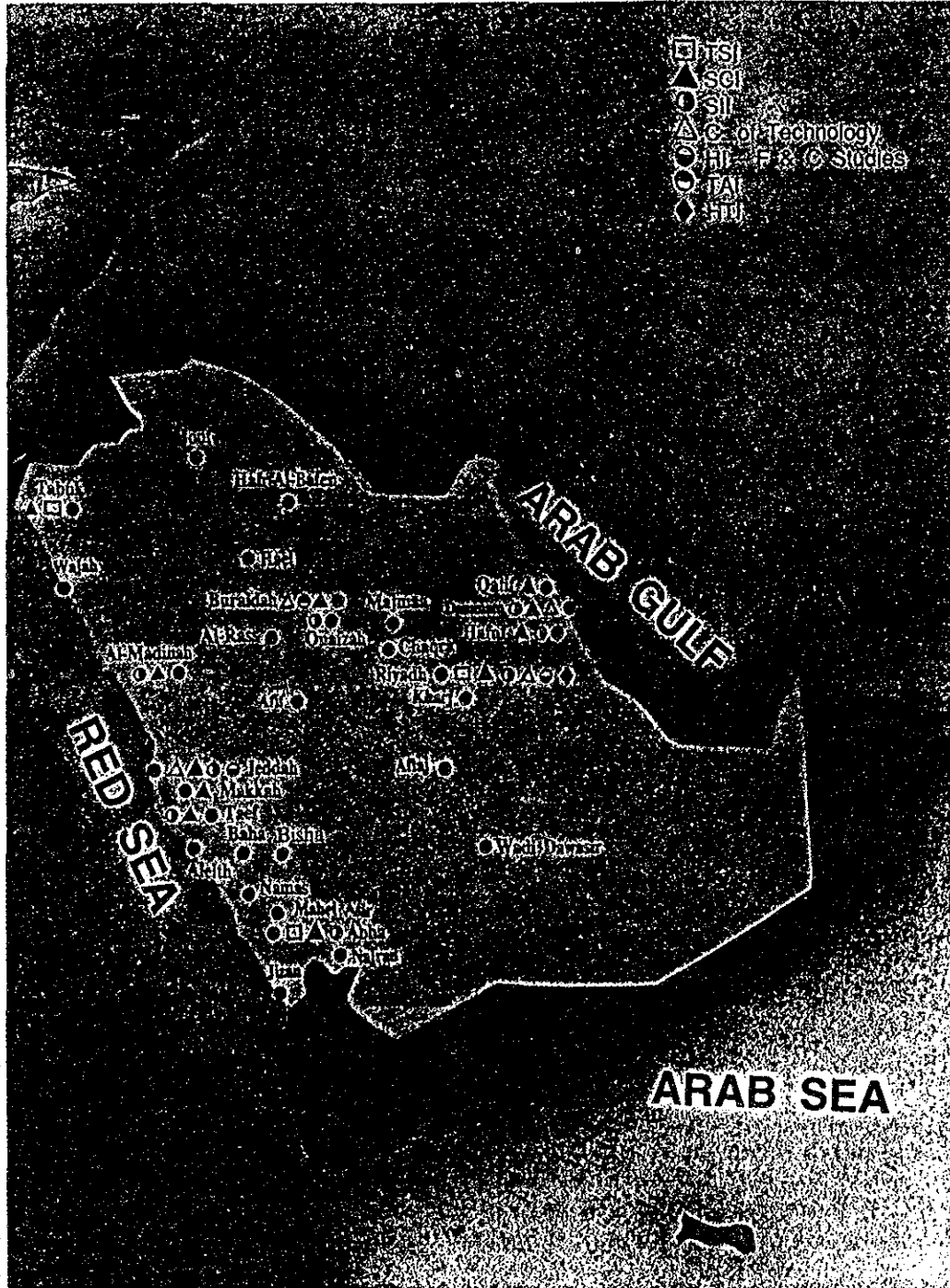
1. Preparing and training the Saudi citizen to perform vocational, and technical work in the various industrial, agricultural, and commercial sectors and also the public services, either through working in private companies or in the government and public sectors, in addition to education and training at schools, centres and institutes, and trying to develop and upgrade the level of OJT technicians and workers in order to provide them with advanced knowledge in the field of science and technology, inside and outside the Kingdom.
2. Helping the young and illiterate people who were unable to continue their academic education, by training them in morning and evening specialized programmes according to their ages, abilities and interests to continue their education or to follow technical work.
3. Preparation of the technical Saudi cadres, like teachers and instructors.
4. Controlling investment in the field of education so as to develop skills and expand the base of technical work in the Kingdom.
5. Creating a unified-scale educational framework to support technical manpower, through coordination with the manpower qualification departments and the Manpower Ministerial Committee.
6. Supporting vocational orientation programmes through the concerned departments to improve **GOTEVOT's** technical and training services and achieve the required goals.
7. Emphasizing researches and studies to solve technical manpower problems in the light of the labor market requirements.



CHAPTER TWO

TECHNICAL EDUCATION

Distribution of GOTEVOT Educational Units (Technical Education)
1400/1408H



Technical Education is GOTEVOT's most important activity, and plays a major role in its programmes, plans and objectives. As with other developing nations which have their own plans & ambitions, this type of education went through different stages of development.

GOTEVOT activities in this field include 3 types of education :

- Technical-Industrial Education (Higher/Secondary).
- Technical Commercial Education (Higher/Secondary).
- Technical Agricultural Education.

Each of these types of education will have a complete separate section in this book, due to their importance in preparing the individual for vocational and technical work, the realization of development plans, the utilization of fast technological development and practical and theoretical training methods, and the encouragement of small national factories. Technical education is supervised by the TED which has several branches:

1. **Industrial Education Department** to supervise technical institutes and secondary industrial institutes.
2. **Commercial Education Department** to supervise commercial secondary institutes.
3. **Agricultural Education Department** to supervise agricultural institutes.
4. **Examinations Department.**
5. **Department of the Colleges of Technology.**
6. **Department of Technical Supervisors Institutes.**