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Subsector Analysis
of
Technical and Vocational Education
Morocco
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Prepared

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SECTION I

PREFACE

The Government of Morocco (GOM) has given increasing attention to the improvement of technical and vocational education. A number of initiatives are already underway in education and other sectors. A new five-year plan, which will appear in 1981, will build upon preliminary planning already accomplished and will lead to new programs and projects in formal and nonformal education and training during the plan's period. Many of these projects will receive technical and financial assistance from international development agencies.

USAID/Morocco, in reviewing its activities in support of education and human resources development, indicated in its 1980 Country Development Strategy Statement (CDSS) the need for an analysis of current and planned developments in technical and vocational education in Morocco. USAID/Morocco had already become involved in a number of important activities in this area and had judged that any future efforts should be considered in terms of a clearer overall perspective of the existing capacity and future policy directions to be taken by the various GOM ministries operating in the area of technical and vocational education.

Through Indefinite Quantity Contract No. AID/SOD/PDC-C-0191, USAID/Morocco contracted with the Academy for Educational Development to undertake a sub-sector analysis of technical and vocational education in Morocco. The Academy, which has undertaken education sector analyses in other countries, was asked to send a technical assistance team to Rabat, Morocco, to review existing data and consult with appropriate Moroccan officials.

The general scope of work contained in the contract specifically called for the contractor to undertake the following:

- consider the effectiveness, ultimately in terms of benefits to those deprived of formal education, of current and planned GOM strategies (both general and specific) for dealing with the country's needs for vocational and technical training;
- determine whether changes in such strategies are recommended, including whether components of that strategy require bolstering;
- examine the appropriateness of (further) support for components of that strategy by international donors and how this should be effected, including alternative approaches; and
- assess the potential impact of improved vocational education activities on productivity and agricultural outputs in particular.

This scope of work was subsequently reviewed, elaborated, and clarified for the team in Rabat following discussions with the Mission director and program and HRD officials during the first 10 days following the team's arrival. A program of work was subsequently arranged reflecting the emphases of USAID/Morocco's analysis and interpretation of the desired scope of work.

To conduct the study, the Academy sent the following technical assistance team to Morocco:

Robert D. Hardy, educational economist and team leader: Dr. Hardy was formerly associated with the Center for Research on Economic Development at the University of Michigan.

William M. Rideout, Jr., skills development specialist: Dr. Rideout is professor of International Development Education at the University of Southern California.

Stephen Anzalone, nonformal education specialist: Mr. Anzalone is a doctoral candidate at the Center for International Education at the University of Massachusetts.

The study team visited Morocco between November 22, 1980, and January 2, 1981. During this period, the team reviewed available documentation, visited schools and training centers, and interviewed appropriate GOM officials, AID and other U.S. government officials, personnel of AID-supported projects, and representatives of other technical assistance agencies. The names of persons interviewed and places visited during the study are listed in Appendix B.

Prior to the team's departure, the final report was discussed in detail, and an outline of what was to be included therein was reviewed and approved by USAID/Morocco officials. This, the final version of that report, follows the format agreed to in Rabat.

The team members would like to express their appreciation to USAID/Morocco for assistance and cooperation, and most especially to Dr. George Corinaldi who, although only just arrived at post to begin his first tour of duty in Morocco, did a superb job of supporting, guiding, and encouraging the team in its efforts. Finally, it must be strongly emphasized that GOM officials were overwhelmingly receptive, interested, committed, and substantially preoccupied with the subject this report is about. Through their kindness, cooperation, and assistance much of the data utilized in this report was made available. Working with such dedicated and knowledgeable officials was a rewarding and memorable experience which the team acknowledges with gratitude.

SECTION II

INTRODUCTION

Educational achievements in Morocco since independence in 1956 have been impressive. The commitment to education was succinctly expressed in Royal Decree #163071, dated November 13, 1963, which states that "education is compulsory for all Moroccan children of both sexes from the ages of 7 to 13." Public education is, consequently, free at all levels and is a right of all Moroccans regardless of sex; the government has worked diligently to translate this policy into a reality for all, not just part, of its citizenry.

In pursuit of this educational goal, Morocco had, by 1977, gross enrollments of: 65 percent of children in primary schools (7-11 years of age) which increased by 7.9 percent in 1977/78 for a total of 1,730,160; 21 percent for lower secondary (12-15 years of age) and 11 percent for upper secondary (16-18 years of age) with an overall increase of 10.9 percent during 1977/78 for a total of 582,197; and 4 percent in higher education (after 18 with the number of years varying according to program). Primary and secondary education together received 17.5 percent of the national budget annually. Justifiably, Moroccans point to their accomplishments in the educational sector with pride.

Moreover, the Moroccan Constitution perceptively linked the commitment to education with employment in Article 13 of the Fundamental Principles: "All citizens have an equal right to education and work." Unfortunately, unemployment in Morocco has been, and continues to be, an extremely serious problem exacerbated by a population growth rate in excess of 3 percent per annum and a population profile showing 54.9 percent below the age of 20. The present rate of unemployment, estimated at 20-25 percent, is compounded by the fact that projections made in 1979, which were based on the last census (conducted in 1971) showed that the economically active population (both sexes, ages 15-64 inclusive) would grow from about 8.5 million in 1979 to roughly 14.7 million in 1993 for an increase of approximately 6.2 million. The Government of Morocco (GOM) is presently committed to a policy of full employment, but has thus far been unable to achieve it. Given the dramatic expansion in the economically active population over the next 14 years by Moroccans already born, unless more successful employment creating approaches are developed, the impact of this unprecedented population bulge will make the maintenance of even the present unemployment rate, which is considered unacceptable, extremely difficult. Furthermore, it is generally agreed by GOM officials that attempts to expand employment opportunities, at least during a considerable portion of the forthcoming five-year plan, will be hampered by the budgetary austerity necessitated by the nation's economic performance in recent years.

In short, while GOM's national educational policies have linked education and employment, development strategies have--in keeping with the practices followed almost worldwide by newly independent nations and supported by many international organizations--increasingly stressed schooling with an academic orientation. This tendency to emphasize academic studies was reinforced by student demonstrations in the mid-1960s, which were fueled by unemployed graduates from the vocational education stream who, although a rapidly decreasing component

of the formal school system, were still unable to find employment following the completion of school programs. Subsequently, the Ministry of Education substantially withdrew from vocational education.

Except for the need to train its own administrative and teaching staff, the Ministry of Education thus was relatively free from responsibility for vocational education and for the employment of school graduates; education in effect was to be considered more in the classical sense--in terms of training an elite and in terms of its contributions to help individual citizens realize their potential, rather than serving as a tool to promote national development by addressing the broader, national needs for training middle-, lower-, as well as higher-level cadres. Obviously individual and national goals are related, but the responsibility for establishing, evaluating, and ensuring the relationship and balance between them was not to be considered as falling within the purview of the formal system. However, the Ministry of Education was later restructured to include a coordinating mechanism (Secrétariat d 'Etat a la Formation des Cadres) for all ministries (approximately 12) involved in offering advanced and post-secondary formal training and education.

Meanwhile, the responsibility for providing vocational training and education was assumed in response to need and on an ad hoc basis by the ministries which would eventually hire a substantial proportion of the graduates from such programs. As these auxiliary systems have grown, there has developed an increasing awareness of the need to regulate, articulate, and evaluate these diverse programs individually and collectively.

The Five Year Development Plan of 1973/77 identified serious educational and training needs. New approaches began to be considered. The plan listed five major education and human resources development activities, one of which called for the establishment of a National Bureau of Literacy within the Ministry of Education with an inter-ministerial commission to coordinate its work. This was not done, and the plan did not meet the target for giving some literacy to approximately 2.5 million illiterates; the need still exists although to a limited degree it was addressed by basic level (Category 4) training programs established by several of the other technical ministries. The remaining four goals from the 1973/77 plan period were acted upon and in spite of accomplishments achieved, the World Bank has identified them as "educational policies for the future." These policies which will again appear in the next five-year plan are as follows:

- the expansion of primary education to provide complete enrollment of the seven-year age group by 1955;
- Arabization--the continued expansion of Arabic as the language of instruction, especially at the secondary level in science and technical courses;
- Moroccanization of the teaching service (this is completed at the primary level and it is planned to have the lower secondary level fully Moroccanized by 1980); and
- the development of secondary and higher education to meet the country's needs for skilled manpower through the expansion of

secondary technical education, higher institutes of technology, and a greater orientation towards science and engineering in the universities.

While it does not yet appear that new strategies have been adopted to accomplish these persistent goals, it is apparent that important progress has been made to plot out carefully considered directions (les grandes lignes) which should lead not only to new strategies for accomplishing these policies within the formal school system (see Section III), but also within the context of an increasingly refined and reconceptualized vocational education stream which will function parallel to, but with linkages with, the formal system (see Section IV). The Government of Morocco will undoubtedly be seeking assistance to accomplish the education and human resources development goals set forth in the forthcoming five-year plan, and it would also appear that USAID/Morocco will be asked to assist in some of these efforts in view of previous AID activities in support of skills training in Morocco (see Section VI).

Given (1) future employment needs, (2) the problems of internal and external efficiency in education, (3) the conviction that large numbers of Moroccans require training, (4) the recognition that training and education do not automatically lead to jobs, and (5) the increasing concern about promoting labor-intensive rather than capital-intensive developmental approaches, it appears that the emphasis GOM is now placing on education and training for employment is both critical and urgent.

The strategies to address the above policies and to accomplish the above goals are now in the process of being formulated.

SECTION III

BACKGROUND OF THE FORMAL EDUCATION SYSTEM

For a technical and vocational education subsector analysis to be in proper perspective, at least brief consideration must be given to its place in the context of the broader educational system.

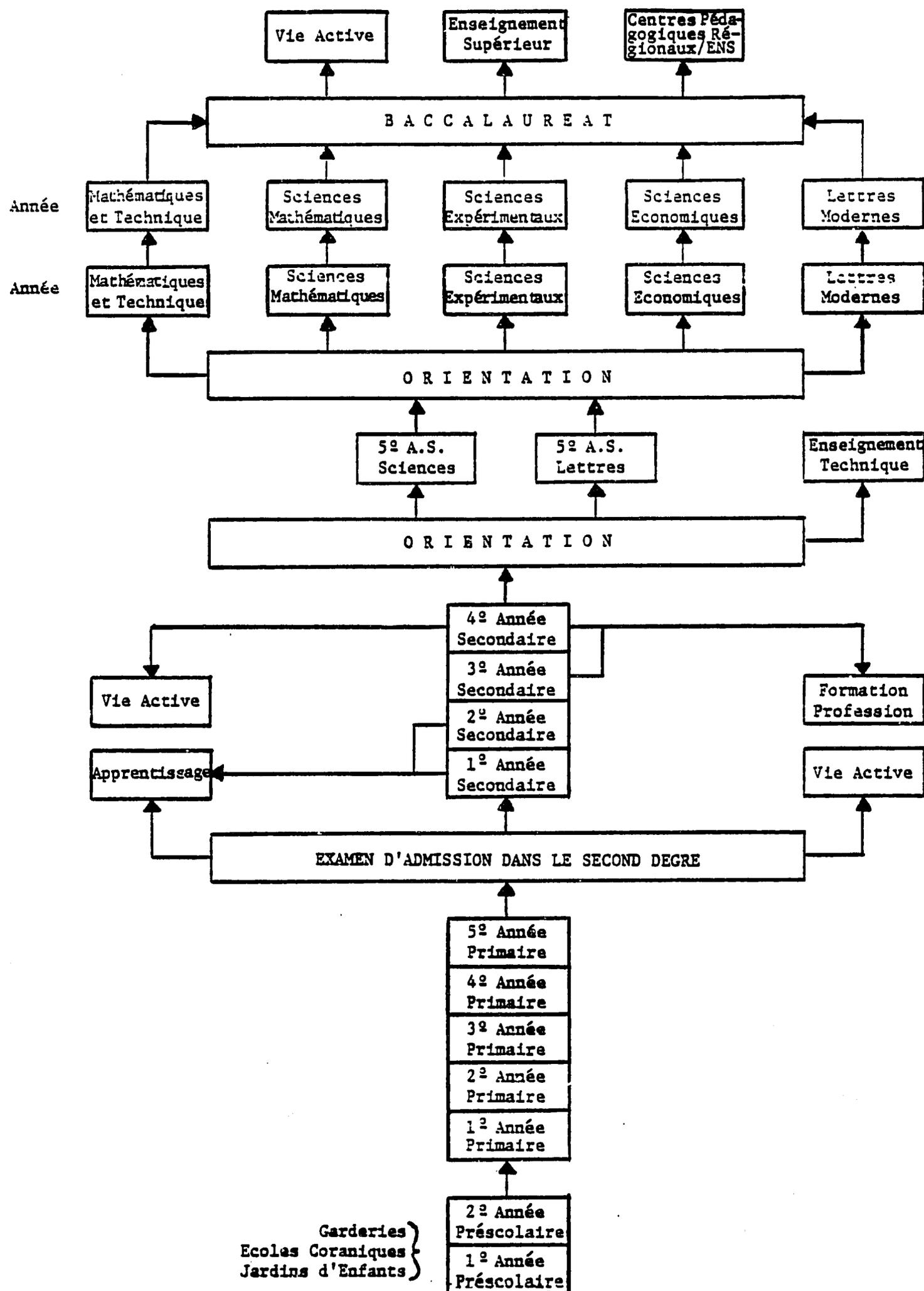
When Morocco became independent from France in 1956, it inherited an educational system of the classical European mode which was not easily redirected toward the tasks of modernization either in the social or in the economic sense. The system presently consists of five years of primary schooling, four years of lower secondary schooling, and three years of upper secondary schooling, followed by program options varying in length of time at the higher education level. Specialization begins at the upper secondary level where students choose among humanities, science, technical subjects, and mathematics and economics. (See table on the following page.)

Higher education is available at four universities, dominated by Mohammed V University in Rabat which has 58 percent of total enrollments. There are also about 20 other post-secondary institutions operated by the technical ministries. While private schooling is available at the primary and secondary levels, it only accounts for 3.8 and 7.6 percent of total enrollments, respectively.

The administration of the educational system has recently been strengthened by the amalgamation of the Ministry of Primary and Secondary Education and the Ministry of Higher Education to form the Ministry of National Education and Training of Cadres (Ministère de l'Education Nationale et de la Formation des Cadres--MENFC). The training of cadres in this context refers to highly specialized and post-secondary training aimed at preparing higher-level personnel for the sponsoring technical ministries concerned (including MENFC)--it is not responsible for meeting national training requirements for middle- and lower-level manpower.

Unfortunately, one of the areas of concern has been the low internal efficiency of the system which has undoubtedly been influenced by the rapid rate of expansion accomplished since independence. Although there has been improvement, repeater rates are still high--31 percent in primary and 16 percent in secondary. Concomitantly success rates in examinations are low with only 33 percent passing the secondary entrance examination and 44 percent receiving the baccalauréat. At the same time, there are severe problems related to equity with those in the urban areas being favored over those in the rural areas. Females constitute about one-third of primary enrollment, and female enrollment decreases at higher academic levels to only 20 percent of university students. While regional disparities exist for both male and female, they are more pronounced for girls as indicated by the fact that 39 percent of primary enrollments in the northwest are girls, while their participation rate decreases to only 19 percent in the south.

Investment in higher education has favored the universities (1977 enrollments were 45,000) rather than the higher institutes of technology (6,000). Furthermore, within the universities, enrollments have grown with little regard to skilled



manpower needs; currently 77 percent are enrolled in law and humanities, compared with 9 percent and 1 percent in science and engineering, respectively. In terms of graduates entering the labor market in the past five years, 61 percent have come from the faculties of law and humanities.

The fourth World Bank loan for education in Morocco (see Section VI) will contribute to the GOM's plans to increase the emphasis on science education in the school while also improving the quality of science education taught. With the establishment of the technical high schools (Lycées Techniques) COM will have the capability to initiate a program of Fundamental Technical Education (Education Technique Fondamentale) at the lower secondary level. At the same time, an effort will also be made to introduce a more effective orientation to science even at the primary-school level so that students are given a chance to acquire useful basic science knowledge before large proportions of them begin to leave the system. This earlier introduction to science is also expected to make those who remain in school more oriented toward scientific and technical careers as well as being more proficient in those subject areas.

In spite of rising levels of investment and enrollment, graduates of higher education have not been qualified for many of the jobs available (4,000 to 5,000 technicians in Morocco are foreigners); surpluses have been produced in non-technical and non-scientific specializations (there are 12,000 students in the Faculty of Law in Rabat in facilities designed for 4,000 and there are approximately 3,000 unemployed university graduates in law as of 1980); and the system has not yet been able to satisfy its own internal needs (foreign teachers in the secondary and technical schools totalled 4,944, while in the universities there were 860 for a combined total of 5,084 during 1979/80 which, nevertheless, represented a substantial drop over the previous academic year). Consequently, problems of internal inefficiency within the system still exist. However, the "crisis" in Morocco's formal education system is and has been most substantially related to its external inefficiency--to that lack of fit between what the schools prepare students to do and what the job market requires--to the increasing recognition that education is not making an adequate contribution either to employment or to employability.

The "crisis in education" which the GOM has begun to elaborate and define was officially recognized at the Ifrane Conference (August, 1980) where the King stressed the need for generalization of primary education and criticized the system's lack of relevance in providing the kinds of skilled manpower Morocco needs and thus employable graduates. As a Moroccan journalist editorialized:

Following independence all (professional) schools, including the Industrial School at Casablanca, closed their doors. It was an error; we only thought about preparing bacheliers and licencies. However, out of 100 students beginning school only 5 succeed. What is important is not the 5 who succeed but the 95 who fail and whom we must recuperate. That is only possible by a qualitative improvement of the educational base in order to avoid losses and then through establishing a systematic practical orientation toward professional schools.

Nevertheless, progressive changes have been occurring in the educational system, and tentative steps have been taken toward implementing a policy to give more responsibility for the management of primary schools to local government authorities in order to ensure closer relationships between primary schools and their environments. While this tendency toward educational reorganization and decentralization is receiving growing consideration, promising innovations have already been attempted with varying results. These include:

- the establishment of school gardens and livestock and poultry raising--activities jointly undertaken by the Ministries of Education and Agriculture which reached a total of 200 schools but subsequently was reduced to 4 following the Ministry of Education's assumption of sole responsibility for managing the project;
- modules introduced to promote scientific and technical instruction accompanied by basic application exercises;
- instruction about the social, economic, and geographic environment of the schools and assisted by local leaders and officials;
- development of activities designed to make the school a center for the promotion of local development efforts and supported by parents and other adults in the area; and
- attempts to cluster social and developmentally oriented activities around the school in order to create a coordinated development-oriented complex.

Activities such as these have extended the roles of teachers and educational administrators by expanding their participation in a more broadly defined human resources development effort. One especially positive effort reported by the Ministry of Education has been that 80 percent of primary and secondary schools have student cooperatives functioning which are in fact student operated and managed canteens which utilize profits to improve educational facilities and programs.

While such undertakings are acknowledged and praised by ministry officials, there has as yet been no systematic evaluation of these different programs to determine their value and generalizability; no analysis about how effective the school decentralization efforts have been in promoting local development; no assessment of the possible participation of school cooperatives in local development, nor any consideration of extending the school cooperative as a developmentally oriented institution which former students could continue to participate in after graduation. As GOM officials have indicated, activities and programs attempted in pursuit of decentralization and development are desperately in need of evaluation and support so that there might be generalization or reformulation, if needed, of those showing promise.

If the presently expressed GOM interest in educational reform of the formal system results in policy decisions more clearly defining the scope and direction of new educational strategies, then the points listed above concerning innovations and evaluations of innovations suggest obvious project and program needs during

the forthcoming five-year plan. Additional efforts which might be considered include the following:

- training teachers and administrators to use the school effectively to assist educating and training the entire population rather than just the children;
- developing incentives for attracting and holding high-quality educators in rural areas;
- developing curricula which reflect the environment and realistic occupational possibilities of the students so that the school experience is beneficial and perhaps profitable at whatever level the student leaves the system;
- developing a retraining infrastructure so that teachers, skilled and semi-skilled workers, and administrators are kept abreast of new trends, techniques, machinery and materials that are important to their respective vocations; and
- generalizing the school system so that inequalities of educational opportunities are overcome--implementation of this effort would require strenuous efforts in rural, especially in low-density population, areas and perhaps greater utilization of media for instruction and training purposes.

SECTION IV

TRAINING AND EMPLOYMENT

A. AN OVERVIEW OF EXISTING CAPABILITIES

In Morocco, as elsewhere, a distinction is made between education and training. Conceptually and in practice, they constitute separate, but overlapping, systems that prepare people for social life and productive activity.

The aims of education are extensive and diffuse. Education seeks cognitive and affective outcomes to equip a person to function intellectually and socially in a future that is largely unknown. It seeks to impart a spectrum of knowledge and skills that are necessary for a variety of occupational activities. The purpose of training, on the other hand, is to prepare a person to perform functions that are largely unknown. In most cases, these functions are directly related to a specific type of productive employment.

Technical education in Morocco is an activity that is undertaken by the formal school system. It has two objectives: developing technical skills needed for future employment and building a technical and scientific basis of knowledge for higher levels of education. The content of vocational training, in Morocco and elsewhere, tends to be more practical and defined with closer reference to employment possibilities and the actual requirements of the workplace. Recognizing the necessary relationship between the systems of education and training is important, and this is something generally well understood in Morocco.

An overview of the preparation offered for different kinds of work in Morocco suggests four categories of professional and vocational training. They are as follows:

Category 1: Higher education and professional training (Enseignement supérieur et formation des cadres)

Category 2: Training of middle-level technicians and supervisors (Formation des cadres moyens)

Category 3: Training of skilled workers (Formation des ouvriers qualifiés et spécialisés)

Category 4: Training of artisans and apprentices (Apprentissage)

Entry into each category of training is determined by previous educational attainments--a prerequisite that is tighter at the higher levels. The content of each category of training contains different proportions of theoretical knowledge to practical training. The outcomes associated with each category of training relate directly to the categories in the structure of employment in the private and public sectors of Moroccan society.

The relationship between education, training, and employment in Morocco and the details of each category of training are shown schematically and discussed in

the following pages.

Entry into a particular level of government service follows a tightly determined system of entry points and diploma equivalences. A civil servant's functions are classified in one of two branches, depending on whether the functions are technical or administrative.

The structure of government employment is as follows:

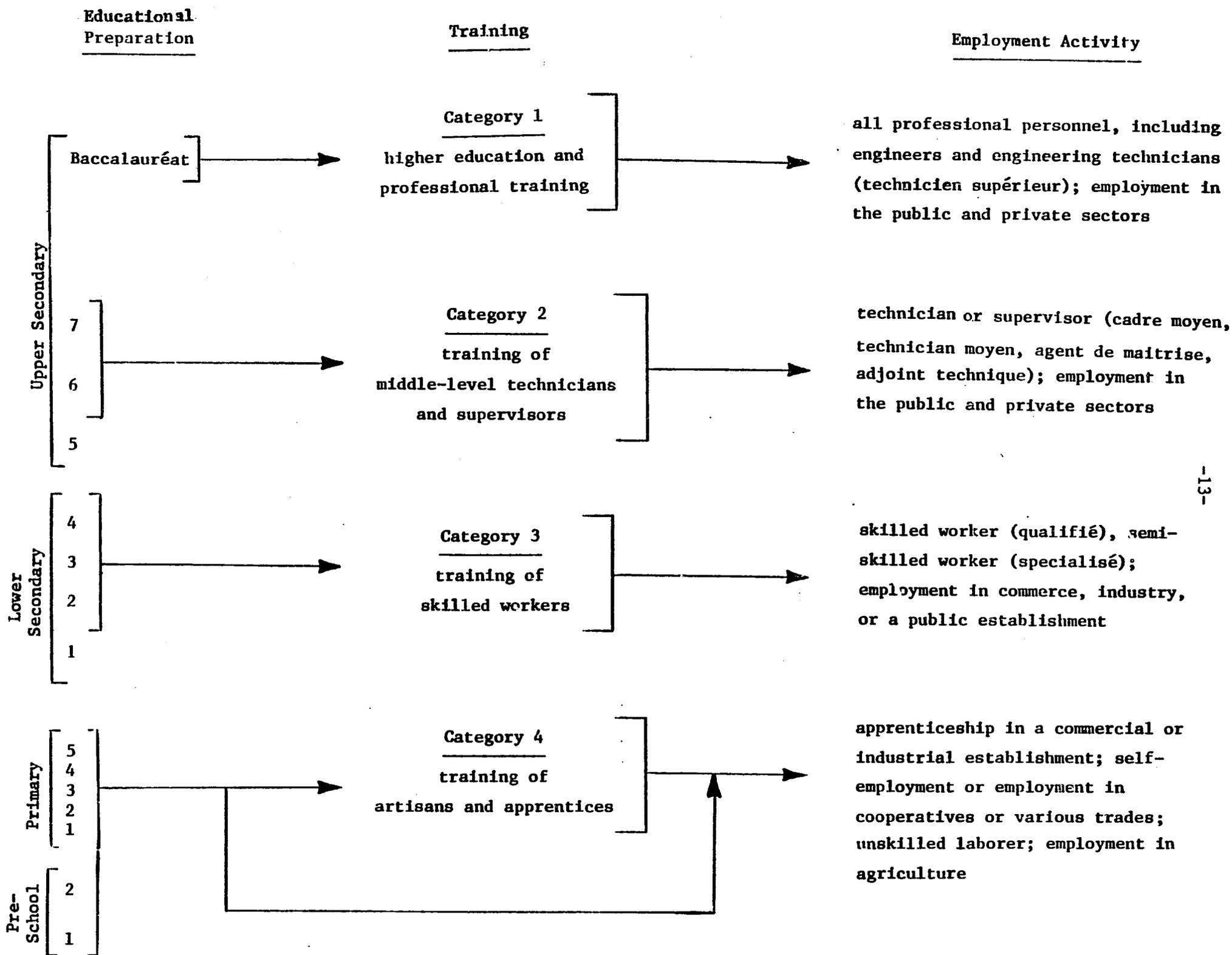
<u>Technical Branch</u>	<u>Grade</u>	<u>Administrative Branch</u>
Research Engineer (<u>ingénieur d' état</u>)	11	Administrator (<u>administrateur</u>)
Applied Engineer (<u>ingénieur d' application</u>)	10	Deputy Administrator (<u>administrateur adjoint</u>)
Specialized Technical Supervisor (<u>adjoint technique spécialisé</u>)	8	Principal Supervisor (<u>rédacteur principal</u>)
Technical Supervisor (<u>adjoint technique</u>)	17	Supervisor (<u>rédacteur</u>)
Technical Assistant* (<u>agent technique</u>)	6*	Technical Assistant (<u>agent technique</u>)
Secretary (<u>secrétaire</u>)	5*	Secretary (<u>secrétaire</u>)
Clerk (<u>agent d' exécution</u>)	4*	Clerk (<u>agent d' exécution</u>)
Service (<u>agent de service</u>)	2*	Service (<u>agent de service</u>)

1. Category 1: Higher Education and Professional Training

In the past, the distinction between the branches of higher education (enseignement supérieur) and professional training (formation des cadres) was more important than it is now. The former branch was the responsibility of the Ministry of National Education, and the latter branch included the various schools and institutes operated by the other ministries for training the technical cadres needed by government and the private sector. In recent years, the distinction became blurred as the responsibility for coordination of these different activities was assigned to a Secrétariat d' Etat in the Ministry of National Education.

Higher education in Morocco includes the faculties of liberal arts, economic and legal studies, science, medicine, and pharmacy of Mohammed V University in

* Note: No differences exist in employment designations for grades 6, 5, 4 and 2.



Rabat, Hassan II University in Casablanca, and Mohammed Ben Abdellah University in Fez, as well as the various faculties of Islamic studies of Quarouiyine University. Professional training is offered in about 30 specialized schools and institutes run by the technical ministeries.

Entry into higher education and professional training is contingent upon successful completion of the baccalauréat examination. Consequently, an estimated 4 percent of each age group has the possibility of preparing for the most desirable jobs in Morocco. Depending on the course of study completed, a graduate either takes a position in the private sector or, more usually, is employed by one of the ministeries for a required period of time.

Higher education and professional training prepares people for the top two echelons of government services. In the technical branch, a design engineer follows a five-year course of study and an applied engineer a four-year course. In the administrative branch, an administrator completes six years of study, and a deputy administrator a four-year course, at the Institut National d'Administration Publique. The specialized technical supervisors (adjoints technique spécialisés et rédacteurs principaux) complete two-year courses of study following completion of the baccalauréat.

Employment possibilities for those completing training at this level have, with a few exceptions, been good. This is in large part because of the absorption of the regular output of the schools and institutions into government employment. Many officials in the GOM believe that a saturation point may soon be reached for employment of higher-level cadres by the ministries. In other sectors, as has been indicated elsewhere in this report, this saturation has already been reached.

2. Category 2: Training of Middle-Level Technicians and Supervisors

Training at this level is intended for those people who complete the seventh year of secondary school (in a few cases, the sixth), but fail to pass the baccalauréat examination. This training, usually lasting two years, leads to employment as a supervisor or technician in the public sector, commerce, or industry. The job designations for this employment in Morocco are alternately: "cadre moyen," "rédacteur," "technicien moyen," "adjoint technique," or "agent de maîtrise," depending upon the functions and the employer.

The functions of a middle-level supervisor in government or in commerce are usually of an administrative nature. The functions of a middle-level technician working in industry require a mixture of knowledge and "know how" to facilitate the production process on the shop floor. This training must give a knowledge of how production is organized, of the raw materials used, and of the technology used to transform materials into a finished product.

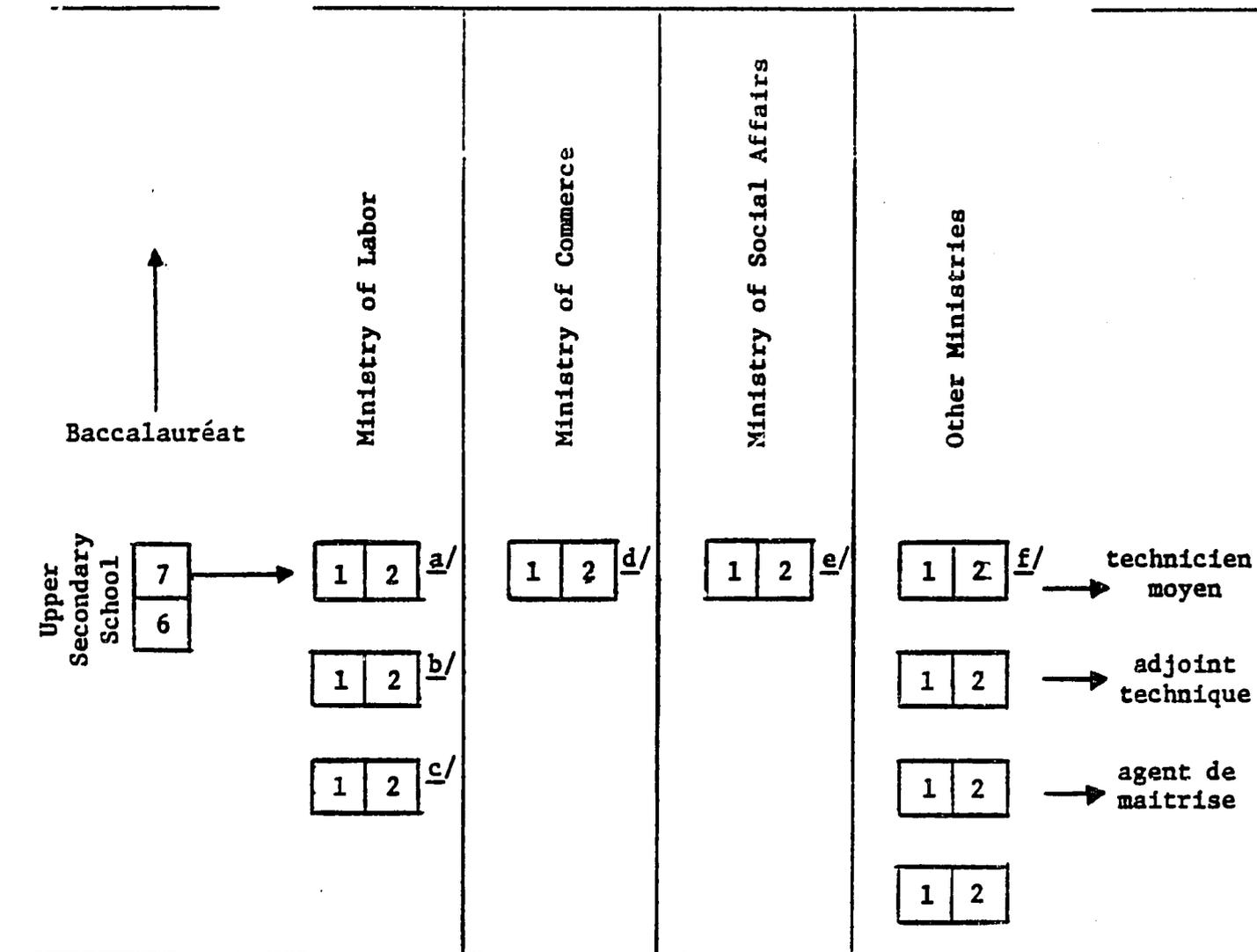
In Morocco, there are about 19 schools and centers run by the various ministries for training at this level. These are summarized schematically on the following page.

Of special interest are those institutions training technicians for employment in industry. This includes the Institut de Formation de Cadres Techniques

Educational Preparation

Middle-Level Training Facilities Operated By Technical Ministries

Employment Designations of Graduates



- a. 14 new Institutes of Applied Technology
- b. Institut National de Formation de Cadres Technique
- c. other
- d. 3 new Training Centres
- e. National Leather and Textile Institute (INCT)

- f. approximately 19 schools and training centers including those run by the ministries of:
 - Administrative Affairs
 - Agriculture
 - Energy and Mines
 - Equipment
 - Planning
 - Transportation
 - Interior
 - Public Health
 - Post and Telecommunications
 - Tourism
 - Environment

(INCFT) operated by the Office of Vocational Training and Promotion of Labor (OFPPT) of the Ministry of Labor, and the National Leather and Textile Institute (INCT) run by the Ministry of Social Affairs and Handicrafts. These institutions supply about 100 to 200 technicians each year--a number far below Morocco's mid-level manpower needs. Consequently, the Ministry of Labor intends to establish 14 Institutes of Applied Technology. The projected capacity of these establishments will increase the annual output of industrial technicians to about 800.

A careful study undertaken for the Ministry of Commerce and Industry by the French Centre d'Etudes et de Réalisation pour l'Education Permanente (CEREP) and a Moroccan affiliate (SCET) calculates that this yearly output will still be insufficient to meet the needs of industry. The CEREP-SCET study estimates that 1,700 technicians will be required annually between 1980 and 1985. Consequently, the Ministry of Commerce and Industry intends to build three Training Centers to provide training for an annual output of some 900 technicians in the fields of mechanics, electricity, food processing, leather, textiles, and industrial chemistry. The first output of these centers is not expected until 1985.

Training at this level provides the technical teachers for vocational training programs for workers and artisans. It also provides preparation for primary-school teachers.

Although current initiatives being taken by GOM ministries appear to satisfy the requirements of industry for technicians at this level, the number of new training places being established is far from the number of potential applicants. The CEREP-SCET study points out that for the year 1978-79, there were 8,166 young people dropping out of school after completing the seventh year of secondary school. Only some 3,015 of these young people were recruited to available training programs run by the various ministries.

Proposals for the forthcoming five-year plan would increase training places available by up to 4,000 by 1986. This increase would significantly reduce possibilities of educational wastage at the all-but-baccalauréat level.

3. Category 3: Training of Skilled Workers

The training of skilled workers needed for commerce, industry, and the public sector in Morocco provides opportunities for young people having to find employment after completing the second to fifth years of secondary school. This amount of general education is judged to be necessary to profit from training at this level, which involves an appropriate split between practical work and technical work. In most cases, entry into a two-year training course after the fourth and fifth years of secondary school leads to employment as a skilled worker (agent qualifié). Entry into a one-year training course after the second or third year of secondary school leads to employment as a semi-skilled worker (agent spécialisé).

Several ministries have programs for training at this level. A breakdown of the number of people trained during the period 1978-80 shows the following average annual outputs:

<u>Ministry</u>	<u>Skilled Workers</u>	<u>Semi-Skilled Workers</u>
Agriculture	278	-
Post and Telecommunications	204	246
Energy and Mines	565	1,591
Equipment	407	-
Administrative Affairs	16	57
Commerce and Industry	623	-
Labor	2,096	2,516
Transportation	105	163
Youth and Sports	227	-
Tourism	172	73
Education	179	-
Social Affairs and Handicrafts	58	-
Public Health	1,468	-
Justice	286	-
Average yearly output (1978-80) Totals*	<u>6,686</u>	<u>5,646</u>

Of special importance at this level are the 33 Centres de Formation et Qualification Professionnelle (CFQP) operated by the Ministry of Labor. These vocational training centers offer training in a variety of industrial and commercial skills and are the main sources of skilled and semi-skilled labor for Moroccan industry. Their output results in about 2,000 new skilled workers each year--90 percent of whom find employment in both industry and commerce. This number will not be adequate if Morocco is to sustain a modest rate of growth in the years ahead.

The CEREP-SCET study estimates that a 5 percent annual rate of growth during the next several years would result in an average yearly increase of 20,000 industrial jobs in establishments of 10 or more employees. Given the present structure of industrial establishments, where, according to the CEREP-SCET study, the proportion of all employees in different job categories is: skilled, 16 percent; semi-skilled, 8 percent; and unskilled, 58 percent; a 5 percent rate of growth would require an average of 3,200 new skilled workers each year for larger industrial establishments alone. The present training outputs at this

* Source: Ministry of Labor data.

level would not allow for any improvement in the existing ratio of skilled to unskilled workers in either existing or new establishments, nor would it be able to meet growth demands in smaller industrial establishments or in commerce.

The insufficient capacity of training at this level can be seen from another perspective as well. The preceding chart shows that the capacity for training skilled and semi-skilled workers allows for an annual absorption of about 12,000 new people. This is far from being sufficient to meet the potential demand of school leavers at this level. In 1979-80, enrollment in the first year of secondary school totalled some 139,000 students. In the fifth year of secondary schools enrollment totalled 53,000. The differences in enrollment would mean a potential demand of approximately 80,000 school leavers at this level for about 12,000 available training places. It is not clear where the remaining 58,000 school leavers find employment. What is clear is that it would be socially productive to intensify training activities at this level with a close eye on employment possibilities in industry, commerce, and even for temporary work in other countries.

4. Category 4: Training of Artisans and Apprentices

In 1979-80, about 485,000 Moroccan children were enrolled in the first year of primary school. During the same year, about 139,000 young people were enrolled in the first year of secondary school. Despite the fact that these enrollments represent different age cohorts, it is reasonably accurate to conclude that each year there are about 350,000 young Moroccans who drop out of school before reaching the secondary level. These school leavers enter the labor force with, in most cases, low (if any) levels of literacy and numeracy, little orientation to the world of work, and almost no training in a skill qualifying them for employment. Both the magnitude and the character of the training agenda at this level are enormous and urgent.

The training offered these school leavers is intended to prepare them to practice a trade in traditional handicrafts in areas such as weaving, carpentry, leather work, metal work, tailoring, and embroidery; or in modern service activities like hairdressing, welding, mechanics, and electricity. Most programs have no educational prerequisite for entry, although many of them include basic education components designed to strengthen levels of literacy and numeracy. The content of these skills-training programs in Morocco is almost entirely practical. The training programs lead to employment as an apprentice in a workshop or industry, to employment as an artisan at home, in a cooperative, or in a small commercial establishment, to improved income opportunities in agriculture, to self-employment in a trade, or to employment as unskilled labor in industry, commerce, or the public sector.

The pluralistic institutional training fabric in Morocco is especially visible at this level. In some instances, a vocational training component has been added on to programs that were designed to serve, and still serve, the wider function of socializing or initiating the disadvantaged into Moroccan society. Different ministries approach this socialization function from their own perspectives; however, the vocational training offered by the various ministries are often in the same skills. Questions have been raised about a possible duplication of effort and the likely consequences of inter-ministerial competition for resources to offer the same kinds of training.

Since the plurality of vocational training programs at this level are determined by the spectrum of ministerial political differences, the question of duplication (double emploi) cannot readily be resolved simply by recommending administrative coordination and cooperation. Present realities in Morocco require that an educational planner accept the plurality factor as given. What is more, it is not clear that this plurality is necessarily inefficient or undesirable. That different programs often offer training in the same skills is better explained by the cost and marketability of these skills and lack of other employment alternatives at this level rather than by unchecked inter-ministerial rivalry. More to the point is the question of whether competition is necessarily a bad thing.

Actually, the question of duplication in skills training at this level seems to be irrelevant. Training capacity is so small in relation to needs, and so much social demand for training goes unsatisfied that any negative consequences of duplication will not be significant for some time to come.

A review of existing training possibilities for employment as an artisan or apprentice shows the following activities of different ministries.

- Ministry of Social Affairs and Handicrafts (MASA)

MASA operates about 900 centers throughout Morocco offering social services in areas such as health, education, nutrition, and vocational education. MASA programs are aimed at improving the welfare of the "certified" poor.

MASA's two major vocational training programs at this level are its Centres Educatif du Travail (CET), commonly referred to as Ouvroirs, and the Centres de Formation Professionnelle (CFP). The former program is for young women, the latter for young men.

There are about 200 CETs throughout Morocco serving about 55,000 young women between the ages of 8 and 22. The programs are managed regionally and offer training with content divided between crafts and general education (literacy, numeracy, Islamic history, and civics). The course in the Ouvroirs lasts two years, and instruction is provided by about 2,000 (relatively untrained) Monitrices.

Upon completion of training in a CET, many of the young women find employment in MASA cooperatives, some of which are located adjacent to the Ouvroirs. These cooperatives produce items for sale, especially embroidery, and usually this production has been commissioned in advance.

A new project, which will be assisted by USAID, will establish five new CETs that will introduce diversified skills, including poultry raising, carpentry, cosmetology, nursery assistants, pattern-making, and agricultural processing. This same project will establish an institute in Tangier that will offer three levels of training for social service employees. It will also include staff development courses (recyclage) for the CET Monitrices.

The CFPs operated by MASA offer training for boys in basic work skills. There are presently about 18 CFPs throughout Morocco. With assistance from USAID and the U.S. Peace Corps, the number will be expanded in the years ahead. Skills training is offered in carpentry, mechanics, metal working, plumbing, electricity, welding, and tailoring. Courses last for one or two years, depending on the center and the kinds of training offered. CFPs are located mostly in rural areas and are run with local support. The capacity of the CFPs to accept new trainees is small. In the next two years, the 13 CFPs assisted by the Peace Corps will be able to provide training for only about 2,000 boys. Employment for those completing the nonformal training courses offered at the CFPs is often problematic and discussed later in this report.

• Ministry of Youth and Sports

Two programs of the Ministry of Youth and Sports are important sources of lower-level skills training in Morocco. The first of these is the Foyers Féminins program for young Moroccan women. The second one is the Centres d'Observation et Rééducation (COR) for young Moroccans who have committed minor infractions of the law.

The Foyers Féminins provide training to about 45,000 literate and semi-literate young women who follow a three-year course in one of the 336 women's centers throughout Morocco. The traditional orientation of training offered by the Foyers has been in general education and home economics, with some attention given to handicrafts. Instruction is provided by a corps of 1,100 Monitrices, who are recruited after completion of the fourth year of secondary school and trained at the Institut Royale de la Formation des Monitrices. While retaining the traditional orientation (mission classique) of the Foyers, Ministry of Youth and Sports is undertaking to develop, with assistance from USAID, skills training for employment in traditional handicrafts and in modern services like hair-dressing, typing, and nursery assistants.

The CORs operated by the Ministry of Youth and Sports are intended to facilitate the reinsertion into society of young people who have committed minor infractions. Part of this mission is to orient young people to work in a particular sector. The Ministry is developing the vocational training capabilities of the CORs. There are two types of training provided: the first is a course in basic education for those with deficient educational attainments and the second type is vocational training in skills like carpentry and mechanics for those young people with an adequate level of general education. The latter type of COR is being developed with assistance from the Ministry of Labor on the skills instruction side.

• The Ministry of Agriculture and Agrarian Reform

The Ministry of Agriculture offers two approaches to lower-level agricultural training. The first approach is through extension work. This training involves a host of activities, including demonstrations, meetings, radio programs, and visits to research stations. In the less prosperous, non-irrigated agricultural zones, extension courses are offered through the Centres des Travaux. There are between five and ten such centers in each province.

This number is to be increased. The training that is provided through extension is hampered by the limited number of extension workers available to work with farmers. The present ratio of 1:750 does not permit farmers much contact with extension workers. The Ministry of Agriculture is addressing this problem by attempting to increase the number of extension workers and grouping the farmers together in cooperatives for purposes of sharing equipment as well as training. The second initiative of the Ministry of Agriculture is its schools for the sons of farmers, the Centres Régionaux d'Animation et de Formation Agricole (CRAFA). The Ministry operates 10 of these centers, which offer courses which last from one to three months on different aspects of agriculture. About 9,000 young Moroccans have received training in CRAFA courses. The Ministry admits that these training courses pose special problems. Care must be taken not to break relations between the young person and his family as a result of learning new agricultural practices. There has also been a tendency for young people to drift toward the cities following completion of their courses.

Officials in the Ministry are frank in conceding that opportunities for training in agriculture at this level are far from sufficient.

- The Ministry of Labor and Promotion of Employment

The Ministry of Labor is also involved in training at this level. Besides numerous short-term courses, it runs centers for training in occupations such as tailoring and construction work.

Two other training activities being developed by the Ministry of Labor are noteworthy, although strictly speaking they do not belong at this level, since educational entry levels may, in many cases, be higher than the usual programs for artisans and apprentices. The Ministry is experimenting with pilot mobile-training units that are designed to travel to hard-to-reach rural areas. The intention is to provide training of up to one or two years' duration aimed at developing polyvalent skills in mechanics, building, repair, and maintenance-- all of which are missing in most rural settings. The Ministry hopes to generalize this experience and increase the number of mobile units in the years ahead. The Ministry also wishes to develop short-term training for young people through local development projects (Chantiers de Formation). In 1981, the number of places in the Ministry of Labor's apprenticeship training programs is expected to reach 35,000.

In brief, Morocco has undertaken a variety of initiatives under the aegis of different ministries to provide skills training for the vast majority of people who do not reach secondary school. The capacity of these programs is woefully inadequate; demand for places, in some cases, is five times actual capacity. Special attention is needed to increase training opportunities in rural areas. Existing and new programs could greatly benefit from a more systematic understanding of the relationship of training to employment at this level.

B. FUTURE POLICY DIRECTIONS FOR VOCATIONAL EDUCATION

Although Morocco has not articulated a formal strategy with respect to the future development of technical education and vocational training, the policy

directions to be followed by the GOM have been clearly established. The shape of things to come is spelled out in the forthcoming five-year plan (1981-86).

A most important development occurring during the last plan period was the establishment of the Permanent Commission for Training and Employment (Commission Permanente de la Formation et de l'Emploi). The need for such a mechanism within the GOM to coordinate vocational training has been repeatedly reaffirmed since the 1960s. This body, composed of about 50 people from appropriate ministries, began meeting in 1980. It meets once every two months, and sub-commissions meet twice a month. The Ministry of Labor provides the ongoing secretariat functions for the commission. Together with its training activities, the special responsibility of the Ministry of Labor in the commission's mandate makes it a pivotal point for the conception, coordination, and implementation of vocational education in Morocco.

All indications point to the viability of the commission's role as well as to a satisfactory degree of inter-ministerial cooperation. Evidence of the emerging cooperation at the policy level can be found in the Ministry of Labor's proposals for the new five-year plan (Rapport de Synthese de la Commission Nationale de l'Emploi, de la Promotion Nationale et de la Formation Professionnelle). The objectives presented, representing a consensus of the technical ministries, have an inter-sectoral flavor and show an analytical awareness of the close relationship between education, training, and employment. In these proposals, vocational training is not treated as an item apart but rather conceived within the context of overall developmental needs in the human resources sector including cooperation and articulation with the formal education system (see below).

Antecedent to the plans for vocational training are the policy directions for the promotion of employment in Morocco. The treatment of this issue in the new plan shows a sense of continuity with the last one. The relevant section of the new plan observes that the present rate of unemployment is unacceptable and that more concerted actions are needed to increase employment. Specific measures proposed include:

- greater reliance on labor-intensive techniques in industry and agriculture;
- improving services in rural areas to stem migration to the cities;
- improving the conditions of employment in the handicrafts sector through development of cooperatives, better production techniques, improved credit, and better technical supervision;
- a greater mobilization of unemployed manpower for work relief projects in road construction and reforestation (Promotion Nationale); employment and training of young people in local development projects (Chantiers de Formation);
- increased assistance to the cooperative movement; and
- development of industrial production of goods for local consumption and exportation together with a geographic decentralization of industry.

On the basis of these concerns for promoting employment, the new five-year plan turns to consideration of vocational training. There are at least five clusters of objectives that deserve mention here.

1. Relationship to Education

The coming directions for vocational training are elaborated in terms of a global reform of education now being contemplated in Morocco. First, this anticipates cooperation to stimulate a greater motivation and earlier orientation of students to technical careers. The Ministry of National Education is called upon to establish units in each primary and secondary school to provide information to students on appropriate vocational training possibilities. Secondly, the plan recognizes the need for an improvement in the quality of instruction at the primary and secondary levels so that those entering vocational training will do so with a more solid practical, technical, and scientific base for participation in training.

2. An Increase in Training Capacity

The plan will propose a modest augmentation of training places at different levels. Although it must be kept in mind that by the time of final approval of the plan only part of the number of projects being proposed by the technical ministries are likely to be retained. The proposed increase in training places between 1981 and 1985 can be summarized by ministry as follows:

Mid-Level Technicians and Supervisors

Labor	1,700
Commerce and Industry	288
Social Affairs and Handicrafts	360
Energy and Mines	100
Agriculture	400
Equipment	378
Post and Telecommunications	100
Administrative Affaires	1,000

Skilled Workers

Labor	1,000
Equipment	1,296
Public Health	200
Post and Telecommunications	87
Energy and Mines	-5

Semi-Skilled Workers

Labor	-840
Tourism	422
Post and Telecommunications	100
Energy and Mines	-3

Artisans and Apprentices

Labor	2,000
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Social Affairs and Handicrafts	9,600
Youth and Sports	(figures not listed)

This breakdown shows a modest increase in the training apparatus foreseen in the years ahead. That only about two-thirds of these preliminary projections will be included in the final plan is attributed to lack of funds and not to lack of recognition of training needs.

3. Vocational Instructors

The plan anticipates an improved supply of vocational instructors with the establishment of the Higher Schools of Technology and the Institutes of Applied Technology. Measures will be proposed relating to improved conditions of employment for these instructors.

4. Harmonization of Training

The plan foresees a number of administrative and legislative proposals for a greater harmonization of entry into, and exit from, training programs. These will relate to such things as the replacement of inappropriate examinations (concours) with tests designed to better tap aptitudes for vocational training, establishing equivalences of diplomas, and harmonizing conditions of hiring.

5. Greater Coherence Between Education and Training Streams

The most striking aspect of the future directions for vocational training in Morocco are the plans for developing a greater coherence between the systems of technical education and vocational training.

The Ministry of Labor, in cooperation and consultation with the other technical ministries, and in conjunction with the Ministry of National Education, envisions steps to make progression within and between the branches of technical education and vocational training more systematic, efficient, and equitable. A coherent series of links, or passarelles, has been proposed for the future. The passarelles would make it possible for the most capable students in programs of vocational training to advance to higher levels of training and even, in some cases, to reenter the formal education system. Thus, young people having had to abandon school for whatever reason would not be locked into the social structure at a particular level of training and employment because they lacked the educational prerequisites for the next level of training. A diagram of the proposed system is presented on the following pages.

An example shows how the system would work. A student leaving school after three years of secondary school and admitted to a one-year course in a Centre de Formation et Qualification Professionnelle (CFQP) could, if successful, gain admission to the second year at the CFQP for training to become a skilled worker. If the trainee is again successful, admission could be gained to an Institute of Applied Technology. Success in this two-year course could lead to admission to the two-year program at one of the new Higher Schools of Technology. Consequently, for the most able trainees in vocational training, the proposed system of passarelles would constitute a route of advancement from Category 3 to Category 1 training.

It is also contemplated that passarelles could be established between the Higher Schools of Technology and the new Institute of Applied Engineering. Since at present, it is already possible for an applied engineer to gain admission by examination to programs for training to become a design engineer, the system of passarelles would be complete at the top of the system. With respect to completing the bottom part of the system, one more passarelle would need to be established--between the level of apprenticeship training and training in a CFQP (i.e., between Category 4 and Category 3). Such a passarelle is under consideration for the future. The Ministry of Labor is aware of the difficulties in establishing a passarelle between these levels owing to the educational deficits of those people in apprenticeship training.

A considerable amount of effort will be required to bring such a system of passarelles into practice. Nonetheless, it is a unique and ambitious endeavor that will help make vocational training in Morocco legitimate in its own right with opportunities for advancement, and not an activity that is contemplated only in relation to failure in school--a failure which has heretofore condemned the individual to a permanent occupational category.

SECTION V

VOCATIONAL EDUCATION AND PRODUCTIVITY

In considering a vocational education subsector analysis in Morocco, it may be prudent to caution about the obvious--that an economic analysis in and of itself has limitations as an approach to decision-making in the educational sector. Cognizant of the World Bank's warning that "the inadequacy of basic data in Morocco has made estimates of future technical manpower needs difficult and figures should be regarded only as general orders of magnitude," it should be noted that assessments of the contributions which vocational and technical education in Morocco make to development have essentially been based either (1) on the degree to which projected growth rates derived from the development plans have been accomplished, or (2) on the accomplishment of enrollment increases targeted for the educational and training systems (the assumption being that the increased manpower available was reaching the proper economic development sectors).*

Pursuant to this approach, estimated manpower needs have, according to GOM officials, been based on assessments submitted by each ministry which, after being modified and integrated into national plans, have become the basis for linear projections of annual and total projected manpower needs. These have resulted in the following estimates: The annual requirements for engineers in Morocco between 1977-90 will be 1,740 per annum of which 580 will be ingénieurs d'état (five-year course) and 1,160 ingénieurs d'application (four-year course), compared with a current output for both categories of 387 (excluding Moroccan graduates from overseas institutions). In 1977, there were 773 Moroccans studying engineering and technical courses overseas. Requirements for higher engineering technicians in the same period are estimated at 4,400 per annum, while outputs were only 407 in 1977. Shortages of high-level manpower have to date been alleviated by the employment of large numbers of expatriates, but this constitutes merely a temporary and costly expedient and should not obscure the urgent need to develop local sources of comparable manpower.

Middle-level technical manpower requirements are expected to average 11,700 industrial technicians per annum and 13,500 commercial technicians. Outputs in these categories in 1977 were 1,499 and 3,906, respectively. For other middle- and lower-skill levels, the training infrastructure is considered inadequate at present, with only some 20,000 enrolled trainees to respond to the needs for craftsmen, rural extension agents, health auxiliaries, and hotel workers. The output of the training system is currently meeting only about one-third of estimated requirements for these types of skilled manpower. In addition, vocational training, at these levels especially, suffers qualitative deficiencies resulting from a shortage of trained instructors and lack of equipment and teaching aids. Particular attention is required in order to expand pre-employment training for the unskilled and poorly educated because of its impact on poverty groups.

At the lowest level, pre-employment training in six-month courses enrolls 3,600 trainees. These courses provide the first opportunity for training to

* World Bank Report #2094, March 19, 1979.

those who may not have completed primary schooling, but since even the simplest formal courses require at least some competencies normally derived from primary education, 35 percent of the age group who did not attend primary school, together with older illiterates, are excluded entirely from other training opportunities. The need for literacy programs and expanded low-level skills training is a compelling priority.

Problems inherent in making estimates based on relatively "soft data" are further aggravated by inadequate information on the quality and relevance of training, on placement, and on subsequent productivity--all of which have, in general, been assumed to be positive. Furthermore, projected manpower needs are not the equivalent of actual job availability--a need which leads to training but does not result in employment creates, as one Moroccan official described, trained unemployed (formation des chomeurs).

Simply trying to determine the economic relationship between vocational training and productivity remains, unfortunately, speculative. Experience in other developing countries has not made it possible for an educational planner to presume that a successful manpower planning/vocational training strategy necessarily leads to growth in productivity and national income. Too much depends on decisions and outcomes over which the educational planner has little control. The possible impact of improved vocational training in Morocco will relate to such things as the market for its minerals, agricultural products, and manufactured goods overseas; to decisions about how production is to be organized; to decisions about the balance of employment in the economy, whether improved skills will be used in more, rather than less productive sectors of society; to non-economic, social and ascriptive conditions affecting entry and advancement in employment.

Even at a more micro-level, the educational planner is at a loss in trying to demonstrate how increases in productivity are explained by improvements in vocational training. It is difficult to determine what part of the increase might be assigned to factors other than education and training in explaining increases in labor's productivity. In fact, one cannot determine without qualifications the respective contributions to vocational training, to workers' general education levels, or to skills which have been gained even from on-the-job experiences.

It is also clear that any potential increase in productivity through improved vocational training must be seen in a social as well as an economic sense (yet data on social benefits are even more difficult to obtain than those on economic benefits). The improvement of vocational training, especially in the case of basic skills, is likely to have important benefits that will not show up in national income accounts. The vocational training programs in Morocco are aimed at more than just employment. Especially at the lower levels, they try to initiate the disadvantaged into the social life of the country and try to improve a whole range of skills important for family life, as well as to provide a second (albeit limited) opportunity to acquire the general basic education essential to social participation and to subsequent training for employment. An assessment of the relationship of improved vocational training to productivity must not discount these non-income benefits. In Morocco, the returns from such training, both for the individual and the nation, are potentially far-reaching.

The "lack of data barrier" is a perennial problem in analyzing the

relationship between vocational education and productivity. It is interesting to note that a USAID-sponsored study conducted in 1971 by Abt Associates, Inc., pointed to the need for a study to determine middle-management training needs in Morocco and asserted that the major reasons why this was not happening related to: "(1) ...a tendency to believe that since the country has such tremendous needs ...there is no need to discriminate between them, (2) difficulties of data collection (which) have always loomed so large that individuals were convinced that many analytic techniques for needs assessment were invalidated, and (3) (the fact that) a needs assessment means probing for objectives which has often been a task that both national and international donors (have) found ...easier to avoid." To date such a study has not been conducted, and while such information would undoubtedly be useful, GOM has obviously made significant progress in its developmental efforts without it.

Furthermore, it is questionable whether any one such study would be enough-- whether it would be universally accepted and unchallenged. A series of relevant studies are, in fact, underway or promised (see Appendix D), but what in the long run will be more important will be the establishment of an ongoing system and process (1) for obtaining the information needed for making policy and strategy decisions which will provide a basis for effective formative, as well as summative, evaluations and (2) for utilizing the findings effectively in the planning and implementation process.

In summary, questions focusing only on whether improvements in technical education and vocational training in a country like Morocco are likely to lead to increases in productivity in general and in agriculture in particular cannot be answered with assurance by the educational planner. If such an analysis were to be done, it would have to be within the broader framework of the entire education sector (which has not yet happened) and within the national economic development and employment contexts. In addition, the unavailability of some kinds of data would make generalizing even about non-monetary assessments risky. In short, in addition to serious questions still raised about the methodological "state of the art" for measuring productivity increases on the basis of educational factors alone, such efforts become even more problematic when a sophisticated data base is lacking.

Nevertheless, development in Morocco has not been, and should not be, blocked by unavailable or incomplete data. Experience, insight, and on-the-spot analyses of needs for technically trained manpower can provide the basis for developmental decision-making, and these, combined with the information base available, have been reflected in project justifications by national, bilateral, and multilateral officials: "...lack of basic data makes estimates of future technical manpower needs difficult (but) it is nevertheless clear that requirements for technicians and engineers will outstrip the training capacity of local institutions in the foreseeable future" (World Bank Report, 1979).

The Bank statement coincides with a generally pervasive conviction by Moroccan officials that skills training and development are critically needed and potentially profitable for the people and the nation. As was indicated in Section IV, the unlimited potential felt to exist for handicraft training seems to be justified on the one hand by the numbers employed in producing products ordered in advance and on the other hand by the promise of successfully entering the international market, which has been encouraged not only by a strong tourist market within Morocco, but also by such things as the conclusion of a sizable order placed by a French international department store for Moroccan

handicrafts.

Whether such data may be considered "soft" or not, Moroccan officials interviewed repeated almost unanimously a theme proclaiming emphatically the nation's critical manpower needs:

"it is evident"... "there is no doubt about it...", "the demand for training cannot be met... classes, courses, and programs are almost immediately oversubscribed..."
"the needs in the construction industry are immense..."
"students leave some training programs before they are finished because they receive such attractive job offers..."
"the reason some services in Morocco are so expensive is because there are not enough trained technicians to meet the demand..." "the market cannot absorb all the artisan products that are produced..." etc.

There also seems to be a general feeling that since the formal education system has essentially been out of the vocational education business at the sub-category I level for over 15 years, and since national development during that period has scored significant gains, it therefore stands to reason that vocational education needs must now be formidable.

The need to link training and employment, however, has also been identified as an area of concern. For instance, some instructors interviewed in vocational training programs were extremely worried about the employment prospects of their graduates and many of the instructors were doing their best to find jobs for their former students. For some graduates, employment was found only through the personal intervention of instructors. Moreover, some instructors claimed that they knew students who had completed training programs several months before but had still not found work.

When questions about employment for graduates of training programs were subsequently raised with Moroccan officials, they explained that factors such as the time lag between course completion and employment were in part organizational in nature--a system needed to be established to put the trainees and the potential employers into closer contact with each other; that there was often an unwillingness on the part of graduates to go where the jobs were since they preferred to remain in more desirable urban areas, and that there was often a lack of initiative on the part of graduates to seek jobs aggressively or to accept those jobs which did not meet their employment expectations.

In spite of these employment concerns, teachers confirmed that when new training programs were organized, even in areas where employment had been difficult to obtain, such as in auto-mechanics, the courses quickly filled. In the Ouvrier classes there were often five women applying for each training place available. There is little question about the social demand, or hope, factor--of the conviction that with training there is a chance for life to improve.

While specifics may be lacking and disagreements may exist about the kinds of corrective actions to take to deal with the problems, there is solid acknowledgment of the obvious--unemployment and the rural/agricultural sector are of critical concern and importance and require priority attention. While it is estimated that 15 percent in the industrial sector and 40 percent in the

traditional sector are unemployed, it is also estimated that manufacturing as a whole provides only 11.1 percent of total national employment. Therefore, not only are employment needs in the non-industrial sector acute, but the economic rationale for targeting on this sector is reinforced both by the overwhelming proportion of the population it already employs throughout the country and by the recent announcement that total food imports exceeded agricultural exports for the first time in 1979/80. Finally, even though there are benefits to be derived from repatriated earnings, the fact that an estimated 1,000,000 laborers have had to seek employment in Europe, where slowing economies are causing rising demands for an end to guest-worker programs and even, perhaps, repatriation of some already employed in Europe, is acknowledged to be of growing concern. It is difficult to conceive what a country like Morocco could do if it were to be faced with the disappearance of such an important labor market let alone how it might deal with the return of thousands already employed in Europe. At best, the message being received by Moroccan officials appears to be that this "employment safety valve" is a privilege which can no longer be taken for granted and one which almost certainly will disappear for Moroccan workers in the future.

In developing a strategy for generating employment, GOM, especially in view of its austerity program, has paid increasing attention to cost factors. The findings, therefore, of a recent World Bank report on the Small Scale Industry (SSI) Development Project noted that SSI firms, which were defined as employing from 5 to 50 workers, included about 81 percent of all manufacturing enterprises in the country. Consequently, while they constituted the employment core of the industrial sector and were essential to any effort to improve employment therein, new employment cost factors were disconcertingly high. It was reported that the cost of creating a job in manufacturing had increased to DH 90,000 (U.S. \$22,500) during the third plan, which was an increase of DH 30,000 per job created just between the second and third plan periods. Furthermore, job creation costs in this sector are expected to continue to rise, and employment opportunities available have been, unfortunately, heavily concentrated in one limited region of the country--75 percent of manufacturing is located in the Casablanca-Kenitra axis, with 54 percent in Casablanca alone. As the Bank has summarized, "from the policies adopted and in light of the results achieved it appears that over the past five years manufacturing has not sufficiently contributed to either employment creation or to regional development (both of) which remain major government concerns in Morocco."

As indicated in Section III, it is recognized that a part of the unemployment problem is structural; there is a mismatch between the skills of those seeking jobs and the jobs available. However, it must also be expected, based on experiences in other countries, that there might be a tendency to exaggerate structural employment during a depressed economic period and to place excessive emphasis on education and training failures and inadequacies when the problems faced are in fact a result of much broader economic factors and conditions.

Accepting this caveat, it is still fully recognized that unemployment and rural and agricultural problems are especially acute, and as a result the evolving vocational system, as pointed out in Section IV, is to attempt to establish a structure which will provide the kinds of skills nationwide which the employment market seeks or can accommodate. The goal is also to accomplish this at a cost per job created which the GOM can tolerate which would, consequently, also permit

enrollments in training programs of the large numbers required not only for the asserted economic need just mentioned, but for the social demand purposes as well. These costs, as indicated in Section IV and as estimated in the Rapport de la Commission Nationale de l'Emploi de la Promotion Nationale et de la Formation Professionnelle, are dramatically lower per individual than the SSI figures quoted above. If post-training employment (or self-employment) assumptions are anywhere near accurate, the cost per job created will be vastly less than SSI estimates.

The need to verify and ensure post-training employment has increasingly become a part of project objectives. Even prior to the formal initiation of the proposed vocational and technical education and training efforts in the forthcoming Five Year Plan, the link between education, training, and employment has been constructively addressed. In GOM/USAID projects such as Non-Formal Training for Women a student data base study and a rotating fund for job creation is included, while in the Industrial and Commercial Job Training Project for Women there is a major employment survey in the industrial employment sector to determine professionally trained middle-level personnel. In the Peace Corps projects in support of the CFPs there is growing emphasis on on-the-job training which is increasingly used as a technique by Peace Corps instructors to help students find employment following the completion of training. The trend toward employment emphasis also appears in the recommendations from studies such as the one completed in October, 1980, on "An Operational Program for the Socio-Economic Development of Ben M'Sik Casablanca, Morocco," in which it is recommended that "training activities must be tied to the existing availability of openings or vacancies (which are presently negligible) or the creation of new jobs, and... the impact of vocational education."

The World Bank, too, has underscored its acknowledgment of the importance of the education-training-employment connection by agreeing with GOM in the Fourth Education Project that to ensure that the graduates of the 11 Technical Lycées would be adequately trained in relation to industry's needs and would secure employment in jobs for which they had been trained, a tracer system would be established for each institution. In addition, the tracer systems would contribute to improving vocational guidance, career evaluation, and curriculum development in the longer term. GOM will operate the tracer system from the opening of each institution and will submit details of these systems to the Bank at least 12 months before the opening of each new institute to permit review and comment. The results of the tracer studies will be forwarded to the Bank for five years following the first outputs from the institutions to promote sound project evaluation.

Data gathered from these types of project-related efforts will be invaluable for the design of future projects and plans. Furthermore, such inputs reflect reality while at the same time they are actually dealing with the problems of concern--relevant training and employment for men and women. At such time as the kinds of studies projected or underway (such as those listed in Appendix D) are completed, they will, assuming that they are well done, further contribute to the data base for planning and for more sophisticated analyses of vocational education's contribution to productivity. The expansion of such project related evaluations are invaluable and most certainly should be endorsed.

In summary, it appears clear that unemployment is the most critical single problem in Morocco and that its solution will not be found in the manufacturing sector. The manufacturing sector presently employs only about one-tenth of

those employed and seven if it were to achieve a 5 percent rate of growth per year during the next five-year plan, it would create an annual average of only 20,000 new jobs--a rate of increase only slightly higher than the annual rate of population growth. Job creation in the manufacturing sector is extremely costly--it would mean pursuing a capital-intensive strategy in a country with abundant and both un- and under-utilized labor--a country which appears eminently suited to a labor-intensive approach.

The solution to unemployment will lie in the creation of jobs (or opportunities for self-employment) in the non-modern sector--a difficult but critically important developmental strategy to pursue. However, it is generally agreed that agricultural production and agricultural processing do, along with a highly promising handicraft sector, offer impressive growth and employment prospects.

To capitalize on these prospects, the vocational and technical education and training strategy being designed by the Moroccan government (and outlined in Section IV) is an extremely significant step toward implementing a bold strategy. Vocational education will not by itself solve unemployment; it does, however, promise to make significant contributions to that end, and there are presently no better options available for dealing with the problem. Oriented toward the rural, handicraft, and agricultural (including livestock) sectors, it could provide equity and address the high social demand for training from the "poorest of the poor" and assist them to participate in the developmental process.

AID has already made commitments to assist the Ministry of Social Affairs and Handicrafts and the Ministry of Youth and Sports to implement this new approach, especially in the area of expanding their capabilities for the training of trainers, and is presently considering the expansion of this component. In fact, what USAID/Morocco has already committed itself to in this general area of activity is applauded and considered highly commendable. This report would like to endorse accomplishments to date and to urge strongly that assuming GOM requests additional assistance AID should give sympathetic consideration to expanding its participation in those areas in which the USG can play a significant and perhaps unique donor role, based on its experience and capabilities in such areas as:

- planning, management, and evaluation training;
- establishment of nonformal and functional education/training programs;
- agricultural extension training and programming; and
- marketing of handicrafts and agricultural products.

It is also suggested that USAID maintain the flexibility needed to respond to important "targets of opportunity"--those components or institutions identified as potentially providing impressive returns to the developmental effort for relatively minor inputs. An example of this would be the Leather and Textile Institute at Fez which presently has adequate student housing and classroom and laboratory facilities to double its enrollment--if the shortage of teachers could be overcome. Pending the availability of data for determining more effectively the relationship between productivity and education nationally, these types of

activities with evaluative mechanisms built in could provide valid and potentially generalizable productivity figures and assessments on a project-by-project basis.

SECTION VI

AN ANALYSIS OF RECENT INTERNATIONAL ASSISTANCE FOR TECHNICAL AND VOCATIONAL EDUCATION IN MOROCCO

To support its efforts in the area of technical and vocational education, the Government of Morocco (GOM) has an impressive record in attracting financial and technical assistance from a variety of multilateral and bilateral sources.

An analysis of the activities of different donors shows a close relationship between the technical assistance provided by donors and the development plans formulated and followed since Morocco's independence. Cooperation between the GOM and international donors has been consistent in supporting a "top-down" development strategy. Activities have concentrated on investments in capital-intensive industry and agriculture, development of infrastructure, and the training of higher-level manpower, particularly for the public sector.

The congruence of technical assistance provisions with the overall direction of Morocco's top-down development strategy is especially close in the area of education. The concerted financial assistance extended to Hassan II Institute of Agronomy and Veterinary Science is a good example of the shared interest of donors in supporting higher-level professional education. During the last few years, this Institute has been the beneficiary of the following entitlements from international donors: UNDP, two projects for about \$1.3 million; France, the services of 25 professors and 19 volunteers for an indeterminate duration; USAID, assistance totalling some \$9.7 million; Canada, assistance amounting to about \$5.5 million; and Belgium, assistance of about \$219 million.

On the other hand, it must be noted that although the top-down approach to development, with the resulting emphasis on the training of higher-level cadres, has been the dominant theme in the GOM's development strategy of recent years, it is by no means the only one. There have been voices within the GOM--specifically, the Ministries of Labor, Social Affairs, and Youth and Sports--that have recommended more attention to the development of the productive capacities of a wider range of the Moroccan population. Programs to train and upgrade the capabilities of skilled and semi-skilled workers, apprentices, artisans, and small farmers have been established over the years. But, unlike the case of higher-level training, donor support of these social and vocational training schemes for the vast majority of Moroccan citizens has been episodic.

A review of recent technical assistance activities in Morocco shows the following points:

Apart from the substantial loans inscribed under the capital accounts, the total international assistance expenditures in Morocco during 1979 exceeded \$79 million. According to the "Annual Report on Development Assistance for 1979 by the Office of the Resident Representative of the United Nations Development Programme in Morocco," some \$21.9 million of the reported 1979 expenditures, or 27.5 percent, were allocated to activities in education. The report assigns under the heading "education" a number of high-level manpower training activities that might arguably be counted in other sectoral

accounts. Still, the proportion of development assistance monies going to education is comparatively large. The report also notes that both the overall figure of \$79 million and the proportion of this amount going to education underestimate actual expenditures, because not all expenditures, notably those of France, were reported.

A breakdown of major technical assistance activities recently concluded, in progress, or in the pipeline follows:

1. Multilateral Assistance

a. The World Bank

1) First Loan (1965): \$11 million

The loan assisted the building and equipping of 18 secondary schools and provided properly equipped laboratories and workshops. This effort was meant to address Morocco's need for middle-level manpower and for an enlarged pool of qualified students for post-secondary education.

2) Second Loan (1971): \$8.5 million

The loan was intended to continue assistance for the qualitative improvement of education in Morocco by provision of seven teachers' colleges, a pedagogical research institute, science laboratories for six secondary schools, and laboratory and workshop equipment for another 10 technical and 13 commercial schools.

3) Third Loan (1976): \$25 million

The loan continued the support for manpower training in key sectors (agriculture, health, and tourism) and for improving the relevance of the secondary school curriculum through the establishment of five secondary schools that would emphasize science and technology courses. Additionally, the loan financed the establishment in poorer rural areas of 47 primary schools that would offer an experimental, practically oriented curriculum.

4) Fourth Loan (1979): \$113 million

The loan will assist the GOM in meeting middle- and higher-level technical manpower needs by expanding secondary and post-secondary technical education. The major components of the loan consist of construction, furnishing, and equipping:

- eleven technical lycées;
- one technical teacher-training college;
- two higher institutes of technology (to be located in Fez and Casablanca);
- one institute of applied engineering (to be located in Casablanca); and
- an extension to the Mohammedia College of Engineering.

5) Summary

The Bank's lending in education through the fourth loan has totalled \$157.5 million. This represents only 12 percent of the Bank's investment in Morocco. A fifth loan is under consideration.

b. United Nations System

1) United Nations Development Programme (UNDP)

UNDP assistance provided in education amounted to some \$2.2 million in 1979, representing 45 percent of its expenditures in Morocco for that year. UNDP and other UN assistance in other sectors but related to technical and vocational education accounted for another \$2 million in 1979. UNDP financed projects undertaken by the specialized agencies include the following:

● UNESCO

UNESCO is currently undertaking the third phase of a project assisting the GOM with research for Arabization of education in Morocco (\$1.5 million). This project is under the sector of "culture." UNESCO is undertaking education sector projects at the School of Communications in Rabat (\$800,000) and at the National School of Public Works (\$1.4 million). Assistance was provided by the Ministry of Education for the planning and reform of primary and secondary education. UNESCO reportedly will provide assistance in the years ahead for developing new educational media.

● UNICEF

UNICEF is completing three projects for a total expenditure of about \$1 million. These projects have assisted the GOM: in pre-school education in Koranic schools and "modern" day care facilities; in nutrition, school gardens, and other practical activities in primary schools; and for radio/television programs for basic education. Under the sectoral heading of "manpower," UNICEF is spending some \$300,000 in 1979-80 in support of the Foyers Féminins program of the Ministry of Youth and Sports.

● ILO

The ILO will soon complete projects with the Office of Vocational Training and Promotion of Employment (OFPPT) (\$485,000) and the Institute of Labor and Social Training (\$71,000). Earlier ILO assistance helped in establishing the

Institute de Formation des Cadres Techniques (INCFT) and the Ministry of Labor's capacity for vocational training. The ILO provided assistance for the development of the Institute of Leather and Textiles (INCT) in Fez.

2) Other UN organizations

The United Nations Fund for Population Activities (UNFPA) is providing assistance related to vocational training under the population sector heading. This includes an allocation of \$10,000 for a recent study of the impact on different localities of returning migrant workers. UNFPA also funded a four-year project (\$3 million), undertaken with assistance from UNICEF, aimed at strengthening the Foyers Féminins training program for women.

a. Other Multilateral Assistance

1) European Economic Community (EEC)

Morocco has signed an agreement with the EEC countries for assistance in establishing nine Institutes of Applied Technology to be run by the Ministry of Labor. The GOM intends to establish 14 such institutes (two of which are being started with assistance from the World Bank). These centers will provide training for technicians leading to certification as an agent de maîtrise.

2) Catholic Relief Services (CRS)

An important source of assistance for vocational training in Morocco is the Catholic Relief Services. In 1979, CRS supported a total of 16 projects that reached some 615,000 people. CRS assists the Ministry of Social Affairs and Handicrafts (MASA) with its Mother Child Health Program through the distribution of U.S. PL-480 Title II food commodities. CRS undertakes projects in the areas of agricultural training, nutrition education, and social welfare and cooperative projects for the destitute, aged, and handicapped. CRS was instrumental in helping MASA to establish the vocational training for women (ouvriers) and the vocational training activities for boys undertaken at the Centres de Formation Professionnelles.

2. Bilateral Assistance

a. USAID

USAID's commitment to programs for the training of Moroccans who have benefitted only marginally from development is both recent and innovative. Despite some reservations expressed about the possible strength of the GOM's support of out-of-school training programs for the poor during a period of fiscal austerity and questions about a decidedly pluralistic institutional fabric that could conceivably lead to inefficient management and redundancy, USAID decided to support three projects on an exploratory basis. The accent on these programs--one with the Ministry of Labor, the second with the Ministry of Youth and Sports, and the third to be undertaken with the Ministry of Social Affairs and Handicrafts--is on strengthening existing institutional capabilities

for providing training opportunities for the socially and economically disadvantaged Moroccans, especially women. The estimated costs of these three projects is likely to exceed \$10 million. With this commitment, together with the Food for Peace provisions that were used in the past by Catholic Relief Services to help MASA initiate the ouvroirs training program for women (now being used for the nutrition programs of MASA social centers), USAID has already become the largest contributor to those programs designed to improve the employment prospects of the vast majority of Moroccans.

b. France

The largest amount of bilateral financial and technical assistance for development activity in Morocco comes from the Government of France. The total amount of this assistance, including expenditures for technical and vocational education, could not be determined. A recent agreement concluded between Morocco and France (1979) provides for French Treasury loans equivalent to \$80.9 million. About \$58 million of this total is for large-scale infrastructure projects, particularly in transportation and communications. The remaining \$22 million will cover balance-of-payment deficits. For the latter, an additional \$90 million was extended from private sources of credit in France.

French assistance to education are programs of cultural and technical cooperation. Most of these projects are extended for indeterminate periods of time. A large part of this aid has gone toward subsidizing the salaries of French citizens teaching in Moroccan secondary schools. With the increasing Moroccanization of the teaching force at this level, support is now increasing in the area of higher education. France is expected to contribute teachers and teacher trainers for the staffing of the technical schools to be established in connection with the World Bank's fourth education loan.

Consistent with the general direction of donor assistance to Morocco, France supplies expertise to at least 23 institutions training middle- and upper-level technical personnel for GOM ministries. In 1979, fellowships for higher education and for technical training in France numbered 900. France also supplies equipment for a number of vocational training programs throughout the country.

c. Belgium

The Government of Belgium is providing extensive institutional development assistance in Morocco by providing teachers and funds for agricultural education, engineering education, and the training of hotel personnel. It is also providing about \$1 million to assist vocational training projects in Casablanca and Fez.

d. Canada

The Government of Canada, in addition to its large commitment to teacher training, provided nearly \$2 million in 1979 for training technical personnel in agriculture and hotel management. Canada assisted the MASA social centers in 1979 with small grants for the purpose of buying books and equipment.

e. United States Peace Corps

In 1978, the U.S. Peace Corps began a significant program of assistance for the improvement of vocational training in Morocco. With its present contingent of 37 volunteers (PCVs) serving in MASA training centers, the Peace Corps commitment is one of the few substantial contributions to basic skills training for primary-school leavers. The PCVs are providing skills training and will soon be training trainers in areas such as welding, electricity, carpentry, and mechanics. The total number of volunteers in this vocational training program will grow to about 60 by June, 1981. USAID is funding the purchase of equipment for the MASA centers where PCVs are assisting.

f. Japan

The Government of Japan is providing volunteers for teaching in Morocco. In 1979, these volunteers numbered 43, an undetermined number of whom are working in vocational training in the MASA Centres de Formation Professionnelle.

3. Impact of Recent Technical Assistance

The analysis of recent activities of international donor assistance agencies in education and training in Morocco might best be concluded by attempting to determine the impact of this assistance on each of the four categories of training that have been discussed throughout this study.

a. Higher education and professional training

Donor assistance at this level has had a strong effect in helping Morocco meet its needs for high-level manpower.

Any future activities in this area must take into account the following:

- a pervasive feeling throughout the GOM that a saturation point has been reached with regard to employment of high-level cadres in the Civil Service; and
- the recognition by the Ministry of Labor and others of a comparatively high ratio of cadres to qualified workers in Moroccan industry.

b. Training of middle-level technicians and supervisors

Donor assistance has also had a strong impact in helping different ministries develop schools for the training of technical personnel needed at this level.

The GOM recognizes the outstanding need for middle-level technicians, especially in commerce and industry. Recent initiatives, such as the decision to establish 14 Institutes of Applied Technology and three Training Centers by the Ministry of Commerce and Industry, should be adequate to meet most of these needs.

c. Training of skilled workers

Here, donor assistance has not had a strong impact. A shortage of training opportunities remains at this level, especially in rural areas. Future developments in Morocco are likely to warrant additional assistance to increase training opportunities at this level for women. The shortage of technical teachers at this level will be overcome in part by personnel being trained at the Institutes of Applied Technology and actions taken by the GOM relating to improved conditions of employment for technical trainers.

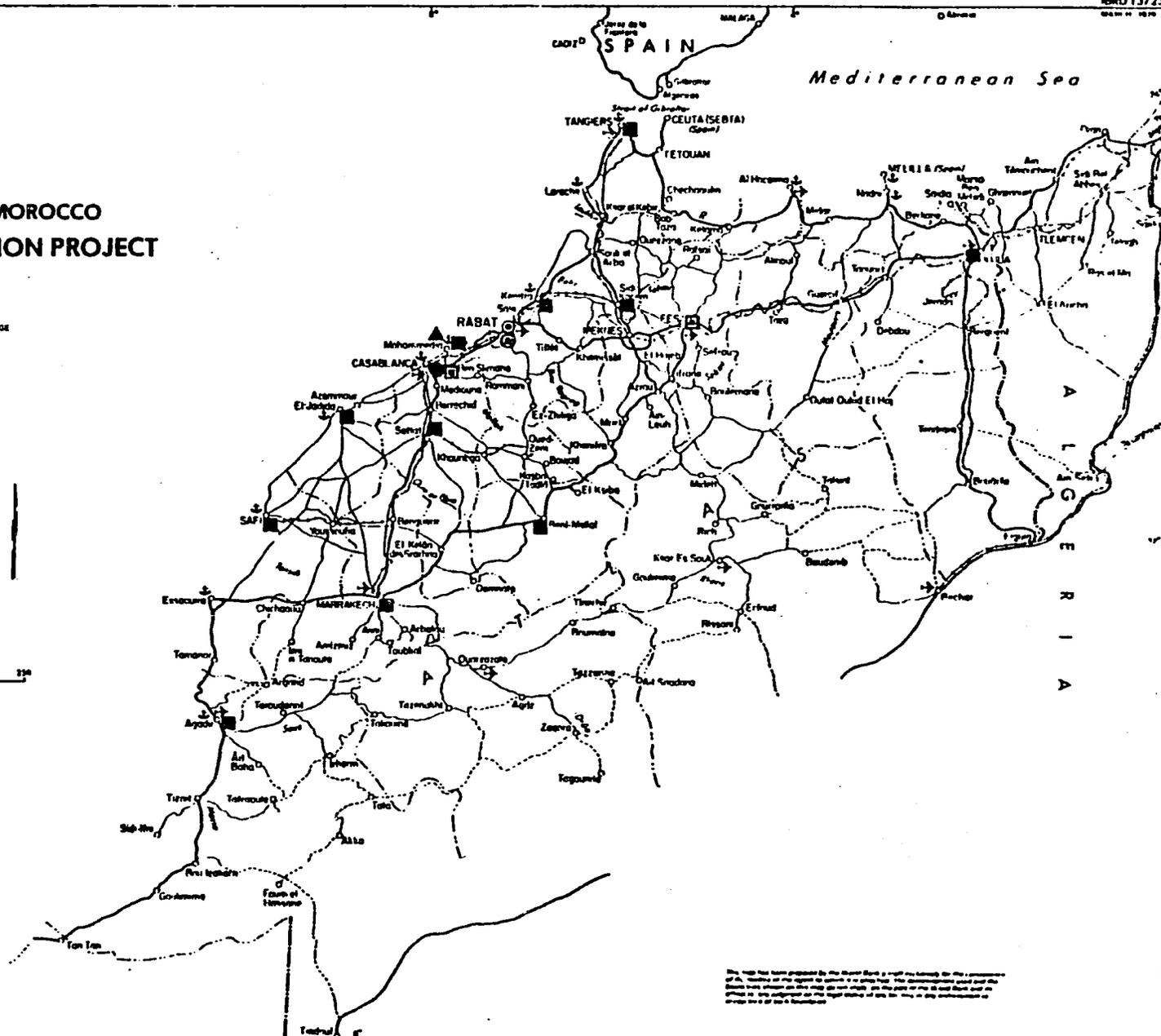
d. Training of artisans and apprentices

Donor assistance for programs to train artisans and apprentices has been inadequate. Future donor assistance might be sought to support: a substantial increase of training places in existing programs; diversification of skills for which training is offered; strengthening of management capabilities at all levels; upgrading of capabilities of instructional staff; strengthening of the general education components of various training programs; and research aimed at gaining a better understanding of the relationship of training to employment at this level.

APPENDIX A
KINGDOM OF MOROCCO

KINGDOM OF MOROCCO FOURTH EDUCATION PROJECT

- TECHNICAL LYCEES
- APPLIED ENGINEERING INSTITUTE
- ▲ TECHNICAL TEACHER TRAINING COLLEGE
- HIGHER INSTITUTES OF TECHNOLOGY
- MOHAMED ELBAH ENGINERING COLLEGE
- MAIN ROADS
- SECONDARY ROADS
- - - TRACES
- - - RAILROADS
- ✈ AIRPORTS
- ⚓ PORTS
- RIVERS
- - - PROVINCIAL BOUNDARIES
- - - INTERNATIONAL BOUNDARIES



This map has been prepared by the World Bank and is intended for the information of the recipient of the loan. It is not to be used for any other purpose. The Government of Morocco and the World Bank assume no responsibility for the accuracy or completeness of the information shown on this map. The data on this map have been obtained from the best available sources and are subject to change without notice.

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APPENDIX B

SITES VISITED

PERSONS INTERVIEWED

Appendix B

SITES VISITED

MARRAKECH:

Entraide Nationale Delegate
HARTI School
Centre de la Formation Professionnelle
SMB Orphanage
Ecole de Nutrition
Centre Social
Ecole de Coiffeur
Centre Educatif de Travaux

FES:

Entraide Nationale Delegate
Centre Educatif de Travaux
Centre de la Formation Professionnelle (MASA)
Handicraft Training Center - Ensemble Artisanal
Institute of Leather and Textile
Centre de Formation Professionnelle
MASA Cooperative Handicrafts

RABAT AREA:

Oued Akreuch - Cooperative Scolaire
Ministry of Agriculture
Ministry of National Education
Ministry of Energy and Mines
Ministry of Social Affairs
Ministry of Labor
Ministry of Youth and Sports
Ministry of Commerce and Industry
Secretariat d'Etat auprès du Premier Ministre chargé du Plan

Peace Corps
New TransCentury
Catholic Relief Services

CASABLANCA

Office of Vocational Training and Promotion of Employment
AMIDEAST (USAID Project)

PERSONS INTERVIEWED

GOVERNMENT OF MOROCCO

Ministry of Plan - Secretariat d'Etat au Plan et au Developpement Regional

- Mr. Benrida
Chef de la Division des Ressources Humaines
- Mr. Addelhamid Kheyabu
Direction des Establishments et des Participation et de la Formation Professionnelle

Ministry of Labor

- Mr. Jaffar Ouajjou
Secretary-General
- Mr. Bichri
Director of Training in Morocco
- Mr. Mohamed Laraqui
Chef de la Division des Realisations
- Mr. Ouhad
Assistant to the Director of the Office of Vocational Training and Promotion of Labor (OFPPT)
- Mr. O. Saida
Centre de Formation Technique (Fes)
- Mr. A. Qua Qua
Commission for Vocational Training
- Mr. Mohamed Alaoui
Service Entreprises, OFPPT

Ministry of Social Affairs and Handicrafts (MASA) - Ministere des Affaires Sociales et de l'artisanat

- Mr. Hajibi Nourredine
Training Division
- Mr. Bekkai
Delegate, Entraide Nationale, Marrakech
- Mrs. Halima Abed
Provincial Director of Social Centers, Marrakech
(and staff)
- Mrs. Sematt Latifa
Director, School of Nutrition, Marrakech
(and Faculty)

- Mr. Mohammed B. Dah
Coordinator, Vocational Training Center (CFP), Marrakech

Mrs. Tourira
Director
School of Hairdressing
Marrakech

Mr. Ben Ali
Chef Cuisinier
School of Nutrition
Marrakech

Mr. H. Skalli
Delegate
Entraide Nationale
Fes

Mr. Fillali
Delegate of Handicrafts
Fes

Mr. K. Brazi
Adm. Officer
Leather and Textile Institute
Fes

Mrs. Nezha Medmoun
Director of Ouvroirs
Fes

Mrs. Fatima Bakri
Director of Social Centers
Fes

Mr. Mohamed Khouajri
Chief Accountant
Delegation Entraide Nationale
Fes

Mr. Ahmed Benaïssa
Director
SMB

Mr. K. Brazi
Responsable Administratif

Mr. Lahgen Boutative
Coordinator, Vocational Training Center
Fes

Ministry of National Education - Ministère de l'Education Nationale et de la Formation des Cadres

Mr. A. Benjelloun
Director of Planning

Mr. A. Amine
Director of Technical Education

Mr. A. Rhaiti
Director, Higher Technical Teacher Training School

Mr. Bouchta
Director, Oued Akreuch School

Ministry of Commerce and Industry - Ministère du Commerce de l'Industrie de la Marine Marchande et des Peches Maritime

Mr. Abdelhamid Bennani-Smires
Secretary General

Mr. Abdellah Alaoui
Director General
National Sugar Refinery, Tadla

Ministry of Youth and Sports - Ministère de la Jeunesse et des Sports

Mr. A. Guessous
Secretary General

Ministry of Agriculture - Ministère de l'Agriculture et de la Reform Agraire

Mr. Moulay Ahmed Alaoui Lamdraoui
Secretary General

Mr. El Mokhatar Ben Said
Director of Extension Division in Agriculture

Mr. Mouline
Director of Technology Education

Mr. Kassa
Director, Agricultural Education and Research

Ministry of Energy and Mines - Ministère de l'Energie et des Mines

Mr. Skalli
Secretary General

Mr. Rachati
Chief, Division of Vocational Training

OTHER AGENCIES

U.S. Peace Corps

Mr. Leo Pastore
Director

Mr. Chip Randall
Vocational Education Specialist

Mr. Mario Iachella
Vocational Education Procurement Officer

Mr. Eric Inman
Volunteer, CFP, Marrakech

Ms. Pam Jackson
Volunteer, CFP, Marrakech

Catholic Relief Services

Mr. Lee Sanborn
Director

Mrs. Conchita Sanborn
Asst. Director

Ms. Wendy Burne
Program Assistant

A.I.D./Rabat

Mr. Harold Fleming
Director

Mr. Mark Ward
Program Officer

Mr. Marion Ford
Agricultural Officer

Mr. Hannafi
Assistant Agricultural Officer

Mr. Jack Sleeper
Agricultural Economist

Mr. George Corinaldi
Human Resources Officer

Ms. Sherry Suggs
Assistant Human Resources Officer

Mr. Thomas Eighmy
Economist

Mr. Abdellatif Benabdesselem
Education Analyst

U.S. Embassy/Rabat

Mr. Graham
Economic Officer

AID-Sponsored Projects

Mr. Anthony Fisher
Team Leader
AMIDEAST/OFPPPT
(Project for Industrial and Commercial Job Training for Women - Casablanca)

Mr. Carlos Gomez
Economist
AMIDEAST

Mr. Henry Jennings
Team Leader
New TransCentury Foundation
(Project for Non-Formal Education for Women - Rabat)

Mr. John Strattner
New TransCentury Foundation
(Project for Non-Formal Education for Women - Rabat)

Mrs. Stephanie Sweet
New TransCentury Foundation
(Project for Non-Formal Education for Women - Rabat)

Ms. Judith Taybi
New TransCentury Foundation
(Project for Non-Formal Education for Women - Rabat)

Ms. Sheila Reines
New TransCentury Foundation
(Project for Non-Formal Education for Women - Rabat)

APPENDIX C

METHODOLOGY

METHODOLOGY

The first two weeks of the study (November 24 through December 6) were devoted to the review and analysis of primary and secondary data, including documents, reports and publications from the GOM, various Ministries, international donors and USAID/Rabat. This review was necessary to ascertain the past, present and future trends of the formal educational system in Rabat and more specifically what were the future plans of various Ministries engaged in vocational training programs to alleviate the problems associated with the shortage of mid-level manpower.

The third week (December 7 through December 12) was spent conducting interviews and making on-site visits to various educational institutions in Fes, Casablanca, and Marrakech.

During the entire study period (November 22 through January 2) the study team conducted interviews with Embassy, USAID/Rabat, and GOM officials from the Ministries of Labor, Plan and Finance, Industry and Commerce, Youth and Sports, Energy and Mines, Education, Social Affairs and Handicraft, and Agriculture. There were also interviews held with organizations with projects in Morocco supported by USAID/Rabat. These were the Peace Corps, the Catholic Relief Services, and New TransCentury. A complete list of the names of those interviewed and places visited by the study team is included in Appendix B to this report.

APPENDIX D
RELEVANT STUDIES

Appendix D

Listed below are some of the most relevant studies which according to their projected dates of completion should have been available to the team, but, unfortunately, were not. Some are nearing completion while others have not yet even begun. When available these reports should provide extremely important additional information from which to gain greater insights into the relationships between vocational and technical education and training and productivity.

1. Proposed World Bank Manpower Survey. This had not yet been started in January, 1981, but if and when completed, it should be invaluable to determining manpower needs/requirements in Morocco.
2. National Census of Morocco. This is to be undertaken in 1981 but the actual date of completion is not fixed. The study will form the basis for all basic manpower planning and analysis and USAID is providing technical and financial support to assist GOM with some segments of the study.
3. Non-Formal Education for Women, a New Transcentury USAID funded project. The instrument to be used for this study is still being designed. It will provide demographic data about the clientele, job placement and will include a tracer/follow-up section.
4. "Enquête sur les Besoins en Formation Professionnelle du Personnel Feminin." This is being undertaken by Carlos Gomez as a part of the USAID supported Project for Industrial and Commercial Job Training for Women. This study will provide extremely important socio-economic data which will permit results to be cross-tabulated with national census data.
5. New Five Year Plan for Morocco had not yet been released prior to the team's departure.