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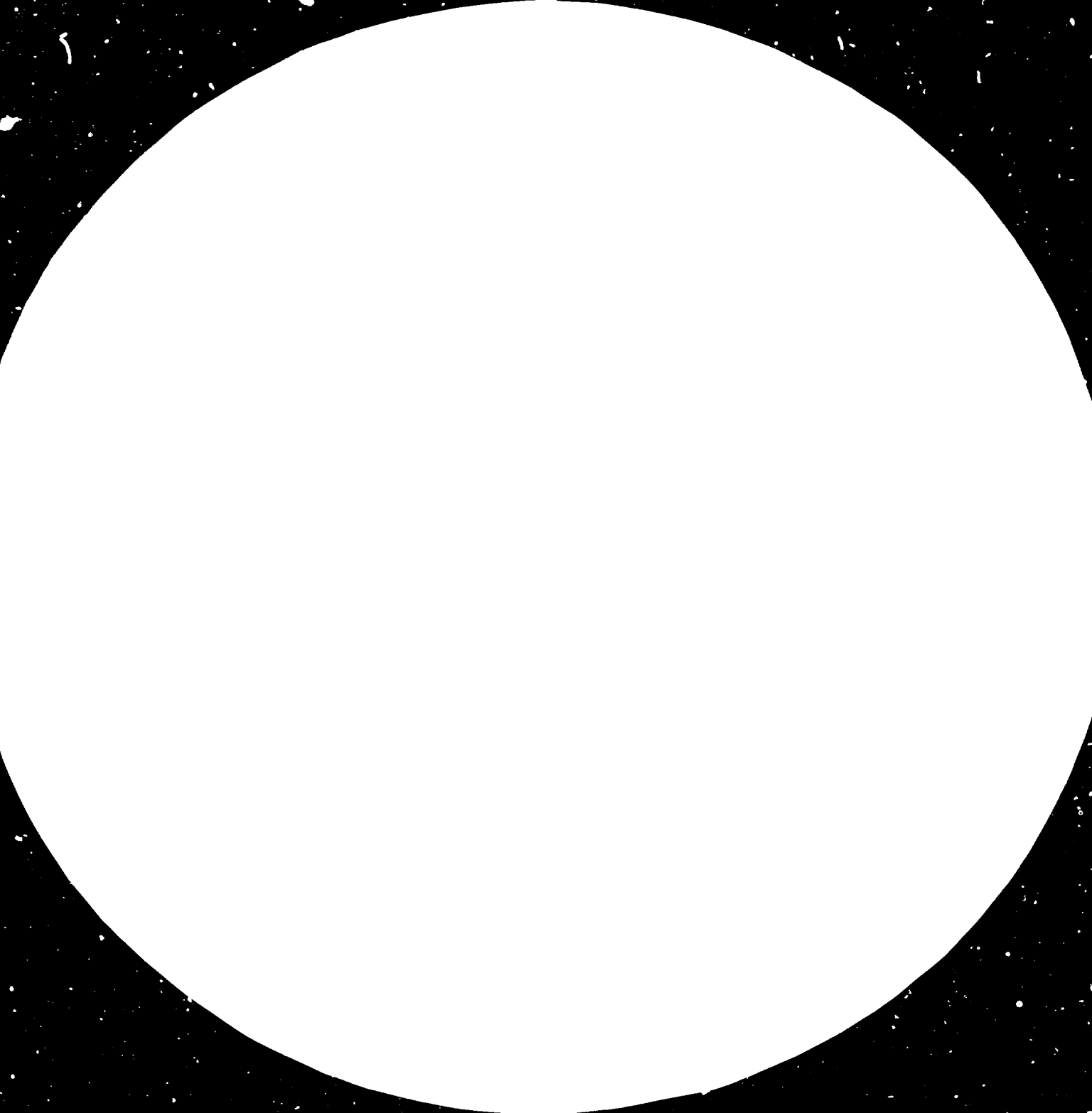
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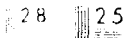
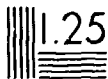
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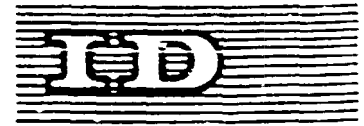




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ISSUES FOR POSSIBLE CONSIDERATION BY THE
FIRST CONSULTATION ON THE TRAINING OF INDUSTRIAL MANPOWER*

Prepared by
the secretariat of UNIDO

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PREFACE

The System of Consultations

The Second General Conference of the United Nations Industrial Development Organization (UNIDO), held at Lima, Peru, in March 1975, recommended that UNIDO should include among its activities a system of continuing consultations between developed and developing countries with the object of raising the developing countries' share in world industrial output through increased international co-operation.^{1/}

The General Assembly, at its seventh special session in September 1975, in its resolution 3362 (S-VII), decided that the System of Consultations called for by the Lima Declaration and Plan of Action should be established at global, regional, interregional and sectoral levels^{2/} and that UNIDO, at the request of the countries concerned, should provide a forum for the negotiation of agreements in the field of industry between developed and developing countries and among developing countries themselves.

The System of Consultations has been established under the guidance of the Industrial Development Board. At its fourteenth session, the Board decided to establish the System of Consultations on a permanent basis with the following main characteristics, including those described in its past decisions:

(a) The System of Consultations should be an instrument through which the United Nations Industrial Development Organization (UNIDO) would serve as a forum for developed and developing countries in their contacts and consultations directed towards the industrialization of developing countries;^{3/}

^{1/} "Report of the Second General Conference of the United Nations Industrial Development Organization" (ID/CONF.3/31), chapter IV, "The Lima Declaration and Plan of Action on Industrial Development and Co-operation", para.66.

^{2/} Official Records of the General Assembly, Seventh Special Session, Supplement no.1, para.3.

^{3/} Official Records of the General Assembly, Thirty-fifth Session, Supplement no.16, para.151(a).

(b) Consultations would also permit negotiations among interested parties at their request, at the same time as or after consultations;^{4/}

(c) Participants of each member country should include officials of Governments as well as representatives of industry, labour, consumer groups and others, as deemed appropriate by each Government;^{5/}

(d) Final reports of the Consultations should include such conclusions and recommendations as agreed upon by consensus by the participants as well as other significant views expressed during the discussion.^{6/}

Consultation on the Training of Industrial Manpower

The Board, at its thirteenth session, authorized UNIDO to convene in 1981 a First Consultation on the Training of Industrial Manpower. Due to a lack of financial resources this Consultation has had to be postponed to 1982.

In 1978 the Board decided that "an inter-secretariat working group should be established by UNIDO, in collaboration with UNESCO and ILO, with a view to examining the ways of maximizing the use of industrial manpower training facilities existing in developed and developing countries and to exploring their potential for expansion in relation to the needs of developing countries. The Executive Director of UNIDO should report to the Board at its thirteenth session on the results of the group's work, with a view to recommending to the Board, if appropriate, the convening of a Consultation Meeting on the Training of Industrial Manpower".

The UNIDO/ILO/UNESCO Working Group was established in December 1978; it suggested that preparations for the First Consultation should examine the potential for:

(a) Greater use of existing training facilities in the developed countries for the benefit of developing countries;

^{4/} Ibid., para.151(b).

^{5/} Ibid., para.152.

^{6/} Ibid., Thirty-second Session, Supplement no.16, para.163.

(b) Greater use of existing training facilities in the developing countries and the need for their expansion to allow, inter alia, for increased co-operation among developing countries;

(c) Improving contractual arrangements for the acquisition of industrial skills.

UNIDO has carried out work in selected developing countries in order to survey the potential of existing facilities in those countries and to assess the nature of developing countries' short and long-term requirements. This will permit the formulation of suggestions concerning the:

(a) improvement of the organization and co-ordination of training facilities in developed and developing countries;

(b) improvement of modes of co-operation for the acquisition of industrial skills and of the corresponding contractual relations;

(c) identification of additional sources of industrial training for the benefit of developing countries through increased recourse to multilateral training institutions and to co-operation between developing countries.

In 1979 a report was prepared by UNIDO, in consultation with ILO and UNESCO, entitled "The acquisition and development of industrial skills by developing countries" (ID/CONF.4/8).^{7/} This report was considered by member countries at the Third General Conference of UNIDO (ID/CONF.4/22, paras.202 to 210);^{8/} the developing countries noted the similarity of their proposals to those contained in the UNIDO document, while all countries generally supported it.

The present paper to be considered by the Expert Group Meeting elaborates and refines the issues submitted to UNIDO III, taking into account the comments made at the Third General Conference and the conclusions of preparatory work undertaken by UNIDO in 1980.

^{7/} This document will be made available at the Expert Group Meeting.

^{8/} See Annex I.

INTRODUCTION

1. Industrial skills are required by industrial enterprises. Enterprises are the main protagonists in the world of industry supported by government policy, technology, training and financial institutions. Co-operation at the international level has therefore to be examined in the light of the *raison d'être* and logic of the protagonists in the present international economic order.

2. Technology, as shown through history of mankind, means power, both economic and political. Hence the importance for developed countries to try to preserve their technological advance and for developing countries to acquire and develop technology. This is at the root of the problem and is the bone of contention between North and South on the subject of technology and training. However, it is not over night that the Third World will acquire technology and related know-how; this requires a lengthy and difficult process.

The objectives of developing countries

3. In the short run, the developing countries consider it necessary to fully mobilize the capacity of existing training facilities in developed and developing countries in order to satisfy the immediate industrial training needs of their industrial projects (i.e. training, which is immediately utilisable).

4. The long-term objective of developing countries is the establishment of a national industrial training capacity, enabling them to achieve their overall industrialization objectives. Each country sets its industrial priorities and assesses the corresponding requirements in terms of finance, technology and related know-how. These priorities can only be achieved if know-how, skills and related training programmes are gradually developed and made available locally. Training is consequently a compulsory channel through which the industrialization process must pass, thereby reducing progressively the unilateral dependence of developing countries on the industrialized countries which are the main suppliers of know-how and skills.

I. THE EXISTING TRAINING CAPACITY IN DEVELOPED COUNTRIES
ITS POTENTIAL UTILIZATION AND ADAPTATION 9/

5. The utilization of existing training capacity depends on its organization and co-ordination for the benefit of developing countries and on the mechanisms of co-operation through which developing countries obtain access to it.

A. Organization and co-ordination in developed countries

6. Exporting enterprises are only secondarily concerned with industrial training for developing countries. The training which may be provided by exporting enterprises is of a limited nature in terms of the project under contract, a major gap existing in its capacity to train technicians and trainers. It is solely concerned with the efficient operation of the production unit or equipment being sold. In other words, only partial and fragmentary training is provided meeting short-term needs only.

7. Most enterprises can only provide training by securing the support of specialized training institutions and of the education system; they also require the support of financial institutions in order to finance the training component of their export contracts. Such institutional or financial support is generally difficult to obtain.

8. Institutions specialized in industrial training include various categories and types; although they are large in number, it appears that only 10 to 20 per cent are qualitatively organized to provide industrial training. However, in general, they are not directly linked to a particular industrial enterprise and hence to its equipment and technological process.

9/ CESI/SICOFEP: "L'acquisition de compétences industrielles dans les pays en développement et la situation française de l'offre de formation", février 1981.

TETOC: "Potential for increasing utilization of training institutions in the United Kingdom for the benefit of developing countries", February 1981.

As a result, in the cases of subcontracts, industrial training institutions first must become fully familiarized with the exporting enterprise's equipment and technology, adapt its training methods to these, and prepare the corresponding specific training programmes. The familiarization and adaptation process implies increased costs to the buyer from the developing country: it also implies that the buyer faces an intermediary when purchasing technological skills and related know-how.

9. Financial institutions too are parties to the co-operation arrangements between enterprises and have a direct impact on the capacity of developed countries to provide industrial training to developing countries. However, the financing of training is not one of their prime objectives; rather the main objective is to finance the sale of goods and equipment etc. For this reason, whenever a buyer considers that costs have to be reduced, one of the first items to be cut is training programmes. Although increased attention has been paid recently to this problem, notably the World Bank and the EEC institutions, much remains to be done in order that the financing of the transfer of know-how and related skills be allocated high priority by financial institutions.

B. Co-operation arrangements: commercial and official bilateral co-operation

10. The developing countries have encountered difficulties with commercial co-operation arrangements due to the fact that they are not faced with one single partner which bears overall responsibility for the organization and co-ordination of the supply of equipment together with the corresponding training programmes. In general, commercial arrangements are characterized by the existence of several suppliers (for example, enterprise and industrial training institution) with the consequence that none of them bears overall responsibility for the successful implementation of the training component of the contract(s).

11. Commercial co-operation arrangements are also often deficient for the following reasons: where co-operation only involves assembly (i.e. about 10 per cent integration into the national production process),

a minimal amount of training is required, and the developing country's dependence on the foreign supplier is very large. More seldom is the case where integration into the national production process attains 60 per cent or more; it is, however, in such cases where more complex and complete training is required and more importantly where unilateral dependence on the foreign supplier could be significantly reduced.

12. An analysis of contractual relations in connection with the export of equipment, technology, licenses etc. to developing countries reveals the extent to which training provided is partial and fragmentary and often is given little or no importance.^{10/} Contract provisions for industrial training generally fail to cover the following points sufficiently:

- (a) the objective of the contract; definition of know-how and skills to be transferred; tasks to be performed as a result of training;
- (b) determination of price of training programmes; sources of finance;
- (c) ownership of the training programme and of the related know-how, particularly when the latter is not legally protected;
- (d) elaboration of training programme, including the definition of "close collaboration", training of trainers, levels of training etc.;
- (e) selection and recruitment of trainees: definition of qualifications and of other criteria for selection; assessment of percentage turnover etc.;
- (f) implementation of training programmes; percentage in theory and practical training, training methods etc.;
- (g) verification of transfer of skills and related know-how: obligation of achieving results, collectively as well as individually.

13. Even when individually each trainee is extremely well trained in accordance with the programmes which he has followed, nevertheless the production unit may not operate satisfactorily. The reason is frequently found to be that there is a considerable gap between individual and collective training. This stresses the importance of the organization

^{10/} M. Salem: "Contrats de formation et de transferts technologiques: une approche juridique", avril 1980.

and management required for the transfer of know-how and skills to developing countries. In other words, training is not purely technical; it is necessary to ensure that it is integrated into the production unit as a whole. Contractual arrangements should ensure that such considerations are effectively taken care of.

14. The level of training provided concentrates on the skilled worker level and to a lesser extent on the higher level (engineers, managers etc.); the major gap is found to be at the intermediate level (technicians) whose knowledge is crucial to translate a theoretical technological process into actual production; similarly, a gap is found in training of trainers whose multiplier effect is vital to developing countries.

15. In the case of official bilateral co-operation, the developing countries are more often than not faced with a single partner (an agency of a ministry of co-operation) who is responsible for the organization and co-ordination of supply to developing countries. This situation appears to be preferred by developing countries; they would like to see commercial co-operation arrangements also characterized by the existence of one partner who would assume similar responsibilities for organization and co-ordination.

16. However, bilateral co-operation has hitherto concentrated on providing a considerable number of scholarships to trainees from public or parastatal enterprises in developing countries; it does not cater directly for trainees from private sector enterprises unless public sources of finance are used in connection with a given project or training programme. It should also be borne in mind that enterprises from developing countries prefer to deal directly with foreign suppliers (public or private) and training facilities rather than go through the bureaucratic channels of government apparatus.

C. Possible solutions

17. The following improvements would be desirable:

- (a) improved organization and co-ordination of suppliers;
- (b) improved co-operation arrangements;
- (c) improved contractual relations.

(a) Improved organization and co-ordination of suppliers of industrial training 11/

13. The above paragraphs indicate that several obstacles prevent developing countries from making full use of the training facilities in the developed countries. To overcome these obstacles, the supply of industrial training could be better organized and co-ordinated; in particular, it should be desirable that responsibility for the following functions be assumed by a single body or agency in the developed country:

(i) Information about potential suppliers and their quantitative capacity

Such information should indicate the industrial sectors in which the levels of training, teaching methods, previous experience in industrial training for developing countries are available.

(ii) Diagnosis of the developing country's needs

Before negotiating a contract, the supplier needs to examine the nature of the purchaser's needs; this diagnosis of the purchaser's needs should include an examination of training facilities available in the developing country and of their capacity to meet the purchaser's needs; similarly, it should assess the skill capacity of the manpower already available.

(iii) Establishment of contact between buyers and the most appropriate suppliers in a given developed country.

(iv) Co-ordination of suppliers

This is required to meet the demand from developing countries: the activities of enterprises, training and financial institutions require co-ordination. The role of a training institution assumes greater importance if a training centre for a particular branch of industry is to be established. In short, the co-ordination of suppliers of technological skills and related know-how should be designed to permit developing countries to meet their short and long-term objectives.

(v) Adaptation

Product adaptation, involving adaptation of technology and of the corresponding training programmes is generally required; it involves a certain investment by the supplier of equipment and by a training institution whose training programmes must be adapted to the needs of the purchaser and to the equipment of the supplier. The financing of such adaptation should be made available from the outset.

11/ CESI/SICOFEP: op.cit.

(b) Improved co-operation arrangements

19. The following preliminary proposals are made:^{12/}

(i) Within the framework of an intergovernmental agreement

A Ministry of Co-operation (or equivalent government agency) assumes in principle responsibility for the five functions mentioned above and generally provides finance from public sources. If the demand for the developing country is addressed to the developed country's public sector, it is relatively easy for the government agency to organize and co-ordinate supply of the necessary services. If the demand is addressed to the private sector, the government agency must select the appropriate supplier of technology and training services. In either case, the government agency remains the main single partner of the developing country.

(ii) Outside the framework of an intergovernmental agreement

There is no main single partner with which the enterprise from the developing country can negotiate and consequently finds himself at a considerable disadvantage in the selection of potential partners and in the negotiation and implementation phases of the contract.

However, it is possible to envisage that demand from developing countries be addressed to professional associations of a given industrial sector who would then become the main single partner of the developing country. Similarly, in the case where only industrial training is required, a demand could be addressed to an association of training institutions who would then assume that same role.

(iii) Integration into national industrial production

The co-operation arrangements should, to the extent possible, provide for greater integration into the national production process, starting for example from an assembly phase to one where there is approximately 60 to 70 per cent local content. This is important if developing countries are to progressively absorb technology and acquire the necessary skills. The establishment of training centres for a given sector of industry is therefore important in order to build up a national training capacity, partly or completely based on the skills acquired from foreign suppliers.

(iv) The financing of co-operation in industrial training

The problems of financing industrial training to meet the short and long-term needs of developing countries need to be overcome. The suggestion put forward here is that official bilateral co-operation could be more efficiently used by covering the provision of industrial training

by enterprises and by financing the establishment of training centres for the developing country's priority industries. Such complementarity between official bilateral and commercial co-operation arrangements would enable developing countries to meet more effectively their short and long-term objectives.

Other sources of finance will nevertheless continue to be required. It is desirable that export credit institutions from developed countries and commercial banks deal with industrial training for developing countries as an integral part of a commercial transaction. In short, financial institutions should treat the financing of industrial training in the same way as equipment.

(v) Possible assistance from United Nations agencies

In any of the above cases, international organizations could be requested to provide assistance in preparing co-operation arrangements for the acquisition of skills by developing countries: this could involve the provision of advice in:

- the identification of national and enterprise training needs, and of the ways to meet these needs;
- the selection of partners;
- the negotiation and drafting of contracts;
- the implementation;
- the verification of whether the objectives of the contract have been achieved.

The role of international organizations would be to redress the imbalance between enterprises of developed and developing countries, and to assist the latter in satisfying their short and long-term objectives. A proposal concerning possible technical assistance by UNIDO is the subject of Annex II.

(c) Improved contractual relations^{13/}

20. Clauses should be included in contracts in order to cover the points already identified as not being sufficiently dealt with today (see para.12 above). The proposed clauses related to each of these points are described in Annex III.

^{13/} M. Salem: "Legal Aspects of Industrial Training", October 1980.

II. THE EXISTING TRAINING CAPACITY IN DEVELOPING COUNTRIES
ITS POTENTIAL UTILIZATION AND NEED FOR EXPANSION 14/

A. Summary of the present situation

21. Training facilities in developing countries are generally not fully utilized, particularly due to the inadequacy of programmes in meeting needs of enterprises and to high costs.

22. Industrial enterprises are generally too small to have each its own training centre; they tend to pool resources to establish training centres for a given branch of industry usually designed to meet immediate rather than long-term objectives by focussing on training at the skilled worker level. They are also turning increasingly towards foreign sources of technology and related know-how to meet immediate needs related, for example, to a specific industrial project.

23. The problem is often aggravated by a lack of co-ordination at the level of the industrial development plan between education and training on the one hand and industry on the other. The linkage between training institutions and industry leaves much to be desired, so that these institutions generally have an excess structural capacity, but are not in a position to meet the needs of industry: in addition, the linkage between enterprises and the education system is weak. The result is that the short and long-term needs of industrial enterprises are not always satisfactorily met by national training facilities.

24. In a few cases Governments have a deliberate policy to set up training institutions for the priority sectors of industry and in line with the country's long-term objectives. However, training institutions are generally geared towards the training of skilled workers; they are

14/ Z. Fares: "Etude de cas de coopération en matière de formation - l'expérience algérienne de l'acquisition de savoir-faire technologique par le biais de la formation industrielle", juin 1980.

TETOC: "Study of industrial training in Kenya", February 1981.
"Study of industrial training in Peru", February 1981.

not capable of training trainers and technicians which constitute key personnel for industrial enterprises. Few institutions have sufficient information to assess the future needs of industrial enterprises. Furthermore, relatively little has been done to develop or to adapt technological processes and know-how in most developing countries in order to meet their long-term objectives.

25. In general, developing countries face considerable difficulties in defining industrial training needs both at enterprise and national levels; therefore, the demand expressed by developing countries to suppliers abroad is often deficient in reflecting their real needs and may result in an inefficient allocation of resources.

B. Possible solutions

(a) At the national level

26. There is no doubt that the responsibility for industrial training lies with developing countries themselves. They will have to overcome problems of organization and co-ordination of training facilities for their industrial enterprises; these problems are well known and have often been examined by agencies of the United Nations system, such as ILO and UNESCO. (It is expected that these specialized agencies will present specific proposals to the Consultation on the Training of Industrial Manpower.)

27. In addition, co-ordination and organization is required to make better use of technology and skills obtained from abroad. This implies that such skills should not be restricted to that enterprise and should be made available systematically to others as well; in other words, this process should not be left to the "accidental" turnover of personnel from one enterprise to another. Government policy should provide the appropriate organizational structure to absorb and further develop such technology and skills obtained through international co-operation arrangements. This is important if a nationally-based capacity is to be developed.

(b) At the subregional, regional and interregional levels

28. Co-operation in industrial training between developing countries can play a key role in increasing competition at the international level for the supply of technological skills and related know-how, mainly due to the lower prices and better conditions offered by suppliers of other developing countries. It may result also in improving the bargaining power of developing vis-à-vis the developed countries.

29. It is accepted that the costs involved in establishing a national industrial training capacity for priority industries are very high and that not all developing countries can individually finance these costs. External finance is available from a variety of sources in the developed countries, as mentioned above. However, costs can be shared amongst groups of developing countries, so that each could specialize in training for a particular industrial sector(s). This implies that appropriate mechanisms for co-operation at sub-regional and regional levels need to be established.

30. An action programme for co-operation amongst developing countries could be prepared along the following lines:

(i) Each developing country should identify the industrial sectors which it can provide training for trainees from abroad at all levels, particularly for technicians and the training of trainers.

(ii) The adoption of policy measures by each Government in order to encourage the training of nationals of other developing countries; similarly, the adoption of concrete action by training institutions and other facilities to accept trainees from other developing countries. As a corollary, enterprises and Governments of developing countries requesting industrial training need to be ready to accept that in certain fields the training available from other developing countries is as good if not better than that available in the industrialized countries.

(iii) If necessary, the establishment of common training facilities should be considered at the subregional and regional levels to satisfy the needs of enterprises and in line with the industrial priorities of the countries of that region.

(iv) In the case of commercial co-operation, exporting enterprises and training institutions should make every effort to provide full and complete training, including the financing thereof, on better conditions than those applied by exporting enterprises of industrialized countries.

III. THE POTENTIAL ROLE OF MULTILATERAL TRAINING INSTITUTIONS^{15/}

31. Multilateral training institutions have an increasingly larger role to play. This implies however that solutions must be found to overcome the obstacles, such as high costs, preventing their training capacity to be fully utilized. One such solution might be to restructure their activities so that they complement the training provided (or not provided) through commercial co-operation. As discussed above, exporting enterprises generally are not in a position to provide industrial training at all levels and need to obtain institutional support either from the developed country or alternatively from the facilities of multilateral training institutions. For developing countries, such complementarity between commercial and multilateral co-operation would present an advantage in that the buyer would become progressively autonomous in relation to the supplier of equipment.

32. Of equal importance is the advice which can be provided by multilateral training institutions in the negotiation phase of commercial co-operation arrangements.^{16/} Their objective should not, however, be restricted to giving advice, but rather to influence the nature and scope of contractual relations in the field of industrial training. In this way, the demand from developing countries for their advice should diminish through time, and both enterprises and national training institutions would gradually build up their own capacity to negotiate and to supply the required training programmes. To initiate this, multilateral training institutions need to elaborate a strategy and appropriate action programmes to be applied to specific commercial co-operation arrangements being concluded between selected developing and developed countries.

33. The activities of multilateral training institutions should focus on the specific short-term needs of enterprises and on the long-term requirements of the sector as a whole, notably the establishment of a technology and

^{15/} F. Viallet: "Réflexions sur le rôle des institutions multilatérales de formation industrielles pour réduire la dépendance des pays en développement à l'égard des pays industrialisés", février 1981.

^{16/} See Annex II.

training centre for that sector. In this context, the following activities should be given renewed priority:

(a) the training of technicians, particularly in key sectors of industry such as capital goods, agricultural machinery, electronics, chemicals etc.;

(b) the establishment of training institutions capable of satisfying the short-term needs of enterprises and of developing technological know-how further;

(c) training of trainers in order to facilitate the achievement by developing countries of their long-term objective, namely to establish a national capacity for industrial training. Trainers should thus be made available with the following areas of specialization:

- teaching staff;
- personnel responsible for the organization of industrial training;
- managers of training programmes;
- training concepts, i.e. personnel with capacity to innovate in response to new needs;

(d) diffusion of information to both suppliers and buyers of technological know-how and related training on cases of success and failure in the acquisition of skills;

(e) together with national training institutions, carry out research on understanding how trainees absorb technological skills; apparently little research has been carried out in this area.

34. Multilateral training institutions should not consider technician training at their headquarters to be a permanent activity. In the long run, technician training should be carried out within the developing country, if need be by first creating the necessary institutional infrastructure. In the short run, only two situations justify the training of technicians abroad:

(a) where the developing country does not possess the necessary institutional infrastructure;

(b) where the technology and related skills can only be obtained abroad.

35. With regard to the training of trainers, this should primarily and above all be done by those who are working in industry, and who in addition are competent in the areas specified in paragraph 33(c) above. For this reason, multilateral training institutions need to have close links with industry in order to provide them with the necessary training

methods enabling them to train trainers in the developing countries. It should be remembered that industrialists apt to train trainers in general available only in the developed and in some of the more advanced developing countries.

Extract from the Report of the Third General
Conference of UNIDO, New Delhi, 1980.

Item 5(b)(ii)

Recommendations for policies, procedures and
frameworks to foster, develop and strengthen
industrial skills

202. A representative of the Secretariat underlined the paramount importance of the human factor in industrial development. He noted that the issue of development of human resources for industrial development was receiving international prominence and a consultation on industrial manpower had been agreed upon by the Industrial Development Board. He referred to the various documents which had been prepared for the Conference and drew special attention to the report on "Acquisition and Development of Industrial Skills by Developing Countries"^{1/} which had been prepared jointly by the International Labour Organisation (ILO), the United Nations Educational, Scientific and Cultural Organization (UNESCO) and UNIDO.

203. One delegate, speaking on behalf of a group of countries, drew the attention of the Committee to the importance which the developing countries attached to industrial training. In the preparation of the draft New Delhi Declaration and the Plan of Action, a special chapter (chapter VI)^{2/} had been included on the development of human resources. He noted the similarity of the Group of 77 proposals to those contained in the UNIDO document. Other delegates drew attention to the potential of co-operation among developing countries in the area of technical training.

204. A number of other delegates expressed their strong support for the need to intensify industrial training activities and indicated their technical assistance programmes on a bilateral basis or in co-operation with UNIDO in the training of industrial personnel from the developing countries. Some of them expressed their support to the proposals of the Group of 77 contained in the draft New Delhi Plan of Action and their willingness to intensify future co-operation with UNIDO in that field. One delegate indicated that an offer had been made to host the UNIDO Consultation on industrial manpower training in 1981 in the United States of America.

205. The representative of the ILO confirmed that his organization was co-operating effectively with UNIDO and would participate in the preparations for the Consultation on industrial manpower. The representative of the UNDP informed the Committee of the decision of ILO, UNDP and UNIDO to undertake a joint evaluation of United Nations industrial training activities.

^{1/} ID/CONF.4/8.

^{2/} ID/CONF.4/CRP.16/Add.1.

206. The paramount importance of training for industrial development was emphasized by all the speakers who stressed that training should cover the entire spectrum of skills required in the industrialization process, with particular emphasis on the training of technologists, managers and technicians. A number of delegations indicated that in contracts for the supply of industrial equipment, appropriate clauses should be included for the participation of personnel from the recipient countries in engineering design and in the construction and installation process, which was in accordance with the need to place greater emphasis on basic on-the-job training in developing countries. Emphasis was also given to the training of instructors in the developing countries and to the improvement of training methods; the promotion of advanced training in developing countries; the expansion of training in small-scale industries at all levels; health and safety for industrial labour, in co-operation with trade unions; and the promotion of linkages between training institutions and industry.

207. It was recognized that the programme of developing industrial manpower was directly related to the educational systems existing in the developing countries. There was therefore a call for a reform of the educational system in the developing countries to give greater emphasis to science and technical education in accordance with national requirements and social economic development objectives. Some delegates expressed the view that the development of national, human resources was a diversified and long-term process which could be effectively carried out on the basis of national planning. The problem of brain drain was recognized as one that required special attention since the developing countries were losing valuable technical skills, developed at high cost.

208. There was general agreement on the need to pay special attention to greater involvement of women in industrial development activities. The need for special training programmes in order to enhance their contribution was recognized.

209. There was a call for a comprehensive programme of action aiming at providing massive and urgent assistance to the developing countries in industrial training. The high priority accorded by UNIDO to its industrial training activities, particularly within its programme of technical assistance, was welcomed and a call was made for their expansion, particularly to the areas of basic training, group training programmes and the development of multi-purpose and sectoral training institutions. UNIDO was urged to intensify its efforts in the development and utilization of viable training facilities, particularly in the developing countries.

210. UNIDO was also called upon to establish closer co-operation with other United Nations agencies, particularly UNESCO and ILO, notably in the planning and implementation of the Consultation on industrial manpower. The Executive Director of UNIDO was requested to report on the progress achieved in promoting industrial training activities in developing countries not only at the next General Conference of UNIDO but also at the sessions of the Industrial Development Board.

Proposals regarding possible technical assistance from UNIDO^{1/}

Preliminary remarks

In seeking possibilities for action by UNIDO with a view to improving industrial manpower training activities, one must take account of the feasibility of any proposals made. This feasibility will be closely dependent on two conditions: a material condition and an ethical one.

It is clear that possibilities for action are subject to the limitations of the human and financial resources on which UNIDO can draw. This point needs no particular demonstration.

However, the analysis of these possibilities is complicated by the existence of different basic conceptions. In this connection one need only recall the different views taken by the groups (B,D and 77) regarding the role to be assigned to the Organization: the divergences between a maximalist and a minimalist conception emerge from both the discussions concerning the adoption of the Constitution of the United Nations Industrial Development Organization (8 April 1979) and the debates during the Third General Conference of UNIDO, held in New Delhi (January-February 1981).

In relation to our present concerns, this difference of conception has, in our view, a specific implication: namely, the difficulty of assessing how much room to manoeuvre UNIDO has when it comes to intervening in the commercial relations which may exist between enterprises.

In stressing this difficulty our sole purpose is to point out that the chances for the adoption of proposals for action on the part of UNIDO depend, to a certain extent, on whether this difficulty is taken into account - without examining the reasons for it.

In view of the above, proposals for technical assistance from UNIDO will be made under the following three headings:

- I. Technical assistance for the evaluation of national industrial training needs and the determination of the means whereby these needs can be met.
- II. Legal assistance in the drafting of contracts.
- III. Technical assistance in the evaluation of training results.

^{1/} M. Salem, UNIDO consultant.

I. Technical assistance for the evaluation of national industrial training needs and the determination of the means whereby these needs can be met

This proposal will be elaborated under three headings:

1. The reasons for technical assistance;
2. The purpose of technical assistance;
3. The composition of teams of experts.

1. The reasons for UNIDO technical assistance

The necessity of evaluating industrial training needs becomes clear upon examination of over-all economic development plans and individual industrialization projects. In many developing countries planning is somewhat sketchy as regards the problem of the development of human resources.

This situation is the result of two combined factors and has an adverse impact on the effectiveness of plans for carrying out economic projects.

(a) The reasons why evaluation has been lacking

The prevailing ideology with regard to strategies for economic development masks the problem of the development of human resources by primarily emphasizing the capacity to draw on savings to finance investment. The great majority of developing countries have adopted this approach; one has only to look through the investment codes to find an illustration of this tendency; with a confusion of letter and spirit, these codes are almost entirely devoted to ways and means of attracting financial capital for investment purposes. Consequently, the labour factor is hidden from view. We feel this to be a theoretical error as regards the conception of strategies for economic development.

This is not, however, the sole reason for the absence of an evaluation of industrial training needs. It must be recognized that this evaluation exercise is a delicate task calling for technical skills which often do not exist in the countries concerned.

(b) The effects of the absence of evaluation

The partial or in some cases complete neglect of the question of developing human resources has a number of adverse affects on the efficiency of industrial project implementation. As has already been pointed out in the body of the study, this problem is taken up only at the end of the process - that is, when individual projects are implemented. The lack of preparation results in a number of constraints, relating to excessive haste, lack of flexibility in the demand for training, dependence on foreign trainers, etc.

There are secondary effects which hamper the efficient functioning of the industrial units installed: unduly rapid and poorly adapted training programmes, the need for continued foreign assistance over an extended period of time, with the resulting financial burden, etc.

(c) The necessity for evaluating needs

Two conclusions may be drawn from the above. Firstly, the adverse effects of failing to evaluate needs seem to us convincing proof of the necessity of evaluating national industrial training needs in due time. Secondly, the causes for the absence of evaluation show that even where there is a desire on the part of the countries concerned to carry out this exercise, in many cases it may be beyond their technical competence. One must therefore consider the possibility of help from an institution whose services are rendered free of charge and devoid of all ambiguity.

Such a mission could be entrusted to UNIDO as part of its technical assistance to the developing countries.

2. The purpose of the technical assistance

The purpose of the technical assistance envisaged in this paper is two-fold: firstly, to evaluate industrial training needs; and, secondly, to determine the means whereby these needs could be met. The evaluation of needs involves translating, however approximately, the pool of labour required for the running and management of the industrial units envisaged under the development plan into numerical terms, with a breakdown by professional category. It is a question of informing the public authorities of the requesting countries as to the nature and magnitude of the industrial training needs implicit in the requirements of the plan.

This evaluation of needs, however, takes on importance only if it is followed up by efforts to find the means whereby these needs can be met.

UNIDO's technical assistance should therefore include within its scope the task of defining the means of meeting these needs. This entails determining the ways and means of ensuring the training of the necessary personnel and presenting relevant suggestions to the public authorities of the country concerned.

The purpose of this mission would be, in particular, to identify training facilities which could be used or created within the country itself (for example, the creation of vocational departments within existing establishments or of training institutions); conversely, the mission could indicate to the country concerned the best training opportunities abroad in cases where the required training facilities are not available locally and do not, in the short term, warrant investment.

Where the country concerned has not formulated a sufficiently explicit plan, thus making it difficult to evaluate training needs, UNIDO technical assistance will still play a useful role. Basing itself on the country's economic potentialities, the UNIDO mission could suggest the types of training which it needs or might need: for example, it might be suggested that training be encouraged in technical fields directly concerned with the exploitation of a given natural resource.

There is a further type of case in which UNIDO's technical assistance might be envisaged - the evaluation of needs and determination of how they might be met in the more restricted context of a project to establish a particular industrial facility.

At all events, the evaluation of needs and the determination of means should be carried out, and hence requested, sufficiently in advance of the decision to carry out the project or projects in question.

3. Choice of experts for technical assistance

Such missions could be entrusted by UNIDO to experts chosen by it.

However, if technical assistance is to be effective, it would, we feel, be highly advantageous to associate local people who are most concerned with the problems of industrial training with the activities of the experts. Collaboration of this type offers benefits in both directions. On the one hand, the local people could give the foreign experts information on specific local conditions which might otherwise escape their attention; their participation could make for solutions better suited to local conditions. On the other hand, this participation could give the local officials a fuller awareness of the problems and thus facilitate decision-making at a later stage.

Finally, the possibility could be considered of concluding the technical assistance mission with a seminar at which the conclusions of the final report could be discussed by a wider group of participants.

II. Legal assistance in the drafting of training contracts

Parallel to the technical assistance outlined above, legal assistance from UNIDO in the drafting of contracts could also be considered. The particular possibility we have in mind would be the organization of national or regional seminars for the purpose of giving technical training to staff responsible for drafting contracts, or improving their skills, as appropriate. By studying standard models of legal training agreements, these seminars would enable the key questions to be identified and possible answers suggested.

III. Technical assistance in the evaluation of training results

In the body of the study a number of comments have been made on the thorny problem of the effectiveness of knowledge or expertise transmitted through training contracts. In this regard, several mechanisms were suggested for verifying the effectiveness of this transfer. One suggestion was that a third party independent of the parties to the contract should participate in the juries set up to verify the amount of knowledge transmitted.

A possibility might be the nomination of this third party on the basis of a list of experts which would be drawn up by UNIDO. However, this would make UNIDO's role too limited, since it would be merely giving seals of approval to the experts.

A more worthwhile activity should therefore be sought for UNIDO. It would not confine itself to drawing up a list of experts, but on the request of the parties it would entrust an expert with the task of taking part in the control juries for which the training contracts provide. The expert's role would not be to arbitrate in any dispute arising between the parties with respect to the evaluation of training results, but, quite simply, to give his opinions on the verification procedure and its results. If such intervention on the part of a UNIDO expert is desired, the parties to the contract should, of course, make provision for this possibility in the contract.

It may be thought that such intervention would bring moral pressure to bear on the parties and encourage them to be more conscientious in fulfilling their obligations.

PROPOSALS FOR IMPROVING CONTRACTUAL RELATIONS^{1/}

(a) PURPOSE OF TRAINING

It is necessary to ensure that the specific purpose of training is expressed in the contract. It seems to us that the best way to take the purpose of training contracts into consideration is to ensure that there is complete agreement between the training objectives and the recipient's objectives. The declaration should be recorded in the preamble to the contract: firstly the recipient's declaration, followed by the supplier's declaration.

- Declaration by the recipient

"The recipient is in charge of the following mission.....
(a precise definition of this mission follows)"

or

"The recipient wishes to fulfil the following objectives...
(a list of these objectives follows)"

After listing his objectives, the recipient will indicate that his decision to enter into contract and the choice of supplier were determined by the desire to fulfil these objectives.

"In order to fulfil his objectives (or carry out his mission), the recipient wishes to entrust the fulfilment of appropriate training requirements to a competent supplier".

- Declaration by the supplier

"The supplier has noted the recipient's objectives (or mission) and declares that he is competent to carry out training in accordance with these needs, as defined below."

or

"The supplier agrees with the recipient's objectives (or mission) and declares that he has the necessary skills and experience at hand to meet corresponding training requirements, as defined below."

This does not constitute a formal agreement between the two parties. However, correlation of the two unilateral declarations leaves no doubt as to the wishes of the recipient and the willingness of the supplier.

^{1/} M. Salem: Legal Aspects of Industrial Training, October 1980.

(b) AIMS OF CONTRACT

It is necessary to express the supplier's obligations and specify their content and mode of fulfilment which may meet the recipient's needs. One cannot fail to observe that the supplier has an ambivalent function: to give advice and to provide a service. It would therefore be useful if the advisory function appears as such in the contract, if it has in fact been exercised by the supplier. For example:

"The services defined below have been established in accordance with the study carried out by the supplier."

or

"The services defined below are directly based on the study carried out by the supplier."

The only case which does not cause confusion between the advisory function and that of providing a service is that where the recipient either has a competent research department, or commissions a third party to undertake the study - e.g. UNIDO technical assistance or other institutions. Training should be defined in terms of objectives : i.e. to train persons "capable of" : they will be required to undertake a specific task (administration or production) in the workshop (or factory) designated by name. As regards the qualitative aspects, a general provision could be made which does not of course exclude precise definitions of the type of training envisaged:

"The training in question will be conceived and carried out in such a way that it meets the objectives expressed in the preamble."

(c) TRAINING RESOURCES

Training resources represent the human and material resources (educational equipment and the material definition of the programme (content) as well as its functional definition (carrying out of training operations). No precise idea of the means to be implemented can be deduced from reading the contract. Certain elements, however, are never absent from the contract: these are the duration of training and, in the case of contracts granting technical assistance, the number of instructors allocated for training purposes. The notion of men/months

which constitutes the backbone of training contracts is based on a combination of these two elements. The use of the approach to contracts based on the notion of men/months, is taken to extremes and debases the training contract. Hence the absolute necessity to go beyond the notion of men/months and specify the essential elements of a proper training contract.

Explanation of gaps in definitions of training resources

Three assumptions may be advanced to explain these gaps.

- (i) The case of implied definitions: This is the classic case of registration of a group of trainees for a predetermined training course : programmes, resources, methods etc...are those normally used by the training institution.
- (ii) A standard definition of training resources exists between the parties, but is not expressed in the contract: In this eventuality, the parties should include a condition in the contract worded, for example, as follows: "In order to meet the training objectives, the supplier will use training resources defined in the document headed (.....), appended to his contract." Under these conditions, the document appended is considered to be an integral part of the contract and binds the supplier to the same extent as the conditions of the actual contract.
- (iii) Definition of resources subsequent to signing of contract: In this situation the parties sign the training contract, but defer definition of the means until a later stage. However, the parties should not draw up a contract leaving blanks for the supplier to fill in in a discretionary manner. The procedure for definition of the resources should therefore be specified in the contract.

Two variants are noted in practice:

The contract expressly leaves the task of definition of resources to the supplier. This restricts the recipient's position.

The contract stipulates that definition of the resources must be a negotiated procedure. It may prescribe that these resources are to be proposed by the supplier and approved by the recipient.

The corresponding condition should specify:

- the date by which these resources must be defined
- the mode of definition (proposal of resources, discussion, decision etc...)

Condition relating to the time limit:

"The training programme and the means of implementing it will be defined (or completed) within... to commence as soon as trainees have been selected"

It happens in many cases that the programme and resources cannot be determined or improved until a study has been made of the standard of trainees for whom the said training is intended. This procedure is technically coherent.

The condition concerning the mode of definition, stressing the need for close co-operation between the parties, could be stated as follows:

"The training programme and resources will be proposed by the supplier and settled by mutual agreement."

The main problem in this context seems to be the technical incompetence of the recipient in regard to selection of the programme and resources. Consequently, the need to improve the recipient's technical abilities should be stressed. It is in this instance that UNIDO could give technical assistance to the recipient.

(d) SELECTION OF CANDIDATES

The main objective of selection operations is to choose from among the candidates presented those who seem capable of undergoing the training laid down in the contract.

This objective, however, has a limited application since selection sorts out those who are to be selected for training and those who are purely and simply eliminated. It is as if the necessary elements for a particular operation are taken from a fish tank without a care for the future and potential of the candidates eliminated. The concern for the success of the industrial operation in the strict sense prevails over that of training of men.

The supplier, who is responsible for the selection of candidates, would then have to fulfil both objectives: select candidates for training on the one hand, and, on the other, evaluate the aptitudes and suggest careers for candidates not selected, thus contributing considerably in the creation of a national technical know-how.

It seems that the simultaneous pursuit of both objectives would not have any financial implications and would not change their nature or scope.

(e) INDUSTRIAL WORK EXPERIENCE

(i) Selection of places

The choice should be dictated by the main purpose of the practical training periods: the acquisition of experience in order to master the techniques and machines which the trainee is required to use at the recipient's works.

The following provision could therefore be laid down in the contract:

"Industrial work experience will be arranged in factories similar to that of the recipient, in a developed or developing country".

(ii) Selection of factory

The supplier is, in theory, better informed of the possibilities for practical training, as he is more competent to make a suitable choice. It is therefore logical to entrust him with this task.

"The supplier will undertake to place trainees in factories similar to those of the recipient, in a developed or developing country."

(iii) Definition of technical conditions of training periods

The efficacy of a training period is known to depend to a large extent on the conditions under which it takes place. It will, for example, be necessary to ensure that a balance exists between a passive approach (the trainee observes the activities of this counterpart at the factory where he is received) and an active approach (the trainee takes an active part by taking the place of his counterpart). It should also be specified if, and to what extent, the trainee may enjoy certain facilities, especially access to documentation.

Whilst the principle of the definition of conditions of training may not call for discussion, determination of these definitions may cause problems. For example: The supplier of training is personally responsible for training periods by receiving trainees at his own factories, those of his subsidiaries or even those with which he has institutional connections. In this case, there is nothing to prevent the contracting parties from defining together the technical conditions of training and entering them in the contract.

The procedure is different in the second case: that in which the supplier of training is not himself responsible for arranging training periods. This applies in particular to training institutions which, being financially independent, but organically industrial companies, request the latter to place trainees.

Examination of contracts informs us that the conditions under which the training periods take place are often tacitly agreed and implicitly left to the discretion of the company receiving the trainees.

If the supplier does not himself arrange the training periods, this does not exempt him from his obligations.

In fact, the contractual relationship which the supplier establishes with the company receiving the trainees is derived from the notion of sub-contracting. Now, in normal legal parlance, the sub-contract is linked to the main contract and is not a substitute for it. In other words, the supplier should not normally be able to make use of the reluctance of his potential sub-contractors to limit the content and extent of his obligation towards the recipient in the main contract. In the case of international law, the absence of a legislator requires that another way be found to re-establish harmony. This task falls to the actors themselves - the contracting parties.

The difficulty of defining conditions in respect of training periods could be resolved in the following way:

- . First of all, the principle of a common definition of the technical conditions of training periods could be adopted
- . Secondly, the supplier's commitments could be revised.

This procedure may be expressed by the following type of condition:

"The supplier will endeavour to get the companies receiving trainees to accept the following conditions ... (a list of the desired conditions then follows)"

or

"Definition of the technical conditions of the training periods must be based on the following principles ... (a list of principles then follows)"

Two principles will be retained: trainees should be allowed to take an active part in production or administrative operations; the aim of practical training should be to ensure that the trainee is fitted for the job he will be required to undertake at the recipient's factory.

(f) VERIFICATION OF EFFICACY OF TRANSFER OF KNOWLEDGE AND KNOW-HOW

The evaluation of cases studied has shown that the problem of verification of transfer of knowledge and know-how is almost systematically eliminated from the contract. It is only necessary to investigate the modes of verification.

- (i) Nature of checks: They aim to assess the acquisition of knowledge communicated and they also postulate the establishment of operational personnel : "effective" personnel, not just "knowledgeable" personnel.

The following clauses to this effect could be inserted in the contract:

"Upon completion of training, trainees will take examinations to evaluate the skills acquired. The examinations will mainly - but not solely - comprise practical tests and will take place at the recipient's company."

"If, for reasons irrespective of the supplier's wishes, the examinations could not take place at the recipient's company, they must then take place at a similar company or else at the company where the last training period was held."

"Trainees will take examinations relating to the jobs for which they have been trained."

(ii) Panel of examiners: The supplier could be entrusted with the function of evaluating the skills acquired. Although being the most common practice, this could lead to a confusion of roles: the supplier is both a judge and a party to the contract. A joint bipartite panel could be responsible for the assessment. However, the risks of deadlock in the case of diverging assessments by the recipient and the supplier constitute a reason for its rejection.

Another solution would be that the recipient be solely responsible for assessment of candidates. Two main objections would be the technical incompetence of the recipient and the fact that the recipient would become both the judge of the results and a party to the contract. If the recipient were made solely responsible for the assessment of the skills acquired, he could become a law unto himself.

If this solution were to be adopted by the parties concerned, the supplier would have to have the right to oppose any unwarranted breach of his rights. The following clauses could be retained:

"The recipient will undertake to assess the skills acquired by trainees upon completion of training".

This condition should be accompanied by the following precautionary measures:

"The supplier and the recipient will fix the date, place and duration of the assessment of the skills acquired by trainees".

"The supplier will be informed of the content of the tests and the scales of marking".

"The supplier has the right to be present at the time of assessment and to express reservations".

"If the supplier disputes the regularity of the assessment, the recipient undertakes not to oppose the intervention of an independent expert arbitrator".

If this latter precautionary measure is to have a positive effect, the expert arbitrator must intervene within a very short time.

The nominee could be selected from a list of experts drawn up by UNIDO.

As regards the acceptance of the cost of intervention of an expert arbitrator and the approval of assessment, the following clauses could be adopted:

"The costs of intervention of an expert arbitrator will be equally shared between the two parties".

"If the results of the assessment are judged to be satisfactory by the recipient, or by the expert arbitrator, if necessary, the parties will sign a report certifying completion of training".

"If the results of the assessment are not satisfactory, the supplier undertakes to second technicians empowered to finalize training at the recipient's works at his own expense. The number of technicians and the duration of secondment will be fixed by the parties".

(iii) The assessment is made by a joint tripartite panel.

A panel representing both contracting parties and a third party (independent expert) could be set up. However, the intervention of an outside expert is automatic in this case. This solution is without doubt at least as justifiable as the previous one, but it has the drawback of making the procedure more cumbersome.

